JVR Energy Park Project
Draft Environmental Impact Report
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THIS DOCUMENT IS SUBJECT TO SECTION 21167.6.2 OF THE PUBLIC RESOURCES CODE, WHICH REQUIRES THE RECORD OF PROCEEDINGS FOR THIS PROJECT TO BE PREPARED CONCURRENTLY WITH THE ADMINISTRATIVE PROCESS; DOCUMENTS PREPARED BY, OR SUBMITTED TO, THE LEAD AGENCY TO BE POSTED ON THE LEAD AGENCY'S INTERNET WEB SITE; AND THE LEAD AGENCY TO ENCOURAGE WRITTEN COMMENTS ON THE PROJECT TO BE SUBMITTED TO THE LEAD AGENCY IN A READILY ACCESSIBLE ELECTRONIC FORMAT.

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
$\mu g/m^3$	microgram per cubic meter
A_{atm}	atmospheric acoustical absorption
AB	Assembly Bill
AC	alternating current
ACOE	U.S. Army Corps of Engineers
ADT	average daily traffic
AF	acre-feet
AFY	acre-feet per year
A_{grnd}	ground surface acoustical absorption
amsl	above mean sea level
Basin	Jacumba Valley Groundwater Basin
BAU	business-as-usual
BCC	Bird of Conservation Concern
BMP	best management practice
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBP	U.S. Customs and Border Protection
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	Consolidated Fire Code
CFGC	California Fish and Game Code
CFPP	Construction Fire Protection Plan
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society

Acronym/Abbreviation	Definition
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of San Diego
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DC	direct current
DPM	diesel particulate matter
DWR	Department of Water Resources
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FMMP	Farmland Mapping and Monitoring Program
FP	fully protected
FPP	Fire Protection Plan
FRAP	Fire and Resource Protection Program
FTA	Federal Transit Administration
g	gravity
GHG	greenhouse gas
GIS	geographic information system
gpm	gallons per minute
GWP	Global Warming Potential
HCM	Highway Capacity Manual
HEC-RAS	Hydrologic Engineering Centers River Analysis System
HFCs	hydrofluorocarbons
HRA	Health Risk Assessment
Hz	hertz
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
JCSD	Jacumba Community Services District
kV	kilovolt
kWh	kilowatt-hour
LARA	Local Agricultural Resource Assessment
L_{eq}	equivalent sound level

Acronym/Abbreviation	Definition
LESA	California Agricultural Land Evaluation and Site Assessment
LOS	level of service
M-	mitigation measure
MCEG	Maximum Considered Earthquake Geometric
MMT	million metric tons
MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MT	metric ton
MUP	Major Use Permit
MVA	megavolt ampere
MW	megawatt
N&M	Ninyo and Moore
N_2O	nitrogen dioxide
NAAQS	National Ambient Air Quality Standards
NF_3	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NSLU	Noise-Sensitive Land Use
O_3	ozone
O&M	operations and maintenance
OSHA	Occupational Safety and Hazard Administration
PACE	Purchase of Agricultural Conservation Easement
PCS	power conversion station
PCS	plant control system (in Ch. 1)
PDF	project design feature
PFE	Public Facilities Element
PG&E	Pacific Gas and Electric
PGA	peak ground acceleration
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
PLDO	Park Lands Dedication Ordinance
ppb	parts per billion
ppv	peak particle velocity
PV	photovoltaic
RAQS	Regional Air Quality Strategy
RCNM	Roadway Construction Noise Model
RFS	Renewable Fuel Standard
RMP	Resource Management Plan
rms	root mean square
ROW	right-of-way

Acronym/Abbreviation	Definition
RPO	Resource Protection Ordinance
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCADA	supervisory control, and data acquisition
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCFA	San Diego County Fire Authority
SDG&E	San Diego Gas and Electric
SDUH	San Diego County Unit Hydrograph Program
SDWA	Safe Drinking Water Act
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SLCP	short-lived climate pollutants
SLM	sound level meter
SO_2	sulfur dioxide
SoCalGas	Southern California Gas
SPL	sound pressure level
SSC	species of special concern
SUSMP	Standard Urban Stormwater Mitigation Plan
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
T-BACT	toxics best available control technology
TCP	Traffic Control Plan
TIS	Traffic Impact Study
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	Waste Discharge Requirements
WL	Watch List
WPO	Watershed Protection, Stormwater Management, and Discharge Control Ordinance
ZEV	zero-emissions vehicle
ZOI	Zone of Influence

CHAPTER S SUMMARY

This chapter is a summary of the Draft Environmental Impact Report (EIR) for the JVR Energy Park Project (Proposed Project) prepared pursuant to the California Environmental Quality Act (CEQA). As required by CEQA, this EIR: (1) assesses the potentially significant direct, indirect, and cumulative environmental effects of the Proposed Project; (2) identifies potential feasible means of avoiding or substantially lessening significant adverse impacts; and (3) evaluates a range of reasonable alternatives to the Proposed Project, including the required No Project Alternative. The County of San Diego (County) is the lead agency for the Proposed Project and has the principal responsibility for preparing this EIR. Pursuant to CEQA Guidelines (14 CCR 15000 et seq.), this EIR consists of an evaluation of the effects of the entire Proposed Project. This Project EIR will be used by the County to inform public agencies, the public, and decision makers of the significant environmental effects of the Proposed Project; identify ways to minimize significant effects; and describe reasonable alternatives to the Proposed Project.

S.1 Project Synopsis

S.1.1 Project Description

The Proposed Project is a solar energy generation and storage facility which would produce a rated capacity of up to 90 MW of AC generating capacity. The power produced by the proposed solar facility would be delivered to an existing San Diego Gas & Electric (SDG&E) 138 KV transmission line which transects the Project site. The solar facility would be located on 643 acres within the 1,356-acre privately-owned Project site, located adjacent to Jacumba Hot Springs in unincorporated southeastern San Diego County. The Project site is located within the County's Mountain Empire Subregional Plan area.

The Proposed Project would include the following primary components: approximately 300,000 photovoltaic (PV) modules mounted on support structures (single-axis solar trackers); a direct current (DC) underground collection system linking the modules to the inverters; 25 inverter/transformer platforms located throughout the solar facility; an underground collection system; an on-site collector substation; a switchyard; an overhead transmission line to connect the on-site collector substation to the switchyard; overhead transmission lines (tie-in) to loop the switchyard into the existing 138 kV transmission line; and a battery energy storage system of up to 90 MW (or 180MWh) comprised of battery storage containers located adjacent to the inverter/transformer pads (up to 3 containers at each location for a total of 75 containers on site). The Proposed Project would also include a fiber optic line, a control system, five meteorological weather stations, internal access, site access driveways, perimeter fencing, motion sensor lighting, fuel modification zones, and six water tanks for fire protection. In addition, landscaping along some sections of the perimeter fencing would be installed as mitigation for visual impacts. The facility would not be staffed full-time. All Project components would be decommissioned

after approximately 35 years, except the switchyard and connection to the SDG&E transmission line, which would be owned and operated by SDG&E.

Project Approvals and Permits

The Proposed Project requires approval by the County. In addition, approvals or permits may be required by other state and federal agencies. In order to develop a solar facility on the Project site, discretionary actions from the County would be required, including a Major Use Permit (MUP). The Proposed Project is considered a Major Impact Service and Utility type. Other County permits and approvals that would be required include a grading permit, building and demolition permits, County Right-of-Way Permit, and various ministerial permits. A demolition permit is required because the Proposed Project would demolish existing dairy and ranch structures located within the Project site.

S.1.2 Project Objectives

Specific objectives for the Proposed Project are as follows:

1. Develop a solar energy project with a rated capacity of up to 90 megawatts (MW) of alternating current (AC) and an energy storage facility that can supply electricity to indirectly reduce the need to emit greenhouse gases caused by the generation of similar quantities of electricity from either existing or future nonrenewable sources to meet existing and future electricity demands, including during on-peak power periods.
2. Develop a renewable solar energy project that can meet the criteria to achieve the maximum federal solar Investment Tax Credit, which is intended to decrease the cost of renewable energy generation and delivery, promote the diversity of energy supply, and decrease dependence of the United States on foreign energy supplies.
3. Assist in achieving the state's Renewables Portfolio Standard (RPS), as mandated under the 100 Percent Clean Energy Act of 2018 (Senate Bill 100), by developing and constructing California RPS-qualified solar generation from eligible renewable energy resources by December 31, 2045.
4. Develop a utility-scale solar energy project that improves electrical reliability for the San Diego region by providing a source of local generation as near as possible to existing San Diego Gas and Electric (SDG&E) transmission infrastructure.
5. Provide a new source of energy storage that assists the state in achieving or exceeding its energy storage targets, consistent with the terms of Assembly Bill 2514, and its greenhouse gas reduction targets, consistent with Assembly Bill 32 and Senate Bill 32.

6. Site a solar energy project in an area within San Diego County that has excellent solar attributes, including but not limited to high direct normal irradiance, in order to maximize productivity.
7. Develop a utility-scale solar energy facility within San Diego County that supports the economy by investing in the region and creates construction jobs.

S.1.3 Project Location

The Proposed Project would be located on a privately owned 1,356-acre site in southeastern San Diego County. The Project site lies within the Jacumba Subregional Group Area within the Mountain Empire Subregion area of the unincorporated County. The Project site is located south of Interstate 8 (I-8), east of the unincorporated community of Jacumba Hot Springs, and immediately north of the U.S./Mexico border. Access to the Project site is provided by Old Highway 80 and Carrizo Gorge Road. The Project site consists of 24 parcels. The Project site includes right-of-way easements for Old Highway 80, SDG&E easements, and an easement for the San Diego and Arizona Eastern Railway.

S.1.4 Environmental Setting

The baseline for the Proposed Project is established by the physical condition that exists at the time the Notice if Preparation (NOP) for the EIR was published, which occurred on March 7, 2019. The environmental setting is summarized below and described in greater detail for each environmental issue at the beginning of each section in Chapter 2 and 3 of this EIR.

A portion of the Project site has historically been used for dairy and agricultural operations. The Project site is not currently under cultivation and has been fallow. The Project site contains 11 vegetation communities and/or land covers, including 8 sensitive vegetation communities. Across the 1,356-acre Project site, elevations range from approximately 2,745 feet above mean sea level (amsl) in the lower, northern portion of the site to 3,365 feet amsl at the top of Round Mountain in the northwestern portion of the Project site.

Surrounding land uses include public lands, the Jacumba Hot Springs community, Jacumba Airport, and railways. Public land in the surrounding area includes Anza Borrego State Park to and Bureau of Land Management Federal lands. The unincorporated community of Jacumba Hot Springs, which includes residential and commercial uses, is located to adjacent to southwestern boundary of the Project site. The Jacumba Airport is located to the east of the southern portion of the Project site, and the site is located within its Airport Influence Area. The Project site includes an easement for the San Diego and Arizona Eastern Railway, but the segment is not currently operational. Transmission lines transect the northern portion of the Project site, including a SDG&E 138kV transmission line, the Sunrise Powerlink, and the Southwest Powerlink.

S.2 Summary of Significant Effects and Mitigation Measures That Reduce or Avoid the Significant Effects

Table S-1, Summary of Significant Effects, presents the results of the environmental analysis completed for the Proposed Project. Mitigation measures have been identified to reduce environmental impacts associated with aesthetics (Section 2.1), air quality (Section 2.2), biological resources (Section 2.3), cultural resources (Section 2.4), geology, soils, and seismicity (Section 2.5), hazards and hazardous materials (Section 2.6), hydrology and water quality (Section 2.7), noise (EIR Section 2.9), paleontological resources (EIR Section 2.10), tribal cultural resources (EIR Section 2.11) and wildfire (EIR Section 2.12). All impacts (Impact-) and mitigation measures (M-) in abbreviated form are identified in Table S-1. All mitigation measures in full form are identified in Table S-2. The mitigation measures would reduce potentially significant impacts to below a significant level, with the exception of impacts to aesthetics (**Impacts AE-1**, **AE-2**, **AE-3**, **AE-4**, **AE-5**, **AE-6**, **AE-7**, **AE-8, AE-9, AE-CU-1 and AE-CU-2**), which remain significant and unavoidable. Impacts to mineral resources (**Impact M-MR-1**), identified in Section 2.8, are also significant and unavoidable. There are no feasible mitigation measures for mineral resources. A detailed analysis of significant environmental effects and mitigation measures presented in Chapter 2 of this EIR.

S.3 Areas of Controversy

CEQA Guidelines Section 15123(b)(2) requires that an EIR identify areas of controversy, including issues raised by other agencies and the public. Areas of known controversy associated with the Proposed Project that are relevant to the EIR are as follows:

Aesthetics

- Aesthetic impacts related to scenic vistas and community character
- Light pollution.
- Glint or glare impacts to motorists on I-8

Agricultural Resources

- Impacts to potential farmland and impacts to soil that could be used for agriculture

Air Quality

- Air quality impacts, including diesel fuel combustion emissions and dust

Biological Resources

- Impacts to wetlands
- Compliance with applicable resource regulations, including the California Endangered Species Act and Fish and Game Code.
- Direct, indirect, and cumulative impacts to biological and natural resources from all project components, including impacts from human intrusion, drainage, soil, air flow, dust, lighting, and temperature changes

Cultural Resources

- Disclosure of any historical resources
- Impacts to archaeological resources.
- Completion of tribal consultations and potential for significant tribal cultural resources
- Need for tribal cultural resource monitoring during ground disturbance

Hazards and Hazardous Materials

- Fire hazards and need for a new fire station or firefighter personnel
- Exposure to electromagnetic fields

Hydrology and Water Quality

- Excessive water use
- Water quality impacts

Land Use and Planning

- Consistency with the Mountain Empire Subregional Plan and Jacumba's vision statement
- Location in proximity to the Jacumba Hot Springs community and the size of project
- Housing impacts, including removing land that could be developed with housing
- Potential abandonment of existing housing due to the project impacts

Noise

- Noise and vibration impacts to residents

Parks and Recreation

- Impacts to the Anza Borrego Desert State Park, Jacumba Community Park, and the underserved Jacumba Hot Spring residents
- Impacts to existing open space and trails

Other Areas of Controversy

- Environmental justice and socio-economic issues, including impacts to a low-income community
- Impacts to property values
- Tourism impacts
- Lack of benefits to the community.
- Changes to local temperature

S.4 Issues to be Resolved by the Decision-Making Body

The San Diego County Planning Commission serves as the decision-making body for Major User Permits; however, the Proposed Project requires a Fire Services Agreement, which must be approved by the County Board of Supervisors. Therefore, for the Proposed Project, the Board of Supervisors is the decision-making body for the Major Use Permit. The Planning Commission will make a recommendation on the Proposed Project to the Board of Supervisors.

Issues to be resolved by the Board of Supervisors include: (1) how to mitigate the significant effects of the Proposed Project; (2) whether to reject or approve one of the alternatives to the Proposed Project and other environmental findings; and (3) whether to reject or approve the Proposed Project. The Board of Supervisors must adopt detailed findings on the feasibility of mitigation measures that substantially lessen or avoid the significant effects of the Project on the environment.

In addition to mitigation measures, the Board of Supervisors will decide whether or not to adopt the Proposed Project or any of the Project alternatives that would feasibly attain most of the Project objectives while avoiding or substantially reducing any of the significant impacts of the Proposed Project.

Because this EIR has identified adverse environmental effects that are unavoidable, the Board of Supervisors must also determine whether the adverse environmental effects are considered acceptable with consideration given to economic, social, technological, and other relevant benefits of the Proposed Project pursuant to CEQA Section 15093. The Board of Supervisors would prepare a statement of overriding considerations as described in CEQA Section 15093 to

reflect the ultimate balancing of competing project objectives if the Board of Supervisors decides to approve the Proposed Project, Proposed Project alternatives, or components of either, which have the potential to cause one or more significant effects on the environment.

S.5 Project Alternatives

Section 15126.6 of the CEQA Guidelines requires that an EIR describe a range of reasonable alternatives to the Proposed Project or to the Proposed Project location that would feasibly attain most of the Proposed Project objectives but would avoid or lessen any significant environmental impacts. An EIR should evaluate the environmental impacts of the alternatives compared to the Proposed Project. According to the CEQA Guidelines, many factors may be taken into account when addressing the feasibility of alternatives, such as environmental impacts, site suitability as it pertains to various land use designations, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional boundaries (CEQA Guidelines, 15126.6(f)(1)).

Chapter 4 of this EIR describes and evaluates alternatives and is intended to implement the requirements set forth in the CEQA Guidelines. Three alternatives, as listed below, are fully analyzed in this EIR (see also Table S-3). For each of these alternatives, the analysis includes a description of the alternative and a comparison of the environmental effects relative to the Proposed Project. These Project alternatives include:

- Alternative 1: No Project Alternative (No Development and Buildout Scenarios)
- Alternative 2: Community Buffer Alternative
- Alternative 3: Reduced Project Alternative

In addition, Chapter 4 discusses considered and rejected alternatives which include Energy Efficiency Ordinance, Distributed Generation and Storage Policy (rooftop solar panels), Wind Energy, Alternative Locations, Community Buffer with Southwest Expansion, and East County Substation Connection alternatives. These alternatives were considered but rejected because they either did not meet the basic project objectives, were infeasible, or would not reduce a significant impact of the Project.

S.5.1 Proposed Project Alternatives

S.5.1.2 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. According to CEQA Guidelines, Section 15126.6(e), the No Project Alternative must include the assumption that conditions at the time of the Notice of Preparation (i.e., baseline

environmental conditions) would not be changed because the Proposed Project would not be installed. The No Project Alternative must also describe the events or actions that would be reasonably expected to occur in the foreseeable future if the Proposed Project were not approved. The existing County General Plan land use designation for the majority of the Proposed Project development footprint is Specific Plan; therefore, it is reasonable to assume that if the Project was not approved that the Specific Plan are portion of the Project site would be developed. Therefore, the No Project Alternative analysis includes two scenarios: No Development and Buildout, as discussed below.

No Development No Project Alternative

The No Development No Project Alternative scenario assumes that the Proposed Project would not be developed and the existing conditions would remain. No reasonably expected actions or changes to the Project site would be anticipated if the Proposed Project is not approved. Under this scenario, the No Project Alternative would avoid all Proposed Project impacts, including aesthetics, air quality, biological resources, cultural resources, geology, soils, and seismicity, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, paleontological resources, tribal cultural resources and wildfire. This alternative would not meet the project objectives.

Buildout No Project Alternative

For purposes of this Buildout No Project Alternative analysis, the previously proposed Ketchum Ranch Specific Plans for the Project site were considered as to what could potentially be developed within the Project site. The Ketchum Ranch Specific Plan was a multi-use concept; a residential community with recreational and visitor oriented commercial uses on approximately 1,250 acres. The conceptual land use plan included 1,110 dwelling units, active/passive open space for recreational uses such as an 18-hole golf course, a wastewater reclamation facility, and other supporting uses.

In general, this alternative would reduce several of the significant and unavoidable aesthetic impacts of the Project considering a community would be more visually compatible with the area than the Proposed Project (**Impacts AE-1 to -3, and AE-6 to -9**). Nonetheless, the Buildout No Project Alterative would continue to result in a significant visual contrast with the existing visual character and quality of the area considering the significant change from an open undeveloped site to a developed multi-use community. From closer viewpoints, the buildings that would be constructed would have similar or increased view blockage impacts (**Impacts AE-4** and **AE-5)**. This alternative would also likely increase the significant and unavoidable impact on mineral resources (**Impact MR-1**) since the development on the Project site would be permanent and it is likely that more on-site biological open space easements would be required for this alternative, both of which would further

increase the loss of availability of any underlying mineral resources. Due to the increase in construction and operational activities relative to the Project, the Buildout No Project Alternative development scenario would also increase impacts associated with air quality, biological resources, geology, soils and seismicity, hazards and hazardous materials, hydrology and water quality, noise, paleontological resources, tribal cultural resources and wildfire would be increased relative to the Project (see Table S-3). In addition, other impacts determined to be less than significant for the Project, would be increased to potentially significant levels under the Buildout No Project Alternative. This includes potentially significant operational mobile-source air quality and odor from wastewater treatment, operational mobile noise, and operational transportation impacts. This alternative would not meet the project objectives.

S.5.1.2 Community Buffer Alternative

The Community Buffer Alternative would include a 300-foot buffer from the adjacent Jacumba Hot Springs community, north of Old Highway 80. No construction or activities would occur within the 15.4-acre buffer included in this alternative, and that area would instead remain in its current undeveloped condition. The Community Buffer Alternative would include 282,504 PV modules instead of the Proposed Project's 300,000 PV modules, which would reduce the energy generated from 90 MW to 82.3 MW. The battery energy storage system, switchyard, substation and other project components would be the same as the Proposed Project. The length of construction may be slightly reduced under this alternative, but the daily construction would remain the same as the Proposed Project, as would site access and number of employees.

This alternative would reduce impacts to aesthetics **(Impacts AE-1, AE-2, AE-CU-1 and AE-CU-2**), air quality (**Impact AQ-1**), biological resources (**Impacts BI-V-2,** and **BI-W-2**), hydrology and water quality (**Impact HDY-1**), mineral resources (**Impact MR-1**) and noise (**Impacts NOI-1, NOI-2 and NOI-3**). Although these impacts would be lessened, they would remain potentially significant under the Community Buffer Alternative. All of the impacts listed above, except for **Impacts AE-1**, **AE-2, AE-CU-1, AE-CU-2** and **MR-1**, could be reduced to less than significant with implementation of mitigation measures. **Impacts AE-1**, **AE-2, AE-CU-1, AE-CU-2** and **MR-1** would remain significant and unavoidable, similar to the Proposed Project. The provision of a 300-foot buffer adjacent to Jacumba Hot Springs would not have a substantial effect to the remaining significant impacts of the Proposed Project, including cultural resources, geology, hazards and hazardous materials, hydrology and water quality, paleontological resources, and tribal cultural resources. Similar to the Proposed Project, with implementation of mitigation measure these impacts would be reduced to less than significant.

The Community Buffer Alternative would generally meet all project objectives, although not to the degree that the Proposed Project would. This alternative would generate 7.7 MW less than

the Project, and therefore, it would not achieve Project objectives 1, 2 or 3, 5 or 7 to the extent of the Proposed Project.

S.5.1.3 Reduced Project Alternative

The Reduced Project Alternative would reduce the development footprint relative to the Proposed Project. This alternative would not develop the portion of the Project site to the north of the existing transmission lines that transect the Project site, reducing the development footprint by 142 acres compared to the Proposed Project. This 501-acre solar facility alternative would reduce the number of PV modules to 250,428. This reduction in PV modules would reduce energy generated by approximately 22 MW D/C relative to the Proposed Project. With this reduction, the Reduced Project Alternative would generate 68 MW compared to the Proposed Project's generation of 90 MW. The switchyard, substation and other project components to the south of the transmission lines would be the same as the Proposed Project. The length of construction would be reduced under this Alternative, but the daily construction would remain the same as the Proposed Project, as would site access and number of employees.

The reduction of the development footprint by 142 acres would reduce impacts to aesthetics **(Impacts AE-1, AE-2, AE-3,** and **AE-6 through AE-9**), air quality (**Impact AQ-1**), biological resources (**BI-V-2, BI-W-2, BI-SP-2, BI-W-1, BI-W-2, BI-W-5, BI-W-6, BI-V-1, BI-V-3, BI-V-4, BI-JAR-1, BI-JAR-2, BI-JAR-3, BI-WLC-1 BI-WLC-2**, and **BI-WLC-3**), cultural resources (**Impacts CR-1** and **CR-2**), geology (**GEO-1** and **GEO-2**), hazards and hazardous materials (**Impacts HAZ-1** and **HAZ-2**), hydrology and water quality (**Impact HYD-1**), mineral resources (**Impact MR-1**), paleontological resources (**Impact PR-1**), tribal cultural resources (**Impact TCR-1**), and wildfire (**Impacts WF-1, WF-2 and WF-3**). These impacts could be reduced to less than significant with implementation of mitigation measures, except Impacts **AE-4, AE-5**, and **MR-1** which would remain significant and unavoidable.

This alternative would generally meet all project objectives, although not to the degree that the Proposed Project would. The Reduced Project Alternative would result in approximately 22% less renewable energy generation and, therefore, it would not achieve Project objectives 1, 2 or 3, 5 or 7 to the extent of the Proposed Project.

S.5.2 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(b), indicates that a list of reasonable alternatives must be developed and considered by the lead agency. Elimination of potential environmental impacts of the Proposed Project should be considered when developing potential alternatives. As evaluated in Chapter 2 of this EIR, the significant impacts of the Proposed Project include: aesthetics; air quality; biological resources; cultural resources; geology, soils, and seismicity; hazards and

hazardous materials; hydrology and water quality; mineral resources; noise; paleontological resources; tribal cultural resources; and wildfire.

As shown in Table S-3, the No Development No Project Alternative would be environmentally superior to the Proposed Project, based on avoidance of all of the Proposed Project's significant environmental impacts. However, the No Development No Project Alternative would not meet any of the project objectives. Additionally, CEQA Guidelines, Section 15126.6(c)) requires that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Environmentally Superior Alternative is the Reduced Project Alternative. The Reduced Project Alternative, which reduces the development footprint by 142 acres and avoids the area to the north of the SDG&E transmission corridor, would substantially reduce the severity of aesthetic impacts (**Impacts AE-1, AE-2, AE-3, and AE-6 to AE-9**), air quality (**Impact AQ-1**), as well as potentially significant biological, cultural, mineral resources, paleontological, and tribal cultural resource impacts.

Table S-1
Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
Significant and Unavoidable Impacts		
2.1 Aesthetics		
Impact AE-1: Impact to Jacumba existing visual character and/or quality	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence)	Significant and Unavoidable
Impact AE-2: Impact to visual character of Jacumba Hot Springs	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-3: I-8 – Long distance view changes to this eligible state scenic highway viewpoint due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-4: Old Highway 80 – Long distance view blockage and character change from this County scenic highway system viewpoint due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-5: Jacumba Community Park – Long distance view blockage and character change from this County Park due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-6: Anza-Borrego Desert State Park Lands and Carrizo Gorge Wilderness - Long distance view changes from State Parks lands due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-7: Round Mountain – Character change and view interruption from this recreational resource viewpoint due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-8: Airport	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery	Significant

Table S-1
Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
Mesa - Long distance view changes at this recreational resource viewpoint due to proposed project	energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	and Unavoidable
Impact AE-9: Table Mountain area – Long distance view changes at this recreational resource viewpoint due to proposed project	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design), **M-AE-4** (setback of 75 feet from residential property lines), **M-AE-5** (landscaping buffers), **M-AE-6** (tan-colored slats on perimeter fence	Significant and Unavoidable
Impact AE-CU-1 Cumulative Impact on valued visual character or image of neighborhoods, communities, or localized areas.	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design)	Significant and Unavoidable
Impact AE-CU-2 Cumulative impacts to panoramic vista available from elevated vantage point in the Airport Mesa and Table Mountain Recreational Management Zones.	**M-AE-1** (inverter enclosures shall be a non-reflective color), **M-AE-2** (battery energy storage containers shall be a non-reflective color), **M-AE-3** (Transmission line conductors shall be non-reflective in design)	Significant and Unavoidable
2.8 Mineral Resources		
Impact MR-1 A portion of the biological open space easements (188 acres), required as mitigation for the Proposed Project's biological resource impacts, and the 3.2-acre switchyard together would result in a permanent loss of the availability of mineral resources exceeding the County's threshold value of $12,500,000.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Significant Impacts Mitigated to a Level of Less than Significant		
2.1 Aesthetics		
Impact AE-10:	M-AE-1 (inverter enclosures shall be a non-reflective color), M-AE-2 (battery	Less Than

Table S-1
Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
Glare impacts to roadways from proposed project	energy storage containers shall be a non-reflective color), M-AE-3 (Transmission line conductors shall be non-reflective in design)	Significant
2.2 Air Quality		
Impact AQ-1: Construction-related cancer risk from diesel exhaust	**M-AQ-1** (measures to minimize diesel particulate matter emissions)	Less than Significant
Impact AQ-CUM-1: Construction-related emissions of No_x, PM_{10} and $PM_{2.5}$	**M-AQ-1** (measures to minimize diesel particulate matter emissions), **M-AQ-2** (Fugitive Dust Control Plan)	Less than Significant
2.3 Biological Resources		
Impact BI-SP-1: Temporary direct impact to special-status plants	**M-BI-1** (monitoring)**, M-BI-2** (temporary construction fencing)	Less than Significant
Impact BI-SP-2: Permanent direct impact to special-status plants	**M-BI-3 (**habitat preservation)**, M-BI-4** (resource management plan)	Less than Significant
Impact BI-SP-3: Construction-related temporary indirect impacts to special-status plants	**M-BI-1** (monitoring), **M-BI-2** (temporary construction fencing), **M-BI-7 (**biological monitoring of the stormwater pollution prevention plan (SWPPP)**), , M-BI-8 (**prevention of chehmical pollutants), **M-AQ-2 (**fugitive dust control plan**)**	Less than Significant
Impact BI-SP-4: Operational permanent indirect impacts to special-status plants	**M-BI-3** (habitat preservation), **M-BI-4** (resource management plan)**, M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species)**, M-BI-10** (O&M signage), **M-WF-1** (fire protection plan (FPP))	Less than Significant
Impact BI-W-1: Temporary direct impact to special-status wildlife	**M-BI-1** (monitoring), **M-BI-2**,(temporary construction fencing)	Less than Significant
Impact BI-W-2: Permanent direct impact to special-status wildlife (including tricolored blackbird, burrowing owl and raptor foraging habitat)	**M-BI-3** (habitat preservation**), M-BI-4** (resource management plan)**, M-BI-5** (nesting bird surveys)	Less than Significant
Impact BI-W-3: Permanent direct impact to special-status wildlife (sensitive bird nesting)	**M-BI-1** (monitoring), **M-BI-5** (nesting bird surveys)	Less than Significant

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Impact	Mitigation	Conclusion and Mitigation Effectiveness
Impact BI-W-4: Permanent direct impact to Special-status wildlife (bats)	**M-BI-6** (bat surveys and roost avoidance or exclusion)	Less than Significant
Impact BI-W-5: Construction-related temporary indirect impacts to special-status wildlife (including sensitive bird nesting)	**M-BI-1** (monitoring), **M-BI-2** (temporary construction fencing), **M-BI-5** (nesting bird surveys), **M-BI-7** (biological monitoring of the SWPPP**),** and **M-BI-10 (**O&M signage), **M-BI-11** (noise reduction); **M-AQ-2** (fugitive dust control plan)	Less than Significant
Impact BI-W-6: Operational permanent indirect impacts to special-status wildlife	**M-BI-3** (habitat preservation), **M-BI-4 (**resource management plan), and **M-BI-8 (**prevention of chemical pollutants**), M-BI-9 (**prevention of invasive species**), M-BI-10** (O&M signage**); M-WF-1** (FPP)	Less than Significant
Impact BI-WLC-1: Temporary direct impact to wildlife movement	**M-BI-1** (monitoring), **M-BI-2** (temporary construction fencing)	Less than Significant
Impact BI-WLC-2: Permanent direct impact to wildlife movement (Core wildlife area)	**M-BI-3** (habitat preservation), **M-BI-4** (resources management plan)	Less than Significant
Impact BI-WLC-3: Temporary indirect impact to wildlife movement	**M-BI-**1 (monitoring), **M-BI-2** (temporary construction fencing), **M-BI-5** (nesting bird surveys)**, M-BI-7** (biological monitoring of the SWPP)**,** and **M-BI-11** (noise reduction)	Less than Significant
Impact BI-V-1: Temporary direct riparian habitat or sensitive vegetation communities	**M-BI-1** (monitoring), **M-BI-2** (temporary construction fencing)	Less than Significant
Impact BI-V-2: Permanent direct riparian habitat or sensitive vegetation communities	**M-BI-3** (habitat preservation), **M-BI-4** (resource management plan)	Less than Significant
Impact BI-V-3: Temporary indirect riparian habitat or sensitive vegetation communities	**M-BI-1** (monitoring), **M-BI-2** (temporary construction fencing)**, M-BI-7** (biological monitoring of the SWPPP), to **M-BI-8** (prevention of chemical pollutants), **M-AQ-2** (fugitive dust control plan)	Less than Significant
Impact BI-V-4: Permanent indirect riparian habitat or sensitive vegetation communities	**M-BI-3** (habitat preservation), **M-BI-4** (resource management plan), **M-BI-7** (biological monitoring of the SWPPP), **M-BI-8** (prevention of chemical pollutants)**, M-BI-9** (prevention of invasive plant species), **M-WF-1** (FPP)	Less than Significant
Impact BI-JAR-1: Temporary direct	**M-BI-1** (monitoring)**, M-BI-2 (**temporary construction fencing)	Less than Significant

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Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
Jurisdictional resources		
Impact BI-JAR-2: Temporary indirect Jurisdictional resources	**M-BI-1** (monitoring)**, M-BI-2** (temporary construction fencing); **M-BI-7** (biological monitoring of the SWPPP), **M-BI-8** (prevention of chemical pollutants), **M-AQ-2 (**fugitive dust control plan)	Less than Significant
Impact BI-JAR-3: Permanent indirect Jurisdictional resources	**M-BI-3** (habitat preservation), **M-BI-4** (resource management plan), **M-BI-8** (prevention of chemical pollutants; **M-BI-9** (prevention of invasive plant species); **M-WF-1** (FPP)	Less than Significant
2.4 Cultural Resources		
Impact CR-1: Construction and Decommissioning-related impacts to undiscovered cultural resources on-site or known cultural resources within 50 feet of the Project ADI	**M-CR-1 (**temporary fencing), **M-CR-2** (archaeological monitoring), **M-CR-3** (cultural resources treatment agreement and preservation plan), **M-CR-4** (long-term preservation of resources)	Less than Significant
Impact CUL-2 Construction-related impacts to undiscovered human remains	**M-CR-2** (archaeological monitoring), **M-CR-3** (cultural resources treatment agreement and preservation plan)	
2.5 Geology, Soils, and Seismicity		
Impact GEO-1: Ground failure due to liquefaction, seismically induced settlements, and/or lateral ground spread that could result in the collapse of a structure	**M-GEO-1** (detailed, site-specific subsurface report or preliminary geotechnical investigation)	Less than Significant
Impact GEO-2: Expansive soils have potential to impact development	**M-GEO-1** (detailed, site-specific subsurface report or preliminary geotechnical investigation)	Less than Significant
2.6 Hazards and Hazardous Materials		
Impact HAZ-1: Operational-related impacts that could exacerbate wildfire risks and thereby expose project occupants to risk of loss, injury or death involving wildland fires	**M-WF-1** (FPP), **M-WF-3** (Fire Protection and Mitigation Agreement)	Less than Significant
Impact HAZ-2: Construction-related	**M-WF-2**.(construction fire protection plan (CFPP))	Less than Significant

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Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
impacts exposing project occupants to potential risk of loss, injury or death involving wildland fires		
Impact HAZ-CU-1 Cumulative impacts to interference with emergency response	**M-WF-1** (FPP), **M-WF-2** (CFPP), **M-WF-3** (Fire Protection and Mitigation Agreement)	Less than Significant
Impact HAZ-CU-2 Cumulative impacts to Wildland Fire Hazards	**M-WF-1** (FPP), **M-WF-2** (CFPP), **M-WF-3** (Fire Protection and Mitigation Agreement)	Less Significant
2.7 Hydrology and Water Quality		
Impact HYD-1: Impacts resulting from implementation of the Proposed Project associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence, during construction and operation	**M-HYD-1** (perimeter fencing plan)	Less than Significant
2.9 Noise		
Impact NOI-1: Operational stationary equipment noise	**M-NOI-1** (revised acoustical assessment report and site plan)	Less than Significant
Impact NOI-2: Operational Mobile Equipment noise	**M-NOI-2** (PV panel washing protocol)	Less than Significant
Impact NOI-3: Construction-related noise	**M-NOI-3** (construction noise management plan**)**	Less than Significant
2.10 Paleontological Resources		
Impact PR-1: Construction-related impact to paleontological resources	**M-PR-1** (paleontological resources monitoring program)	Less than Significant
2.11 Tribal Cultural Resources		
Impact TCR-1: Construction and Decommissioning related impacts to tribal cultural resources and human	**M-TCR-**1 (temporary fencing), **M-TCR-2** (archaeological and tribal monitoring), **M-TCR-3** (long-term preservation of resources)	Less than Significant

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Summary of Significant Effects

Impact	Mitigation	Conclusion and Mitigation Effectiveness
remains		
2.12 Wildfire		
Impact WF-1 Operational-related impacts to wildfire risk	**M-WF-1** (FPP)	Less than Significant
Impact WF-2 Construction-related impacts to wildfire risk	**M-WF-2** (CFPP)	Less than Significant
Impact WF-3 Infrastructure contribution to increased wildfire risk	**M-WF-3** (Fire Protection and Mitigation Agreement)	Less than Significant
Impact WF-CU-1 Cumulative Impact to Emergency Response and emergency evacuation plan	**M-WF-1** (FPP), **M-WF-2** (CFPP)	Less than Significant
Impact WF-CU-2 Cumulative Impact to wildfire risk	**M-WF-1** (FPP), **M-WF-2** (CFPP), **M-WF-3** (Fire Protection and Mitigation Agreement)	Less than Significant
Impact WF-CU-3 Cumulative Infrastructure Contribution to Increased Wildfire Risk	**M-WF-1** (FPP), **M-WF-2** (CFPP), **M-WF-3** (Fire Protection and Mitigation Agreement)	Less than Significant

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Aesthetics Mitigation Measures	
M-AE-1	Inverter enclosures shall be a non-reflective color. If the enclosures are not manufactured as non-reflective, the enclosures shall be painted a non-reflective color.
M-AE-2	Energy storage containers shall be a non-reflective color. If the containers are not manufactured as non-reflective, the containers shall be painted a non-reflective color.
M-AE-3	All new transmission line conductors shall be non-reflective in design to reduce conductor visibility and visual contrast.
M-AE-4	A minimum set-back of 75 feet from residential property lines to solar panels shall be provided along the western Project boundary. This setback shall be provided where the western Project boundary parallels residential property lines in Jacumba Hot Springs. Setbacks shall be provided pursuant to Section 4800, Setback Regulations, of the County's Zoning Ordinance and shown on Project Plot Plans.
M-AE-5	Landscaping shall be installed to provide visual screening of the solar facility. The proposed rows of landscaping will be approximately 15 feet wide and will include drought tolerant trees (approximately 18 feet tall 10 years after planting) with native and/or drought tolerant shrubs and ground covers incorporated in between the fence line and the existing road and utility

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	easements. As identified on the Project Conceptual Landscape Plan, landscaping shall be installed and shall run parallel to segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of the solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facility adjacent to the community of Jacumba Hot Springs. The applicant shall prepare the Landscape Plans using the Landscape Documentation Package and pay all applicable review fees. Prior to approval of any plan, issuance of any permit, and prior to use of the premises in reliance of this permit, the Landscape Documentation Package shall be prepared and approved. Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the landscaping shall be installed. The applicant shall submit to the [PDS LA, PCC], a Landscape Certificate of Completion from the project California licensed Landscape Architect, Architect, or Civil Engineer, that all landscaping has been installed as shown on the approved Landscape Documentation Package. The applicant shall prepare the Landscape Certificate of Completion using the Landscape Certificate of Completion Checklist. Prior to project construction, the project applicant shall submit a conceptual landscape plan detailing the planting materials and sizes and location of landscaping shall be prepared and provided to the County for review and approval. Landscaping shall be planted and maintained accordingly to ensure continued screening of proposed solar panels by the Applicant and/or Project operator over the operational life of the Project.
M-AE-6	As identified on the Project Plot Plans, tan-colored slats shall be installed along specific segments of the Project perimeter fence in the following specified sections: along the north and south side of the Old Highway 80 for the entire length of solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facilities adjacent to the community of Jacumba Hot Springs. Slats shall be maintained accordingly over the operational life of the Project. Slats shall be replaced as needed to ensure a unified and orderly appearance and to provide continued screening of Project components.
Air Quality Mitigation Measures	
M-AQ-1	Prior to the County of San Diego's (County's) approval of any construction or decommissioning-related permits, the Proposed Project applicant or its designee shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions: a. Heavy-duty diesel-powered construction equipment shall be equipped with Tier 4 Final or better diesel engines for engines 75 horsepower or greater. The County shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards. b. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions. c. All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications. When construction equipment units that are less than 50 horsepower are employed, that equipment shall be electrical or natural gas-powered, where available.
M-AQ-2	Prior to the County of San Diego's (County's) approval of any grading permits and during Proposed Project construction and decommissioning, a Fugitive Dust Control Plan shall be prepared demonstrating compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 and County Code Section 87.428 (Grading Ordinance), to the satisfaction of the County. The Project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM_{10} emissions as part of the Fugitive Dust Control Plan. All measures shall be designated on Grading and Improvement Plans. a. Prior to construction activities, the Project applicant shall employ a construction relations officer who shall address community concerns regarding on-site construction activity. The Project applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations and noted on Grading and Improvement Plans. b. Grading areas shall be watered, or another SDAPCD-approved dust control non-toxic agent shall be used, at least three times daily, to minimize fugitive dust only where chemical stabilizers are not used. c. All permanent roads and the paved access roadway improvements shall be constructed and paved as early

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	as possible in the construction process to reduce construction vehicle travel on unpaved roads. Foundations shall be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earth-moving operations. d. Grading areas shall be stabilized as quickly as possible to minimize fugitive dust. e. Wheel washers, grates, rock, or road washers shall be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads. f. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence. g. Haul trucks shall be covered or at least 2 feet of freeboard shall be maintained to reduce blow-off during hauling. h. A 15-mile-per-hour speed limit on unpaved surfaces shall be enforced. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.
Biological Resources Mitigation Measures	
M-BI-1	**Biological Monitoring.** (a) In order to prevent inadvertent disturbance to sensitive resource areas outside the approved area of impact, a County of San Diego (County)-approved biologist (Project Biologist) shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities. 1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*. The contract provided to the County shall include an agreement that this will be completed, and a memorandum of understanding between the biological consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*, the Project Biologist shall also perform the following duties: a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds). b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading and clarifying that the Project Biologist has the authority to halt work that could harm or harass a protected species. c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading. d. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading. e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading. f. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts on biological resources that are intended to be protected and preserved. g. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earthmoving activities. If brush-clearing and earth-moving activities take place within the bird breeding season, flushing shall not occur in an area identified as having an active nest and thus resulting in a potential take of a species. h. Verify that grading plans include a stormwater pollution prevention plan (SWPPP) (if required pursuant to provisions of the State Water Resources Control Board 2009-0009-DWQ Construction General Permit, or equivalent applying the standards set forth in the County of San Diego Stormwater Standards

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	Manual) to address hydrology impacts; see **M-BI-7**. i. Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that temporarily impacted areas are revegetated as soon as possible. j. Periodically monitor the construction site to verify that artificial security light fixtures are directed away from open space and are shielded. k. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas are provided on a daily basis during vegetation clearing, grubbing and grading. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles shall be covered at night to prevent wildlife from burrowing in. The edges of the sheeting shall be weighted down with sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area at the end of the day) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route. l. Except as stated otherwise herein, biological monitoring is daily during vegetation clearing, grubbing and grading. Once the PV field construction commences, the monitoring shall be weekly. 2. The cost of the monitoring shall be added to the grading bonds or bonded separately with the County Planning & Development Services (PDS). **Documentation**: The Applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to the PDS. Additionally, the cost amount of the monitoring work shall be added to the grading bond cost estimate. **Timing**: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits. **Monitoring**: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate should be forwarded to the Project manager, for inclusion in the grading bond cost estimate, and grading bonds. The DPW/PDS shall add the cost of the monitoring to the grading bond costs. (b) In order to ensure that the biological monitoring occurred during the grading phase of the Project, a final biological monitoring report shall be prepared. The Project Biologist shall prepare the final biological monitoring report. The report shall substantiate the supervision of the grading activities, and confirm that grading or construction activities did not impact any additional areas or any other sensitive biological resources. The report shall conform to the County *Report Format Guidelines for Biological Resources*, and include the following items: a. Photos of the fencing or temporary flagging that was installed during the trenching, grading, or clearing activities b. Monitoring logs showing the date and time that the monitor was on site c. Photos of the site after the grading and clearing activities. **Documentation:** The Project Biologist shall prepare the final report and submit it to the PDS for review and approval. **Timing:** Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved. **Monitoring:** The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform the applicant to release the bond back to the Applicant. (c) Compliance with this measure shall be required during decommissioning activities
M-BI-2	**Temporary Construction Fencing.** Prior to issuance of permits, including clearing, grubbing, grading, and/or construction permits, the project applicant or its designee shall install fencing wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the Project Biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on plans. Prior

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	to release of grading and/or improvement bonds, a qualified biologist shall provide evidence to the satisfaction of the Director of the San Diego County Department of Planning and Development Services (or his/her designee) that work was conducted as authorized under the approved permits and associated plans.
M-BI-3	**Habitat Preservation.** In order to mitigate for impacts to loss of sensitive vegetation communities, plant and wildlife species habitat, special status plant species, burrowing owl occupied habitat, and wildlife movement, the applicant shall provide an on-site biological open space easement. (a) In order to protect sensitive biological resources, pursuant to the Resource Protection Ordinance (RPO) and California Environmental Quality Act, a biological open space easement will be granted over up to 435.00 acres of sensitive vegetation communities, special-status plant species, and habitat for special-status species. The project is estimated to impact sensitive vegetation communities that require mitigation as summarized in the following table.

Vegetation Community/Land Cover	Ratio	Permanent Direct Impacts (Acres)	Required Mitigation (Acres)	Biological Open Space Easement (Acres)
*Desert saltbush scrub	2:1	50.39	100.78	4.69
*Desert sink scrub	3:1	—	—	12.43
*Disturbed freshwater marsh	3:1	—	—	0.08
*Mesquite bosque	3:1	2.64	7.92	126.12
*Sonoran mixed woody scrub	1:1	—	—	139.33
*Sonoran mixed woody and succulent scrub	1:1	72.85	72.85	132.05
*Tamarisk scrub	3:1	1.11	3.33	—
*Non-wetland waters of the United States/state	1:1	—	—	0.78
Fallow agriculture[1]	0.5:1	467.63	233.82	9.35
Disturbed habitat	N/A	27.27	—	10.17
Urban/developed	N/A	21.24	—	<0.01
Total	**—**	**643.13**	**418.70**	**435.00**

Note: An asterisk (*) marks land cover types for which the County of San Diego (2010a) requires mitigation.
[1] The fallow agriculture is considered raptor foraging habitat mitigated at a 0.5:1 mitigation ratio.

This biological open space easement shall mitigate for project impacts to sensitive vegetation communities and habitat for wildlife species, thereby preserving compensatory habitat that provides equal or greater benefit to plant and wildlife species. This biological open space easement will be granted to the County of San Diego (County). Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. This easement is for the protection of biological resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. The only exceptions to this prohibition are (1) vegetation clearing by hand, by written order of the fire authority for reduction of an identified fire hazard; (2) activities conducted pursuant to an approved revegetation or resource management plan; (3) vector control by written

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	order of the County; and (4) construction, use, and maintenance of approved multi-use, non-motorized trails. No trails have been approved as part of this Project and would require subsequent environmental review and approval by PDS. Permanent signage indicating the area is a biological open space will be required and will be installed by the developer. **Documentation:** The applicant shall prepare the draft plats and legal descriptions of the easements, then submit them for preparation and recordation with the DGS, and concurrence with PDS, and pay all applicable fees associated with preparation of the documents. **Timing:** Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded. **Monitoring:** The DGS shall prepare and approve the easement documents and send them to PDS for pre-approval. The PDS shall pre-approve the language and estimated location of the easements before they are released to the applicant for signature and subsequent recordation. Upon Recordation of the easements, DGS shall forward a copy of the recorded documents to PDS for satisfaction of the condition. (b) **Special-Status Plants.** Mitigation shall be provided for one pygmy lotus (County List A) and 21 sticky geraea individuals (County List B). County List A plant species will be mitigated at a 3:1 ratio, and County List B species will be mitigated at a 1:1 mitigation ratio. Mitigation for these plants shall be achieved through a combination of (1) salvaging the plants located in proposed impact areas and replanting in suitable mitigation lands, and (2) establishment of additional plants to meet the mitigation requirements. The Resource Management Plan (RMP) for the biological open space easement shall include the required measures to ensure viability of the transplanted and established individuals. The RMP (see M-BI-4) will include the locations of the plant restoration. The RMP will be the basis for monitoring and mitigation activities for the entire biological open space, including locations of plant mitigation. **Documentation:** The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees. **Timing:** Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded. **Monitoring:** A RMP Annual Report will be submitted to the County along with the submittal fee to cover County staff review time. (c) **Burrowing owl occupied habitat**. Based on mitigation ratios provided in Table 1 of the Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County (Attachment A, County of San Diego 2010b), the project is required to provide 1:1 mitigation ratio for impacts to occupied burrowing owl habitat. Impacts to burrowing owl habitat will be mitigated by dedicating 22 acres of suitable burrowing owl habitat as an on-site biological open space easement. This acreage is included in the overall up to 435-acre biological open space easement. This area is comprised of open, relatively flat habitat which contains similar vegetation communities as the impacted habitat. This biological open space easement shall mitigate for project impacts to occupied burrowing owl habitat. Refer to M-BI-3(a) which describes the biological open space easement requirements. (d) **Wildlife Corridor Access.** The project shall provide a 50 to 100 foot opening in the perimeter fence north of the SDG&E easement to allow for wildlife moving within the easement corridor or north of the easement to move in and out of the easement. The opening in the fence will allow wildlife traveling along the fence line to find a break in the fencing leading them into the larger wildlife corridor. This opening in the fence shall be

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	provided and maintained for the life of the project. **Documentation:** The fencing on the construction plans shall show an opening in the perimeter fencing as described above. The applicant shall install the project fencing or walls as indicated above and provide site photos and a statement from a California Registered Engineer, or licensed surveyor that the fencing has been installed to provide the required opening. **Timing:** Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded. **Monitoring:** The *[PDS, PCC]* shall review the photos and statement for compliance with this condition.
M-BI-4	**Resource Management Plan (RMP).** In order to provide for the long-term management of the proposed on-site biological open space, an RMP will be prepared and implemented. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of Planning & Development Services as follows: 1. The plan will be prepared and approved pursuant to the most current version of the County of San Diego (County) Biological Report Format and Content Requirements. 2. The habitat land to be managed will be owned by a land conservancy or equivalent. 3. Open space easements will be dedicated to the County in perpetuity, unless conveyed to another public agency subject to approval by the Director of PDS. 4. A resource manager will be selected and approved, with evidence provided demonstrating acceptance of this responsibility. 5. The RMP funding mechanism to fund annual costs for basic stewardship shall be identified and approved by the County. The RMP funding mechanism will be identified and adequate to fund annual costs for implementation; typically determined by a Property Analysis Record as a non-wasting endowment. 6. A contract between the applicant and County will be executed for the implementation of the RMP. **Documentation:** The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees. **Timing**: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the RMP shall be approved. **Monitoring:** The PDS shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.
M-BI-5	This mitigation measure serves to avoid take of birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during the nesting season (M-BI-5(a)) and take avoidance for burrowing owls during the breeding and non-breeding season (M-BI-5(b). **(a) Nesting Bird Survey.** To avoid any direct impacts on raptors and/or any migratory birds protected under the Migratory Bird Treaty Act and California Fish and Game Code, removal of habitat that supports active nests on the proposed area of disturbance shall occur outside the nesting season for these species (which is January 15 through August 31, annually). If construction work must occur during the avian breeding season (January 15 to August 31, annually), the applicant shall: 1. Work with the County, CDFW and the USFWS to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. a. The applicant(s) will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following:

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	b. Nest survey protocols describing the nest survey methodologies c. A management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks d. A monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFSW and CDFW to monitor the applicant's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 e. A schedule for the submittal (usually weekly) of the NML f. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks g. A detailed explanation of how the buffer widths were determined. h. All measures the applicant will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting. 2. Conduct preconstruction nesting bird surveys within 72 hours of construction-related activities; conduct preconstruction survey sweeps immediately prior to ground-disturbing activities; and implement appropriate avoidance measures for identified nesting birds in the NBMMRP. Resurvey, if construction activities are halted for ten consecutive days. 3. To determine presence of nesting birds that the project activities may affect, surveys shall be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols shall include a detailed description of methodologies utilized by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols shall include but are not limited to the size of the project area being surveyed, method of search, and behavior that indicates active nests. 4. Each nest identified in the project area shall be included in the NML. The NMLs should be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs shall include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs shall provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs shall allow for tracking the success and failure of the buffers and would provide data on the adequacy of the buffers for certain species. 5. The applicant(s) will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths shall be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths shall consider the following factors: a. Nesting chronologies b. Geographic location c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise) d. Type and extent of disturbance (e.g., noise levels and quality— punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the ground-nesting birds flush the nests) e. Visibility of disturbance f. Duration and timing of disturbance g. Influence of other environmental factors h. Species' site-specific level of habituation to the disturbance. 6. Application of the standard buffer widths shall avoid the potential for project-related nest abandonment and

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	failure of fledging and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened. This measure does not apply to nests that are started on construction equipment or panels or supporting structures. **Documentation:** The Project Biologist shall prepare the final report and submit it to the PDS for review and approval. **Timing:** Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved. **Monitoring:** The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then the PDS shall inform DPW to release the bond back to the applicant. **(b) Burrowing Owl Take Avoidance Surveys.** Take avoidance surveys are intended to detect the presence of burrowing owls on a project site at a fixed period in time and inform necessary take avoidance actions. Take avoidance surveys may detect changes in owl presence such as colonizing owls that have recently moved onto the site, migrating owls, resident burrowing owls changing burrow use, or young of the year that are still present and have not dispersed (CDFG 2012). Surveys must be completed no less than 14 days prior to the initiating ground disturbance activities. **1.** If burrowing owls are detected during the breeding season (February 1 through August 1) surveys, a Burrowing Owl Management Plan will need to be written and approved by the County and the California Department of Fish and Wildlife before construction continues. The Plan shall include, at a minimum: 1) measures to protect burrowing owls during grading; 2) description of passive or active burrowing relocation during the non-breeding season; and 3) description of BMPs to implement during construction (e.g., ensure that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms). Table 6-2, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls, provides the CDFW-recommended restricted activity dates and setback distances around occupied burrowing owl nests for varying levels of disturbance (CDFG 2012). **2.** If construction activities occur during the non-breeding season for burrowing owl (1 September – 31 January), a biologist shall conduct a take avoidance survey, following the methods described in the Burrowing Owl Staff Report (CDFG 2012). The take avoidance survey(s) can be conducted between 14 days and 24 hours prior to initiating ground disturbance activities; however, time lapses between project activities may require subsequent surveys within 24 hours prior to ground disturbance. If any burrowing owls are found during these surveys, avoidance and minimization measures must be implemented. The following avoidance and minimization measures shall be implemented: a. Avoid working within 50 meters (160 feet) from the occupied burrow during the non-breeding season; b. Avoid direct destruction of occupied burrows during the non-breeding season until the burrowing owl has vacated the burrow (determined through monitoring of the burrow); If these measures cannot be implemented, the applicant shall obtain written approval of an accepted plan (written or verbal) from the County and the California Department of Fish and Wildlife before construction continues. The plan shall include 1) identification of artificial burrow sites, 2) passive relocation methods,

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	3) monitoring and management of the artificial burrow site, and 4) reporting. **Documentation:** The Project Biologist shall prepare the final survey report and/or Burrowing Owl Management Plan and submit it to the PDS for review and approval. **Timing:** Prior to final grading release, or use of the premises in reliance of this permit, the final survey report and/or Burrowing Owl Management Plan shall be approved. **Monitoring:** The PDS shall review the final survey report and/or Burrowing Owl Management Plan for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished. **(c)** In order to avoid impacts to nesting birds and burrowing owls during decommissioning the Project operator shall be required to implement the measures outlined in subsections (a) and (b) prior to undertaking decommissioning activities.
M-BI-6	**Bat Surveys and Roost Avoidance or Exclusion.** To determine whether there is an active maternity roost within the buildings and other structures to be demolished, a bat biologist shall conduct surveys prior to demolition of the buildings or any other areas that provide suitable roosting habitat for bats. If a potential maternity roost is present, the following measures shall be implemented to reduce the potential impact on special-status bat species to a less than significant level: a. **Maternity Roosting Season Avoidance.** All demolition activities, or bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August to reduce any potentially significant impact to maternity roosting bats. If the maternity roosting season cannot be avoided, then roost exclusion can occur outside the maternity roosting season (September through February) to exclude bats from the demolition area prior to the start of demolition during the maternity roosting season. Items b and c below will be required to ensure no impacts occur to roosting bats during the exclusion process. b. **Replacement Roost Installation.** If there is a potential or known maternity roost within a structure to be demolished, a replacement roost installation shall occur outside of the maternity roosting season within the biological open space easement. At least one month prior to the exclusion of bats from the roost(s), the project applicant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in an area that is close to suitable foraging habitat as determined by a biologist who specializes in bats in consultation with County staff. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours daily) to allow the bat boxes to reach an optimum internal temperature (approximately 90°F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on a 20-foot-tall steel pole. Should the bat boxes be required, maintenance of the boxes will be included in the RMP to ensure long-term use/functionality. c. **Roost Exclusion.** Roost exclusion must only occur September through February to increase the potential to exclude all bats from roosts and minimize the potential for a significant impact to occur by avoiding the maternity roosting season. Approximately one month after bat boxes have been installed, exclusion of the existing roost within the buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/ egress locations on the buildings will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (e.g., poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top of the roost location and sealed and passing 2 feet below the bottom of the primary exit point. The exclusion devices will be installed at night to increase the potential that bats will have already left the roost and are less likely to return. Exclusion devices will be left in place for one week to ensure that

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	any remaining bats in the roost(s) are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor whether bat activity has decreased during the exclusion period. Periodic monitoring should also be conducted during the exclusion period to observe whether any bats are still emerging from additional areas within the impact footprint, and an active monitoring survey should be conducted on the final night of exclusion to ensure that no bats are emerging from the buildings and determine whether exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule. The exclusion devices may remain in place until the start of demolition activities. If any bats are found roosting in any proposed demolition areas prior to demolition, additional exclusion will be required and follow the same methodology described in this mitigation measure. This will occur until all bats are excluded. d. **Survey Report**. Following completion of the survey the bat biologist will complete a survey report which records the findings. If active roosts are observed, and the maternity roosting season cannot be avoided, and bats must be removed, the report will also document the replacement roost installation and roost exclusion. **Documentation:** The Project Biologist shall prepare the final report and submit it to the PDS for review and approval. **Timing:** Prior to final grading release, or use of the premises in reliance of this permit, the final report shall be approved. **Monitoring:** The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished.
M-BI-7	**Biological Monitoring of Stormwater Pollution Prevention Plan (SWPPP) Implementation.** During construction monitoring, the Project Biologist shall verify the following are implemented: a. No planting or seeding of invasive plant species on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region. b. Dust-control fencing is in place and intact if fencing is required. c. Construction activity is located outside of jurisdictional waters of the United States/state except as authorized by applicable law and permit(s), including permits and authorizations approved by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board. d. Silt-settling basins installed during the construction process are located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes. Design of drainage facilities shall incorporate long-term control of pollutants and stormwater flow to minimize pollution and hydrologic changes. e. Temporary structures, staging, and storage areas for construction equipment and/or materials are located outside of jurisdictional waters, including wetlands and riparian areas. f. No material stockpiles, debris, bark, slash sawdust, rubbish, cement, concrete or washing thereof, oil, or petroleum products are stored where they may be washed by rainfall or runoff into jurisdictional waters of the United States/state. g. When construction operations are completed, excess materials or debris have been removed from the work area. h. No equipment maintenance is performed within or near jurisdictional waters of the United States/state where petroleum products or other pollutants from the equipment may enter these areas. i. Fully covered trash receptacles that are animal-proof and weather-proof are installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.

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	Littering is prohibited and removal of trash from construction areas daily is required. All food-related trash and garbage are removed from construction sites on a daily basis. j. There are no pets on or adjacent to construction sites. k. Speed limits in and around all construction areas are enforced so that vehicles do not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site, or 10 miles per hour during the night.
M-BI-8	**Prevention of Chemical Pollutants**. Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego (County) agriculture commissioner. The application of herbicides shall be in compliance with all federal and state laws and regulations under the prescription of a licensed Pest Control Adviser with at least 2-years' experience and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the Pest Control Adviser, the County agriculture commissioner, and the California Invasive Plant Council, with the goal of controlling populations before they start producing seeds. During project operation, all areas that use chemicals that are potentially toxic or impactive to sensitive habitats or plants shall incorporate best management practices (e.g., avoid applications during or before rain events and avoid placing materials close to sensitive habitats) on site to reduce impacts caused by the application and/or drainage of such materials within the development footprint. In addition, use of rodenticides shall not be allowed. Weed treatment shall occur at least once per year throughout the life of the project.
M-BI-9	**Prevention of Invasive Plant Species.** A County of San Diego-approved plant list shall be used for areas immediately adjacent to open space. A hydroseed mix that incorporates native species, is appropriate to the area, and is free from invasive species shall be used for landscaped areas adjacent to the biological open space. The San Diego County Planning & Development Services landscape architect shall require that all final landscape plans comply with the following: no invasive plant species, as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with these requirements.
M-BI-10	**Operations and Maintenance Signage**. Signage shall be posted at all entrances to the facility stating that operations and maintenance personnel shall be prohibited from the following: • Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species • Smoking • Traveling (either on foot or in a vehicle) outside of the solar facility undisturbed portions of the Project site • No pets • No Littering • No persons not conducing operations and maintenance activities shall remain at the facility after daylight hours or exceed normal nighttime operational noise or lighting
M-BI-11	**Noise Reduction.** Construction-related activities that are excessively noisy (e.g., clearing, grading, or grubbing) adjacent to breeding/nesting areas shall incorporate noise-reduction measures (described below) or be curtailed during the breeding/nesting season of sensitive bird species. • Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer. • Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements. • Usage of truck engine exhaust compression braking systems shall be limited to emergencies.

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	• Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and Cal OSHA's safety requirements are not violated. These settings shall be retained for the duration of construction activities. • Vehicle horns shall be used only when absolutely necessary, as specified in the contractor's specifications. • Radios and other noise-generating "personal equipment" shall be prohibited. If construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) occur during the period of January 15 through August 31, a County of San Diego-approved biologist shall conduct preconstruction surveys in suitable nesting habitat adjacent to the construction area to determine the location of any active nests in the area (see **M-BI-5**).
Cultural Resources Mitigation Measures	
M-CR-1	**Temporary Fencing.** To prevent inadvertent disturbance of archaeological sites within the avoidance areas and to the unimpacted portions of the site outside of the ADI, temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements: 1. Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect from inadvertent disturbance archaeological sites or portions of sites (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910) adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances and shall remain for the duration of earth-disturbing activities • Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI (CA-SDI-11682, and CA-SDI-20985). • The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed. • Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to M-CR-2. • A signed and stamped statement from a California Registered Engineer, or licensed surveyor shall be submitted to Planning & Development Services for approval. The statement shall identify that temporary fencing has been installed in all required locations where grading or clearing is within 50 feet of an archaeological site outside of the Project ADI.
M-CR-2	**Archaeological Monitoring.** To mitigate for potential impacts to undiscovered, buried archaeological resources within the Project ADI and to mitigate the additional impacts to known archaeological resources, an archaeological monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements: • Pre-Construction o The applicant shall contract with a County-approved archaeologist to perform archaeological monitoring. The project archaeologist shall contract with a Kumeyaay monitor to conduct Native American monitoring for the Proposed Project. o Pre-construction meeting to be attended by the Project Archaeologist and Kumeyaay Native American monitor(s) to explain the monitoring requirements. • Construction o Temporary Fencing. Temporary orange construction fencing shall be installed around unimpacted portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910 and along the MUP boundaries where cultural resources (CA-SDI-11682, and CA-SDI-20985, and CA-SDI-21757) are within 50 feet of the Project ADI. An archaeological monitor and Kumeyaay Native American monitor shall be present to assure proper placement of construction fencing

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	and to prevent impacts to cultural resources. o Monitoring. Both the archaeological and Kumeyaay Native American monitor(s) are to be on site during earth disturbing activities. The frequency and location of monitoring of native soils will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s). Both the archaeological and Kumeyaay Native American monitor(s) shall evaluate fill soils to ensure that they are negative for cultural resources o If cultural resources are identified: ▪ Both the archaeological and Kumeyaay Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery. ▪ The archaeological monitor shall contact the Project Archaeologist. ▪ The Project Archaeologist shall contact the County Archaeologist. ▪ The Project Archaeologist in consultation with the County Archaeologist and Kumeyaay Native American monitor(s) shall determine the significance of discovered resources. ▪ Construction activities will be allowed to resume after the County Archaeologist has concurred with the significance evaluation. ▪ Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the archaeological monitor, the Kumeyaay Native American monitor(s) may collect the cultural material for transfer to a Tribal curation facility or repatriation program. ▪ If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s) and approved by the County Archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources of Sacred Sites; the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance). o Human Remains. ▪ The Property Owner or their representative shall contact the County Coroner and the County Planning & Development Services (PDS) Staff Archaeologist. ▪ Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. Should the human remains need to be taken offsite for evaluation, they shall be accompanied by a Kumeyaay Native American monitor. ▪ If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the Property Owner or their representative in order to determine proper treatment and disposition of the remains. ▪ The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted. ▪ Public Resources Code §5097.98, CEQA §15064.5 and Health & Safety Code §7050.5 shall be followed in the event that human remains are discovered. • Rough Grading o Upon completion of Rough Grading, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring report shall be provided to any culturally affiliated tribe who requests a copy. • Final Grading o A final report shall be prepared substantiating that earth-disturbing activities are completed and whether cultural resources were encountered. A copy of the final report shall be submitted to the South Coastal Information Center, and any culturally affiliated tribe who requests a copy. o Cultural Material Conveyance ▪ The final report shall include evidence that all prehistoric materials have been curated at a San Diego curation facility or Tribal curation facility that meets federal standards per 36 CFR Part 79, or

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	alternatively have been repatriated to a culturally affiliated tribe. ▪ The final report shall include evidence that all historic materials have been curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79.
M-CR-3	**Cultural Resources Treatment Agreement** and **Preservation Plan** Prior to the approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the Cultural Resources Treatment Agreement and Preservation Plan shall be submitted to County of San Diego Director of Planning & Development Services for review and approval. The Plan shall be prepared by the Project archaeologist and the Kumeyaay Native American Monitor and shall include but not be limited to the following: • Parties entering into the agreement and contact information. • Responsibilities of the Property Owner or their representative, Principal Investigator, archaeological monitors, Kumeyaay Native American monitors, and the Tribe. • Requirements of the Archaeological Monitoring Program including unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural materials (both in the field and lab settings), and onsite storage of cultural materials, as necessary and if required. • Treatment of identified Native American cultural materials. • Treatment of Native American human remains and associated grave goods. • Requirements for Temporary Fencing for 10 sites that partially intersect or are within 50 feet of the Project ADI (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11682, CA-SDI-11686, and CA-SDI-19910, and CA-SDI-20985). • Confidentiality of cultural information including location and data. • Negotiation of disagreements should they arise during the implementation of the Agreement and Preservation Plan. • Regulations that apply to cultural resources that have been identified or may be identified during project construction.
M-CR-4	**Long-Term Preservation of Resources** All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 10 potentially significant sites (or portions thereof) that are adjacent to the Project ADI. These include the eight sites that were fully or partially tested because they intersect the Project ADI and the three sites that were not evaluated because they are outside of the Project ADI but require protection because they are within 50 feet of the Project ADI. Temporary fencing shall be installed during decommissioning activities to delineate the ADI. Temporary fencing requirements are provided in **M-CR-1**
Geology, Soils and Seismicity Mitigation Measures	
M-GEO-1	Prior to the issuance of a building permit, the Project applicant shall retain a California Certified Engineering Geologist to perform a detailed site-specific subsurface report or preliminary geotechnical investigation, consistent with the California Building Code. The California Building Code (which incorporates the International Building Code) is contained in the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code, and includes design and construction requirements related to life safety and structural safety. The geotechnical study shall include subsurface investigation, laboratory testing, and additional deep explorations using borings of 60 feet or more and/or cone penetrometer tests across the alluviated portions of the Proposed Project site to further define the alluvium profile and quantitatively address the potential for soil liquefaction and lateral spreading across the site. The subsurface geotechnical study shall also include recommendations for the proposed construction and grading such as remedial grading, ground improvement techniques, special foundation design, and other recommendations to ensure that construction of the project does not result in substantial liquefaction, subsidence, or seismic-related ground failure due to lateral spread. In addition, the Proposed Project shall implement any necessary measures required to comply with existing building codes and regulations.

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Hydrology and Water Quality Mitigation Measures	
M-HYD-1	Prior to approval of final design plans, the applicant shall demonstrate to the satisfaction of the County DPW Flood Control through hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that the design features for the perimeter fencing avoids the blockage and/or redirection of storm flows resulting from the accumulation of debris and/or detritus at wash crossings. This can be accomplished through a number of means such as a) use of breakaway fencing perpendicular to flood flows, b) use of fencing that spans washes (without posts) above the anticipated peak flow depth, c) or an alternative design measure that would avoid accumulations of detritus at perimeter fence wash crossings, subject to County approval. **Documentation:** The applicant shall show the proposed fencing design or alternative design measure on the Final Grading Plans. The associated Drainage Study shall contain hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that model the proposed fencing and/or design measures and demonstrate that the fencing will not cause alteration of drainage patterns and/or flood hazards from pre-project conditions. The Drainage Study shall be in compliance with the County Hydrology Manual and the County Hydraulic Design Manual. **Timing:** Prior to the approval of any grading and/or improvement plans and issuance of Grading or Construction Permits, the Drainage Study and Plans shall be approved. **Monitoring:** The County DPW Flood Control shall review and approve the hydrologic and hydraulic analyses contained in the Drainage Study and the final fencing design and layout to ensure the flood flow is fully mitigated to pre-project conditions.
Noise Mitigation Measures	
M-NOI-1	The Proposed Project would comply with the County's Noise Ordinance §36.404 based upon the current proposed layout of the Proposed Project and the anticipated major noise producing operating stationary equipment (Equipment) deployed for the Proposed Project. The Equipment modeled in the Acoustical Analysis Report (AAR) prepared for the EIR was selected as representative technology at the time the 2020 AAR was prepared. The Project applicant may propose to use different Equipment than what was used to perform the noise modeling in the AAR or propose a change in the Equipment layout. If different Equipment is selected and/or the layout of Equipment is changed subsequent to Project approval, the applicant will be required to submit a revised AAR, and a revised site plan if needed, as follows: a. The Project applicant shall retain a County Approved CEQA Noise Consultant to prepare a new predictive operations noise analysis in accordance with the County's Noise Report Format and Content requirement b. Any proposed Equipment selections, equipment duty cycles, Project layout alterations, and/or the addition, modification, reduction of the preceding equipment noise limits and measures may be approved, if they are demonstrated to comply with applicable outdoor hourly L_{eq} noise limits per Section 36.404(a) of the County's Noise Ordinance at the property line. c. The above identified measures shall take place prior to approval of any building plans for the Proposed Project. Any alterations or modifications proposed and approved pursuant to this procedure shall be included in the proposed Project design plans.

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M-NOI-2	**PV Panel Washing Protocol**: To ensure noise from mobile operating equipment associated with regular cleansing of Project PV panel surfaces complies with daytime County noise standards, the following shall be implemented: a. As part of the Project operations and maintenance program, the Applicant shall prepare a PV Panel Washing Plan (PVPWP) that addresses the usage of self-propelled or towed washing systems during the expected quarterly (or other frequency as reasonably anticipated annually) PV panel washing. The PVPWP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating PV panel washing equipment and vehicle noise sufficiently proximate to the property on which the noise is produced or at any location on a property that is receiving the noise. The PVPWP shall be submitted to County Planning & Development Services (PDS) a minimum of 30 days prior to the first PV panel washing. The County shall review the PVPWP to ensure compliance with the County Noise Ordinance prior to any panel washing. A subsequent plan shall be submitted to County PDS if there are any anticipated changes to the panel washing in the future. The subsequent Plan shall be submitted to the County 30 days prior to any new PV panel washing procedures occur. Components of the PVPWP shall include the following: ● Affected property owners shall be notified in writing two weeks prior to PV panel washing activity within 500 feet of their property boundaries. ● Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA Leq at 16 feet over a full hour; and its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins S80, RR or similar County-classified Noise Zone 1 property**:** within 150 feet – not permitted; 150 to 250 feet – up to five minutes within any hour; 250 to 300 feet – up to fifteen minutes within any hour; 300 to 450 feet – up to thirty minutes within any hour; and, beyond 450 feet – no restriction. ● Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA Leq at 16 feet over a full hour; and its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property: within 100 feet – not permitted; 100 to 150 feet – up to five minutes within any hour; 150 to 200 feet – up to fifteen minutes within any hour; 200 to 250 feet – up to thirty minutes within any hour; and, beyond 250 feet – no restriction. ● Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA Leq at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins S80, RR or similar County-classified Noise Zone 1 property: within 50 feet – not permitted; 50 to 75 feet – up to five minutes within any hour; 75 to 100 feet – up to fifteen minutes within any hour; 100 to 125 feet – up to forty-five minutes within any hour; and, beyond 125 feet – no restriction. ● Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA Leq at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property: within 25 feet – not permitted; 25 to 40 feet – up to five minutes within any hour; 40 to 60 feet – up to fifteen minutes within any hour;

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	60 to 75 feet – up to thirty minutes within any hour; and, beyond 75 feet – no restriction. • Visual guides (flags, reflectors, or other markers) shall clearly delineate distances or zones of operation allowed for either of the afore-mentioned PV panel washing systems (self-propelled or towed). b. Operators of the PV panel washing equipment shall be informed of the PVPWP as part of customary on-site Project training and awareness of County noise standard compliance to avoid potential noise impacts to the Jacumba Hot Springs community
N-NOI-3	**Construction Noise Management Plan**: Prior to construction and decommissioning, the Applicant shall prepare a construction noise management plan (CNMP) which establishes construction activity restrictions in order to reliably achieve compliance with the County's 8-hour 75 dBA Leq standard at the Project property lines adjoining existing occupied properties (defined by Section 36.402.m as "property on which there is a building for which a certificate of occupancy has been issued"). The CNMP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating construction equipment and vehicle noise sufficiently proximate to these property lines of occupied properties. The CNMP shall be submitted to County Planning & Development Services (PDS) thirty (30) days prior to any land disturbance. Components of the CNMP shall include the following: a. Affected property owners shall be notified in writing two weeks prior to construction activity within 500 feet of their property boundaries. b. In order to comply with the County Noise Ordinance (Section 36.409 – Construction Equipment), the acoustical usage factors (AUF) of heavy construction equipment used on the Project site shall be comparable to those listed on Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide Table 1, reference L_{max} values at 50 feet shall be the lower of either the "Spec. 721.560" or "Actual Measured" values from the same RCNM User's Guide Table 1, and duration of heavy equipment operating for construction shall comply with the following limitations by activity, for the specified distance between the indicated heavy equipment operations and a position along the property line of an occupied parcel: • Perimeter fence installation – up to two flatbed trucks and a front end loader: within 15 feet – not permitted; 15 to 25 feet – no more than twenty minutes per 8-hour period; 25 to 50 feet – no more than one hour per 8-hour period; 50 to 75 feet – no more than 4 hours per 8-hour period; and, beyond 75 feet – no restriction. • Site preparation (clearing) – water truck and tractor (mowing attachment): within 20 feet – not permitted; 20 to 25 feet – no more than twenty minutes per 8-hour period; 25 to 50 feet – no more than thirty minutes per 8-hour period; 50 to 75 feet – no more than 2 hours per 8-hour period; 75 to 100 feet – no more than 4 hours per 8-hour period; and, beyond 100 feet – no restriction. • Site preparation (earth-moving) – bulldozer, water truck, and scraper: within 25 feet – not permitted; 25 to 50 feet – no more than twenty minutes per 8-hour period; 50 to 75 feet – no more than one hour per 8-hour period; 75 to 100 feet – no more than three hours per 8-hour period; 100 to 125 feet – no more than six hours per 8-hour period; and, beyond 125 feet – no restriction. • Site preparation (grading) – flatbed truck, grader, water truck, and sheepsfoot roller: within 25 feet – not permitted; 25 to 50 feet – no more than twenty minutes per 8-hour period; 50 to 75 feet – no more than one hour per 8-hour period;

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	75 to 100 feet – no more than three hours per 8-hour period; 100 to 125 feet – no more than six hours per 8-hour period; and, beyond 125 feet – no restriction. • Underground work (trenching) – excavator, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift): within 25 feet – not permitted; 25 to 50 feet – no more than twenty minutes per 8-hour period; 50 to 75 feet – no more than 1.5 hours per 8-hour period; 75 to 100 feet – no more than 3 hours per 8-hour period; and, beyond 100 feet – no restriction. • Underground work (back-filling) – Aussie padder, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift): within 25 feet – not permitted; 25 to 50 feet – no more than twenty minutes per 8-hour period; 50 to 75 feet – no more than 1.5 hours per 8-hour period; 75 to 100 feet – no more than 3 hours per 8-hour period; and, beyond 100 feet – no restriction. • System installation – gradall (4x4 forklift), crane, ATV, vibratory pile driver (RGT Model RG21T or comparable), pick-up truck, and 5kW generator: within 25 feet – not permitted; 25 to 50 feet – no more than twenty minutes per 8-hour period; 50 to 75 feet – no more than 1.5 hours per 8-hour period; 75 to 100 feet – no more than 4 hours per 8-hour period; and, beyond 100 feet – no restriction. All construction equipment operations shall incorporate all recommended noise reducing measures such as, but not limited to, limiting construction equipment operations, installation of temporary noise barriers, and implementation of the recommendations within the CNMP to demonstrate compliance with the County Code Noise Ordinance, Sections 36.408 and 36.409. Concurrent construction activities may occur so long as next closest construction activity to the same studied property line position is at least four times its "no restriction" distance away. By way of example, if earth-moving was occurring near a fixed point on the potentially affected property line, the next-closest set of earth-moving equipment performing like work, or perhaps an overlapping and comparable scheduled activity (e.g., grading), would be permitted if no closer than 500 feet (= 4 x 125') from the same receptor point. c. If distance buffers or duration limits cannot be maintained, then the Project Applicant or its contractor will implement on-site temporary sound abatement measures, such as a field-erected noise barrier (e.g., sound blankets) of sufficient height and horizontal extent, or the placement of storage containers and other similarly solid sound-occluding structures, to ensure construction activity noise at the Project property line complies with County standards. d. The CNMP will also include direction for the Project applicant or its contractor(s) to implement the following: ● Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer; ● Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements; ● Usage of truck engine exhaust compression braking systems shall be limited to emergencies; ● Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and Cal OSHA's safety

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	requirements are not violated; ● Vehicle horns shall be used only when necessary, as specified in the contractor's specifications; and, ● Radios and other noise-generating "personal equipment" shall be prohibited
Paleontological Mitigation Measures	
M-PR-1	Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist, subject to the review and approval of the County. The paleontologist shall prepare a Paleontological Resources Monitoring Program (PRMP) for the project. The PRMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (2010). The qualified paleontologist shall attend the preconstruction meeting and the paleontological monitor shall be on-site during rough grading and other significant ground-disturbing activities in previously undisturbed geological units with moderate to high paleontological resource sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be contained with temporary orange construction fencing and shall include a 50-foot radius buffer. Once documentation and collection of the find is completed, the paleontological monitor shall remove the temporary orange construction fencing and grading will be allowed to recommence in the area of the find. Upon completion of the paleontological monitoring program, the qualified paleontologist shall prepare a final monitoring report documenting the results of the monitoring program. This report shall include a description of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.
Tribal Cultural Resources Mitigation Measures	
M-TCR-1	**Temporary Fencing.** To prevent inadvertent disturbance of tribal cultural resources (TCRs) within the avoidance areas (land outside of the Project ADI), temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements: ● Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect archaeological sites or portions of sites adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances; remain for the duration of earth-disturbing activities; and include the following: o Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI. o The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed. o Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to M-CR-2.
M-TCR-2	**Archaeological and Tribal Monitoring.** To mitigate for potential impacts to undiscovered, buried tribal cultural resources (TCRs) within the Project ADI, an archaeological and tribal monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements: a. Pre-Construction ● The project developer shall contract with a County-approved archaeologist to perform archaeological monitoring. The Project archaeologist shall contract with a Kumeyaay Native American monitor(s) to conduct Native American monitoring for the Project. ● The pre-construction meeting shall be attended by the Project archaeologist and the Kumeyaay Native American monitor(s) to explain the monitoring requirements. b. Construction ● Monitoring o Both the Project archaeologist and Kumeyaay Native American monitor(s) are to be on site during all

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	earth-disturbing activities. The frequency and location of monitoring of native soils shall be determined by the Project archaeologist and the Kumeyaay Native American monitor. Both the Project Archaeologist and Kumeyaay Native American monitor(s) will evaluate fill soils to ensure that they are negative for cultural resources ● Inadvertent Discoveries o Both the Project archaeologist and the Kumeyaay Native American monitor have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery. o The Project archaeologist shall contact the County archaeologist. o The Project archaeologist, in consultation with the County archaeologist and the Kumeyaay Native American monitor, shall determine the significance of discovered resources and whether they constitute a TCR. o Construction activities shall be allowed to resume after the County archaeologist has agreed with the significance evaluation. o Isolates and non-significant deposits shall be minimally documented in the field. If the isolates and non-significant deposits are not collected by the Project archaeologist, the Kumeyaay Native American monitor may collect the cultural material for transfer to a tribal curation facility or repatriation program. o If cultural resources are determined to be significant, a research design and data recovery program shall be prepared by the Project archaeologist in consultation with the Kumeyaay Native American monitor and approved by the County archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources or sacred sites, to cap identified sacred sites or unique cultural resources and to place development over the cap if avoidance is infeasible; and to perform data recovery for non-unique cultural resources. The preferred option is preservation (avoidance). c. Human Remains ● The property owner or their representative shall contact the County coroner and the County Planning & Development Services staff archaeologist. ● Upon identification of human remains, no further disturbance shall occur in the area of the find until the County coroner has made the necessary findings as to origin. Should the human remains need to be taken offsite for evaluation, they shall be accompanied by a Kumeyaay Native American monitor. ● If the remains are determined to be of Native American origin, the most likely descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the property owner or their representative to determine proper treatment and disposition of the remains. ● The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by California Public Resources Code, Section 5097.98, has been conducted. ● California Public Resources Code, Section 5097.98; CEQA Guidelines, Section 15064.5; and California Health and Safety Code, Section 7050.5, shall be followed in the event that human remains are discovered. d. Rough Grading ● Upon completion of rough grading, a monitoring report identifying whether resources were encountered shall be prepared. A copy of the monitoring report shall be provided to any culturally affiliated tribe that requests a copy. e. Final Grading ● A final report substantiating that native soil-disturbing activities are completed and whether cultural resources were encountered shall be prepared. A copy of the final report shall be submitted to the South Coastal Information Center (SCIC) and any culturally affiliated tribe that requests a copy. f. Cultural Material Conveyance The final report shall include the following: • Evidence that all prehistoric materials have been curated at a San Diego curation facility or tribal curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations or alternatively have been repatriated to a culturally affiliated tribe.

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	• Evidence that historic materials have been curated at a San Diego curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations.
M-TCR-3	**Long-Term Preservation of Resources.** All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 11 potentially significant cultural sites (or portions thereof) that are located within 50 feet of the Project ADI, including the eight sites that were fully or partially tested and the three that were not evaluated). Temporary fencing will be installed during decommissioning activities to delineate the ADI.
Wildfire Mitigation Measures	
M-WF-1	**Fire Protection Plan** <u>Fire Protection Measures</u> The Project's Fire Protection Plan (FPP) provides customized measures that address the identified potential fire hazards on the site. The measures are independently established but will work together to result in reduced fire threat and heightened fire protection. The following measures identified in Section 7 of the FPP will be implemented: • Fuel Modification throughout the solar facility site from boundaries inward, including beneath PV modules, around the collector substation and adjacent switchyard, with restrictions on plant species, heights, densities, and locations (Required measure). • Provide a technical report indicating special precautions for firefighting response (included as Appendix G of the FPP) (Code-exceeding measure). • Minimum 20-foot interior on-site inverter fore access driveways and a minimum improved 24-foot wide perimeter on-site driveways would be constructed (Required measure). • Participation in a County Fire Protection and Mitigation Agreement, for funding firefighting and emergency medical resources of which the details will be determined in the Project Fire Protection and Mitigation Agreement (Required measure). • Project funded annual fuel modification inspections to ensure compliance with this FPP (Code-exceeding requirement). • Motion sensor illuminated (and/or reflective) signage at main entrance with inverter and electrical grid disconnect and isolation information and identification (Required measure). • Training program for local fire agencies on the deenergizing process that is controlled by the California Independent System Operator (CAISO), as described in Section 5.2.3 of the FPP. (Required measure). • Training program for local fire agencies including preparation of a technical training video with County input and customized for this facility that can be easily viewed by new firefighters who rotate through the local fire stations (Code-exceeding measure). • Preparation of a construction fire prevention plan (CFPP) for this project to be implemented by all contractors working on this project (CFPP included as Appendix A of the FPP) (Code-exceeding measure). • Portable carbon dioxide (CO2) fire extinguishers mounted at the inverters and medium voltage transformer units. • Six (6) 10,000-gallon water tanks dedicated for firefighting purposes; one tank will be provided at each driveway entrance to the solar panel areas as defined by geographic isolation from other sections and one tank will be

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	provided near the substation (Required measure). • System contact information with local fire agencies/stations to assist responding firefighters during an emergency (Required measure). • Committed on-going maintenance of all facility components for the life of the project (Required measure). • Maintenance logs to be kept and made available upon request to SDCFA/CAL FIRE (Required measure). • Consistent placarding and labeling of all components for fire safety/response (Required measure). Defensible Space and Fuel Modification The Project would provide defensible space by setting back all PV modules a minimum 30-feet from the solar facility's perimeter fence and modifying the fuels on-site by removing and grading them to a height of 6 inches, or, in the case of perimeter areas, drivable surfaces and vegetation free areas. The perimeter Fuel Modification Zone (FMZ) buffer will include at least 30 feet of modified fuels and will include the 30-foot wide perimeter fire access road, and cleared, contiguous modified fuel areas from the perimeter fence to the outermost panel racks. This area seamlessly meets the modified fuel areas that occur throughout the site where fuels are maintained at a 6-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the project collector substation pad area and 100 feet surrounding the adjacent switchyard. The entire solar facility site would include modified fuels with fire access roadways and service roads compartmentalizing the low-growing (less than 6-inch) maintained areas beneath all PV modules, surrounding the collector substation pad area, and surrounding the adjacent switchyard. Fuel modification requirements are detailed in the Project FPP.
M-WF-2	**Construction Fire Protection Plan** Risk Reduction Measures Risk Reduction Measures as identified in the Project Construction Fire Protection Plan (included as Appendix A to the Fire Protection Plan) will be implemented, as appropriate, during the construction phase of the Project to reduce the risk of ignitions. These measures will be enforced through the Site Safety Officer (SSO) and ongoing worker safety training: • Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. This shall include all contractors and subcontractors if more than one. • All internal combustion engines used at the Project site shall be equipped with spark arrestors that are in good working order. • Once initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order. • The Project will be equipped with at least one and up to two water trucks each of 4,000- gallon capacity. Each truck will be equipped with 50 feet of 0.25-inch fast response hose with fog nozzles. Any hose size greater than 1.5 inches shall use National Hose (NH) couplings. • During construction, the project site will have at a minimum two pick-up trucks outfitted with Type-6 Skid-Mounted Units, including fire pump, hose, and nozzle, that are staffed with personnel properly trained to use the

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	equipment. • A cache of shovels, McLeods, and Pulaskis shall be available at staging sites. The amount of equipment will be determined by consultation between SSO and SDCFA/CAL FIRE. Additionally, on-site pickup trucks will be equipped with first aid kits, fire extinguishers, and shovels. Contractor vehicles will be required to include the same basic equipment. • Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials and provided with a gravel surface. • A fire watch (i.e., person responsible for monitoring for ignitions) shall be provided during hot work and shall occur for up to one hour following completion of the hot work activities. • Smoking will not be permitted on the site. • Each Project construction site, if construction occurs simultaneously at various locations on the site, shall be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires. • The on-site contractor or Project staff shall coordinate with SDCFA/CAL FIRE to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site. • All on-site employees shall participate in fire prevention and response training exercises with the SDCFA/CAL FIRE. • The Project shall implement ongoing fire patrols during the fire season as defined by local and state agencies. The SSO will be assigned as fire patrol to monitor work activities when an activity risk exists for fire compliance. The SSO shall verify proper tools and equipment are on site, assess any fire agency work restrictions, and serve as a lookout for fire starts, including staying behind (e.g., a fire watch) to make certain no residual fire exists. Fire watch may be performed by any site personnel. A SSO shall perform routine patrols of the Project site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project staff shall notify SDCFA/CAL FIRE of the name and contact information of the current SSO in the event of any change. • Fires ignited on site shall be immediately reported via SDCFA and CAL FIRE. • The engineering, procurement, and construction contracts for the Project shall clearly state the fire safety requirements that are the responsibility of any person who enters the site, as described in this CFPP. <u>Daily Fire Prevention Measures</u> To limit the risk of fires, all site staff, employees, and contractors shall take the following precautions during Project construction: • Fire safety shall be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis. • Smoking will not be permitted in the project site. Combustible materials shall be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation. • Evacuation routes shall be maintained and free of obstructions. Unavoidable evacuation route blockages shall be coordinated such that a secondary route is identified and available. • Disposal of combustible waste in accordance with all applicable laws and regulations shall be required. • Use and storage of flammable materials in areas away from ignition sources shall be required. • Proper storage of chemicals such that incompatible (i.e., chemically reactive) substances would be separated

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	appropriately shall be required. • Performance of hot work (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch shall be required. Fire watch may be any site personnel who would watch for accidental ignitions. Hot work permits are required and shall be reviewed and granted by the SSO for all hot work. • Equipment shall be kept in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease. • Ensuring that heating units are safeguarded shall be required. • Immediate reporting of fuel or petroleum leaks. The site mechanic shall ensure that leaks are repaired immediately upon notification. • Immediate repair and cleanup of flammable liquid leaks shall be required. • Construction work areas shall be kept free of combustible materials. • Extension cords shall not be relied on if wiring improvements are needed, and overloading of circuits with multiple pieces of equipment shall be prohibited. • Turning off and unplugging electrical equipment when not in use. <u>Red Flag Warning Protocol</u> Red Flag Warnings are issued by the National Weather Service and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. To ensure compliance with Red Flag Warnings restrictions, the National Weather Service website shall be monitored at the site (http://www.srh.noaa.gov/ridge2/fire/briefing.php). During Red Flag Warnings, construction activities shall be limited and precautions may be taken onsite during periods of a Red Flag Warning, when conditions such as low humidity and high winds are present. Upon announcement of a Red Flag Warning, red flags shall be prominently displayed at the entrance gate and main office, indicating to employees and contractors that restrictions are in place. Additionally, any hot work, grading, or other work that could result in heat, flame, sparks, or may cause an ignition to vegetation shall be limited to low fire hazard, non-hot work, unless within an ignition resistant structure until the Red Flag Warning has been lifted. Areas may be evacuated where personnel may be exposed to higher risks. If vehicles are required to be used during Red Flag Warning conditions, vehicles shall remain only on designated access roads on the site.
M-WF-3	**Fire Protection and Mitigation Agreement:** As a condition to providing service and pursuant to the Safety Element of the General Plan, the applicant shall enter into a Fire Protection and Mitigation Agreement with the San Diego County Fire Authority prior to approval of a Major Use Permit to make a fair share contribution toward local emergency response capabilities. The funding shall be used by the SDCFA to mitigate risks of wildfires and to enhance fire suppression and emergency services capabilities for the Proposed Project and the southeast portion of CSA 135.

Table S-3
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project		*Community Buffer*	*Reduced Project*
		No Development	*Buildout*		
Impact AE-1: Impact to Jacumba existing visual character and/or quality	SU	▼	=	▼	▼
Impact AE-2: Impact to visual character of Jacumba Hot Springs	SU	▼	▼	▼	▼
Impact AE-3: I-8 Long distance view changes to this eligible state scenic highway viewpoint due to proposed project	SU	▼	▼	=	▼
Impact AE-4: Old Highway 80 – Long distance view blockage and character change from this County scenic highway system viewpoint due to proposed solar and fencing	SU	▼	▲	=	=
Impact AE-5: Jacumba Community Park – Long distance view blockage and character change from this County Park due to proposed solar and fencing	SU	▼	▲	=	=
Impact AE-6: Anza-Borrego Desert State Park Lands and Carrizo Gorge Wilderness - Long distance view changes from State Parks lands due to proposed solar	SU	▼	▼	=	▼
Impact AE-7: Round Mountain – Character change and view interruption from this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼
Impact AE-8: Airport Mesa - Long distance view changes at this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼
Impact AE-9: Table Mountain area – Long distance view changes at this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼
Impact AE-10: Glare impact to roadways from proposed project	LS	▼	▲	=	▼
Impact AE-CU-1 Cumulative Impact on valued visual	SU	▼	=	▼	▼

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Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project		*Community Buffer*	*Reduced Project*
		No Development	*Buildout*		
character or image of neighborhoods, communities, or localized areas.					
Impact AE-CU-2 Cumulative impacts to panoramic vista available from elevated vantage point in the Airport Mesa and Table Mountain Recreational Management Zones.	SU	▼	▼	=	▼
Impact AQ-1: Construction-related cancer risk from diesel exhaust	SM	▼	▲	▼	▼
Impact AQ-CUM-1: Construction-related emissions of No_x, PM_{10} and $PM_{2.5}$	SM	▼	▲	=	=
Impact BI-SP-1: Temporary direct impact to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-2: Permanent direct impact to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-3: Construction-related temporary indirect impacts to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-4: Operational permanent indirect impacts to special-status plants	SM	▼	▲	=	▼
Impact BI-W-1: Temporary direct impact to special-status wildlife	SM	▼	▲	=	▼
Impact BI-W-2: Permanent direct impact to special-status wildlife (including tricolored blackbird, burrowing owl and raptor foraging habitat)	SM	▼	▲	▼	▼
Impact BI-W-3: Permanent direct impact to special-status wildlife (sensitive bird nesting)	SM	▼	▲	=	=
Impact BI-W-4: Permanent direct impact to Special-status wildlife (bats)	SM	▼	▲	=	=
Impact BI-W-5: Construction-related temporary indirect impacts to special-status wildlife (including sensitive bird nesting)	SM	▼	▲	=	▼
Impact BI-W-6: Operational permanent indirect impacts to	SM	▼	▲	=	▼

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Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project		*Community Buffer*	*Reduced Project*
		No Development	*Buildout*		
special-status wildlife					
Impact BI-WLC-1: Temporary direct impact to wildlife movement	SM	▼	▲	=	▼
Impact BI-WLC-2: Permanent direct impact to wildlife movement (Core wildlife area)	SM	▼	▲	=	▼
Impact BI-WLC-3: Temporary indirect impact to wildlife movement	SM	▼	▲	=	▼
Impact BI-V-1: Temporary direct riparian habitat or sensitive vegetation communities	LS	▼	▲	=	▼
Impact BI-V-2: Permanent direct riparian habitat or sensitive vegetation communities	SM	▼	▲	▼	▼
Impact BI-V-4: Permanent indirect riparian habitat or sensitive vegetation communities	SM	▼	▲	=	▼
Impact BI-JAR-1: Temporary direct Jurisdictional resources	SM	▼	▲	=	▼
Impact BI-JAR-2: Temporary indirect Jurisdictional resources	LS	=	▲	=	▼
Impact BI-JAR-3: Temporary indirect impact to jurisdictional resources	LS	▲	▲	▲	▼
Impact CR-1: Construction and Decommissioning-related impacts to undiscovered cultural resources on-site or known cultural resources within 50 feet of the Project ADI	SM	▼	▲	=	▼
Impact CUL-2 Construction-related impacts to undiscovered human remains	SM	▼	▲	=	▼
Impact GEO-1: Ground failure due to liquefaction, seismically induced settlements, and/or lateral ground spread that could result in the collapse of a structure	SM	▼	▲	=	▼
Impact GEO-2: Expansive soils have potential to impact development	SM	▼	▲	=	▼
Impact HAZ-1: Operational-related impacts that	SM	▼	▲	=	▼

Table S-3
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project		*Community Buffer*	*Reduced Project*
		No Development	*Buildout*		
could exacerbate wildfire risks and thereby expose project occupants to risk of loss, injury or death involving wildland fires					
Impact HAZ-2: Construction-related impacts exposing project occupants to potential risk of loss, injury or death involving wildland fires	SM	▼	▲	=	▼
Impact HAZ-CU-1 Cumulative impacts to interference with emergency response	SM	▼	▲	=	▼
Impact HAZ-CU-2 Cumulative impacts to Wildland Fire Hazards	SM	▼	▲	=	▼
Impact HYD-1: Impacts resulting from implementation of the Proposed Project associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence, during construction and operation	SM	▼	▲	=	=
Impact MR-1 The Proposed Project is an interim use and would not result in the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000. However, MM BI-3, Habitat Preservation, a mitigation measure implemented to reduce the Proposed Project's impacts to biological resources, will cause a potentially significant impact with respect to the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic	SU	▼	▲	▼	▼

Table S-3
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project		*Community Buffer*	*Reduced Project*
		No Development	*Buildout*		
and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000.					
Impact NOI-1: Operational stationary equipment noise	SM	▼	▲	▼	=
Impact NOI-2: Operational Mobile Equipment noise	SM	▼	▲	▼	=
Impact NOI-3: Construction-related noise	LS	▼	▲	▼	=
Impact PR-1: Construction-related impact to paleontological resources	SM	▼	▲	=	▼
Impact TCR-1: Construction-related impacts to tribal cultural resources	SM	▼	▲	=	▼
Impact WF-1 Operational-related impacts to wildfire risk	SM	▼	▲	=	▼
Impact WF-2 Construction-related impacts to wildfire risk	SM	▼	▲	=	▼
Impact WF-3 Infrastructure contribution to increased wildfire risk	SM	▼	▲	=	▼
Impact WF-CU-1 Cumulative Impact to Emergency Response and emergency evacuation plan	SM	▼	▲	=	▼
Impact WF-CU-2 Cumulative Impact to wildfire risk	SM	▼	▲	=	▼
Impact WF-CU-3 Cumulative Infrastructure Contribution to Increased Wildfire Risk	SM	▼	▲	=	▼

▲ Alternative is likely to result in greater impacts to issue when compared to Proposed Project.
= Alternative is likely to result in similar impacts to issue when compared to Proposed Project.
▼ Alternative is likely to result in reduced impacts to issue when compared to Proposed Project.
LS = less than significant without mitigation; SM = less than significant with mitigation measures; SU = potentially significant and unavoidable impact.

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CHAPTER 1 PROJECT DESCRIPTION, LOCATION, AND ENVIRONMENTAL SETTING

This chapter describes the proposed JVR Energy Park, which would be a solar facility that would generate and store solar energy. For purposes of this Environmental Impact Report (EIR), the JVR Energy Park will be referred to as the "JVR Energy Park" or the "Proposed Project." The Project site is located adjacent to the community of Jacumba Hot Springs in southeastern unincorporated San Diego County (County).

1.1 Project Objectives

Specific objectives for the Proposed Project are as follows:

1. Develop a solar energy project with a rated capacity of up to 90 megawatts (MW) of alternating current (AC) and an energy storage facility that can supply electricity to indirectly reduce the need to emit greenhouse gases caused by the generation of similar quantities of electricity from either existing or future nonrenewable sources to meet existing and future electricity demands, including during on-peak power periods.
2. Develop a renewable solar energy project that can meet the criteria to achieve the maximum federal solar Investment Tax Credit, which is intended to decrease the cost of renewable energy generation and delivery, promote the diversity of energy supply, and decrease dependence of the United States on foreign energy supplies.
3. Assist in achieving the state's Renewables Portfolio Standard (RPS), as mandated under the 100 Percent Clean Energy Act of 2018 (Senate Bill 100), by developing and constructing California RPS-qualified solar generation from eligible renewable energy resources by December 31, 2045.
4. Develop a utility-scale solar energy project that improves electrical reliability for the San Diego region by providing a source of local generation as near as possible to existing San Diego Gas and Electric (SDG&E) transmission infrastructure.
5. Provide a new source of energy storage that assists the state in achieving or exceeding its energy storage targets, consistent with the terms of Assembly Bill 2514, and its greenhouse gas reduction targets, consistent with Assembly Bill 32 and Senate Bill 32.
6. Site a solar energy project in an area within San Diego County that has excellent solar attributes, including but not limited to high direct normal irradiance, in order to maximize productivity.
7. Develop a utility-scale solar energy facility within San Diego County that supports the economy by investing in the region and creates construction jobs.

1.2 Project Description

The Project site totals approximately 1,356 acres in southeastern San Diego County, within the County's Mountain Empire Subregional Plan area (see Figure 1-1, Project Location). The Proposed Project would be located to the south of Interstate (I) 8, immediately east of the community of Jacumba Hot Springs, and immediately north of the U.S./Mexico international border. The proposed solar facility would cover approximately 643 acres of the Project site (see Figure 1-2, Project Components). A description of the proposed solar facility is provided in this section, including the project components, construction, operation, and decommissioning.

1.2.1 Solar Facility

The Proposed Project is a solar energy generation and storage facility which would produce a rated capacity of up to 90 MW of AC generating capacity. The power produced by the proposed solar facility would be delivered to an existing SDG&E 138 KV transmission line which transects the Project site The Project components are listed below, shown in Figure 1-2, and discussed in greater detail in Section 1.2.1.1. The Figure 1.3 series includes enlarged views of the site plan and shows the location of the Project components. The construction and operation of the Proposed Project are described in Sections 1.2.1.2. Decommissioning activities are discussed in Section 1.2.1.3.

The Proposed Project would include the following primary components:

- Approximately 300,000 photovoltaic (PV) modules mounted on support structures (single-axis solar trackers)
- A 1,000- to 1,500-volt direct current (DC) underground collection system linking the modules to the inverters
- 25 inverter/transformer platforms, located throughout the solar facility, to convert the power generated by the modules into a compatible form for use with the transmission network
- Approximately 5,000 feet of 34.5-kilovolt (kV) underground AC collection system and 50 feet of overhead AC feeders, approximately 30-feet-tall linking the inverters to the on-site collector substation
- An on-site collector substation located within an approximately 27,360 square-foot area (152-foot by 180-foot)
- A 138 kV switchyard within an approximately 140,000 square-foot area (3.2 acres) adjacent to the on-site collector substation to transfer power from the on-site collector substation to the existing SDG&E 138 kV transmission line
- A 138 kV, 220-foot-long 65-foot-high overhead slack span transmission line to connect the on-site collector substation to the switchyard

- Five 138 kV transmission poles ranging in height from 70 to 115 feet, with approximately 1,860 feet overhead transmission lines (tie-in) to loop the switchyard into the existing SDG&E Boulevard – East County transmission line
- A battery energy storage system of up to 90 MW (or 180MWh) comprised of battery storage containers located adjacent to the inverter/transformer pads (up to 3 containers at each location for a total of 75 containers on site)
- Fiber optic line
- Control system
- Meteorological weather stations (five)
- Site access driveways
- Internal access
- Improvements within SDG&E Transmission Corridor
- Perimeter security fencing and signage
- Lighting
- Water tanks for fire protection (six)
- Fuel modification zones (FMZs)

In addition, landscaping along some sections of the perimeter fencing would be installed as mitigation for visual impacts. 1.2.1.1 Project Components

PV Modules

PV modules generate electricity by safely converting the energy of the sun's photons into DC electrons. The Proposed Project would include approximately 300,000 PV modules, which would be installed in rows (arrays). Arrays grouped together are referred to as an array field.

The modules would be mounted on single-axis trackers oriented in the north–south direction. Single-axis tracking systems would employ a motor mechanism that allows the arrays to track the path of the sun (from east to west) throughout the day. The PV modules are uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. Figure 1-4 shows a typical PV module and support structure. The PV modules would cover the majority of the area of the proposed solar facility.

The PV modules deployed for use in the Proposed Project would comply with all industry standard quality testing. The PV modules would be electrically connected to the grounding system of the facility in accordance with local codes and regulations. The final PV module selection would be

determined during the Proposed Project's final engineering process. Most PV modules are guaranteed a useful life of 35 years in adverse weather conditions.

The PV modules and tracking systems would be inspected periodically. Electrical components would be tested routinely according to manufacturer's recommendations. In the event that remote monitoring indicates a problem, such as low performance in a section of the array field, a crew would investigate and correct the problem on an as-needed basis. It is anticipated that in-place PV panel washing would occur four times a year. Washing of the PV panels would be undertaken using either a self-propelled powered mechanical system (e.g. MultiOne Solar Panel Washer or Mazaka Solar Cleaner or comparable motorized equipment) or a portable pressure washer towed by a pick-up truck. Washing would occur during daylight hours, so no lighting would be required

PV Modules Support Structures

The solar PV modules would be mounted on support structures that allows them to be properly positioned for maximum capture of the sun's solar energy (refer to Figure 1-4). Each row of PV modules (module arrays) would be a single-axis tracker system that would be oriented along a north-to-south axis. The support structures are typically mounted on metal pipe pile or I-beam foundations 6 to 10 inches in diameter. The beams would be driven into the soil using a pile/vibratory/rotary driving technique similar to that used to install freeway guardrails. Driven pier foundations are a "concrete-free" foundation solution that would result in minimal site disturbance and facilitate site reclamation at the end of the Proposed Project's lifecycle. Most pier foundations would be driven to approximate depths of 10 to 15 feet deep depending upon required embedment depth.

The PV modules, at their highest point, would be approximately 12 feet above the ground surface depending upon the100-year flood elevations within the Project site. The PV module arrays' final elevations from the ground would be determined during the engineering and permit process; however, for the purpose of the analysis in this EIR, maximum height above the graded ground surface would be 12 feet. It is common practice to maintain as low of an elevation profile as possible to reduce potential wind loads on the PV module arrays.

Electrical (DC) Underground Collection System

PV modules would be electrically connected to adjacent modules to form module "strings" using wiring attached to the support structures. PV module strings would be electrically connected to each other via underground wiring. Wire depths would be in accordance with local, state, and federal codes. String wiring terminates at PV module array combiner boxes, which are lockable electrical boxes mounted on or near an array's support structure. Output wires from combiner boxes would be routed along an underground trench system approximately 3-4 feet deep and 1-3 feet wide, including trench and disturbed area, to the inverters and transformer pads.

Inverter/Transformer Platforms

Inverters are a key component of solar PV power-generating facilities because they convert the DC generated by the PV modules into AC that is compatible for use with the transmission network. The medium-voltage transformers step up the AC voltage to collection-level voltage (34.5 kV).

The inverters and medium-voltage transformers would be installed at 25 locations, adjacent to the battery storage containers throughout the solar facility. The locations are shown on Figure 1-2 Project Components and the Figure 1-3 enlarged Site Plan series. At each location, two inverters and one transformer would be installed on a metal platform, referred to as a skid. Each metal skid would be approximately 8 feet wide and 20 feet long. The skids would be mounted above the 100-year flood elevations on a set of piles driven into the ground and covered by an earth or gravel mount that is built up to the top of the skid to provide a working clearance to all access points on the skid per applicable electrical and labor codes. All of this electrical rated equipment would be within a 10-foot-long, 10-foot high and 20-foot long area.

Underground Medium AC Voltage Collection System

At each of the 25 inverter/transformer platform locations, the 34.5 kVA transformer would be connected to an underground medium AC voltage collection system which would carry the power to the on-site collector substation. Trenching for the AC medium voltage electrical collection system and telecommunication lines would consist of trenches up to approximately 3-feet to 4-feet deep and 2-feet to 3-feet wide. The trenches would be filled with base material above and below the conductors and communications lines to ensure adequate thermal conductivity and electrical insulating characteristics.

Collector Substation

The Proposed Project includes a collector substation (152-foot by 180-foot (27,360 square feet)) that would be located near the center of the eastern side of the Project site (see Plot Plan to see the Substation and Switchyard). The purpose of the substation is to collect the power from the ACcollector system and convert the voltage from 34.5 kV to 138 kV, as well as to be able to isolateequipment in the event of an electrical short-circuit or for maintenance.

The major components of the proposed collector substation are as follows:

- One 34.5 kV to 138 kV transformer including a concrete pad secondary containment area a few feet high from the ground to contain any mineral oil that could spill out of the inverter per local and state regulations.

- One 138 kV circuit breaker used to protect equipment from an electrical short circuit on the gen-tie.
- The substation would also include a single 34.5 kV circuit breaker used to protect equipment from an electrical short circuit on the collection system, disconnects and bus work to connect and isolate the collector circuits, relays used to detect short circuits, equipment controls, telemetering equipment used to provide system control and data acquisition, voice communication, and the meters used to measure electrical power generated from the Proposed Project. Switching gear and other components would be a maximum of 40 feet in height.
- A 138 kV dead-end structure that would have a maximum height of 65 feet. This structure would have either an A-frame or H-frame design and would be constructed of steel. The dead-end structure is where the power output from the collector substation is delivered to the gen-tie line that goes to the switchyard.
- One Control Enclosure for the Supervisory Control and Data Acquisition (SCADA) system (approximately 34 feet long by 15.5 feet wide and a height of 15 feet).

During operation of the collector substation, operation and maintenance staff would visit the substation periodically for switching and other operation activities. Maintenance trucks would be utilized to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance.

Switchyard

The Proposed Project would include a 138 kV switchyard located adjacent to the proposed collector substation (see Plot Plan to see Substation and Switchyard). The size of the switchyard wouldbe approximately 140,000 square feet (3.2 acres). Within this area would be 8-foot high securityfence (445 feet by 300 feet) surrounded by a 5-foot shoulder for grounding protection inside thefence. Drainage facilities would be installed to control runoff and protect the switchyard fromerosion. The 138 kV insulated electrical bus, steel support structures and foundations would beinstalled to support the following electrical equipment:

- 2 138 kV bays in a ring bus configuration
- 3 Gas Insulated Circuit Breakers with 4 current transformers each
- 12 Gang Operated Air Break (GOAB) switches
- 9 98kV surge arrestors
- 9 138kV Single Bushing Potential Transformers
- 2 138kV-240V/120V Station Service Transformers

- Control Enclosure
- Security fencing
- Motion detection lighting

One single-story control enclosure would be used for relays, metering, SCADA information and security and communication equipment. A gas generator may also be installed for use as backup power to the station lights and station service power transformers. The maximum amount of oil required for the station service transformers at the switchyard would be approximately 175 gallons per pot, or 350 gallons total.

The tallest structures in the switchyard would be the 138 kV line and the dead-end structures. The maximum height in the yard would be the approximately 66-foot-high dead-end structure that spans the gen-tie to the collector substation.

After completion of construction of the switchyard, operation of the switchyard facility would be transferred to SDG&E. Conveyance of the property is exempt per County subdivision Ordinance 81.617 (c)(5) (and the Subdivision Map Act (Conveyance is exempt per Section 66412). The switchyard would be unmanned during operation. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Based on operations at similar facilities, routine maintenance is expected to necessitate approximately six trips per year by a two- to four-person crew. Routine operations would require one or two workers in a light utility truck to visit the switchyard on a weekly basis. Typically, one major maintenance inspection would take place annually, requiring approximately 20 personnel for approximately one week.

138 kV Transmission Line Tie-in

The proposed switchyard would be connected into the existing 138 kV SDG&E Boulevard – East County transmission line. The existing transmission line is overhead between the existing SDG&E Boulevard substation and the vicinity of the proposed switchyard. The existing transmission line is underground from vicinity of the switchyard eastward to the existing SDG&E East County (ECO) substation (within Carrizo Gorge Road and Old Highway 80 right-of-way). The proposed overhead transmission line tie-in would require six spans of wire, totaling approximately 1,860-feet, and up to five steel transmission poles. The poles would range from 70 to 115 feet above the

ground's surface. One of the poles would have six davit arms, while the other four poles would have no davit arms. Each pole would have a pole top to accommodate a fiber optic ground wire for lightning protection and critical communication. Temporary construction areas would be cleared and graded at each pole location for a safe working environment and pulling wire.

Battery Energy Storage System

A battery energy storage system with a maximum capacity of up to 90 MW (180 MWh) is proposed to be located throughout the solar facility. This energy storage system would be comprised of battery storage containers located adjacent to the inverter/transformer platforms (up to 3 containers at each location for a total of 75 containers on site). Figure 1-2 and the Figure 1-3 enlarged series shows the location of the battery storage containers throughout the solar facility.

The battery energy storage system would be charged from the energy from the PV modules, which is a DC connected system. The battery energy storage system would use all the same electrical components and conductors that the PV system uses to deliver to the system. No additional equipment would be required. The battery energy storage systems would be inspected on a regular basis and would be monitored by the SCADA System.

The Project proposes to use steel containers (customized Conex or similar, depending on supplier) to hold Lithium-ion batteries. The containers are typically made from 12 to 14-gauge steel and measure approximately 55-feet-long, 19-feet-wide, and 10-feet-high. Each container would be separated from adjacent containers by approximately 10 feet. Figure 1-5 provides an example of a typical steel battery storage container.

The specific battery type proposed for the Project is a Lithium-ion nanophosphate cell. Currently available data indicates that this particular type of Lithium-ion battery has proven to be less vulnerable to fire occurrences than typical Lithium-ion batteries. Lithum-ion nanophosphate batteries include a stable cathode chemistry that substantially reduces the possibility of thermal runaway and provides for reduced reaction from abuse (Sandia National Laboratories 2012).

The proposed battery storage system would include multiple levels of protections against overcharge. Each container would have underground wiring connecting it to a 600 kW DC:DC converter, which would bring the voltage from the batteries in the container up to match the voltage of the PV energy entering into the inverter's DC bus. Each battery container would have a skid-mounted DC:DC converter.

The containers would be situated to enable emergency/fire response access. The containers would be sited with a setback as required by the Fire Protection Plan (Appendix N of this EIR) from off-site areas as a buffer against potential wildfire ignitions. The containers would not be walk in containers, thus the battery storage containers would not be non-habitable structures per the state and local fire codes that are in place at the time a building permit application is submitted to the County.

The proposed batteries and containers also include the following important monitoring and safety components:

- Modular battery racks designed for ease of maintenance
- Integrated heat and fire detection and suppression system
- Explosive gas monitoring
- Exhaust/ventilation systems
- Integrated air conditioning system
- Integrated battery management system

The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior containers sprinkler system with several sprinkler heads for coverage and an external dry standpipe for fire fighters to connect and pump water.

Critical information from the battery energy storage system, equipment data from the DC:DC converters and inverters would be monitored by the battery monitoring system inside the containers, at the metering at the inverter cabinets and at the SCADA control system described in more detail below.

The battery management system within each container would track the performance, voltage and current, and state of charge of the batteries. The system would proactively search for changes in performance that could indicate impending battery cell failure, and power down and isolate those battery strings in order to avoid potential failures.

The battery management system would be purchased from vendors who are on track to have their equipment meet the following Underwriters Laboratories (UL) listings: UL 9540, 1741, 1973, 1642, and any other UL standards at the time of the application of the building permit. The National Fire Protection Association (NFPA) has developed a new Standard for the Installation of Energy Storage Systems (NFPA 855). This standard addresses the design, construction, installation, commissioning, operation, maintenance and decommissioning of stationary energy storage systems.

Fiber-Optic Line

To provide for communication with the SCADA system, a fiber-optic cable would be placed underground to connect the substation to the switchyard. Utility interconnection regulations require the installation of a second separate, redundant fiber-optic cable. The redundant fiber-optic cable would also be installed within the Project development footprint and the proposed switchyard boundary.

Control System

The Proposed Project's control system includes a SCADA system and an overall plant control system (PCS). Operation of the solar facility would be monitored through the SCADA system, as described below.

The SCADA system is required for the purpose of communicating and monitoring the solar facility from a remote location. The SCADA system connects the solar facility to the plant operator and the Independent System Operator (ISO). The SCADA system would be monitored remotely, and no on-site operations and maintenance facilities or personnel would be necessary.

The SCADA system would be located in two control enclosures. One enclosure would be located in the on-site collection substation area and the other enclosure would be located within the switchyard area. Each enclosure would be approximately 20 feet long by 10 feet wide, and 10 feet in height. The SCADA system would be comprised of rack-mounted servers and software to allow for the continuous monitoring and control of PV inverters, solar trackers, PV weather monitoring system, substation equipment, battery energy storage system and other equipment throughout the solar facility. The SCADA system would be used to provide critical operating information (e.g., power production, equipment status and alarms, and meteorological information) to the power purchaser, Project owners and investors, grid operator, and Project operations teams. The system will also facilitate production forecasting and other reporting requirements for Project stakeholders.

Meteorological Weather Stations

The Proposed Project includes five meteorological weather stations, which would be installed throughout the solar facility. The weather stations would be used to record weather to measure the performance of the solar facility. The parameters recorded would include air temperature, relative humidity, precipitation, air pressure, wind direction and speed, and solar irradiance. Measuring irradiance is important for determining how much power could potentially be harvested from the sun. A pyranometer would be installed at each weather station to measure irradiance.

Four of the meteorological stations would be installed at a place closest to the inverter/transformer platforms to minimize cable runs. The fifth station would be located adjacent to the collector substation. The locations would have no shading obstruction such that the irradiation received by the sensors ("pyranometer") in the station is the same as that received by all the modules in the Proposed Project. Each station would occupy an area of approximately 10 feet long by 7 feet high. The mounting equipment would be made up of steel to ultimately provide height to the actual sensor located at the end of an aluminum (approximately 2-inch diameter) arm about 3 feet long to isolate the equipment from parts that can potentially shade the sensor. The maximum height of the station would be 10 feet. The equipment would be installed on a 5 foot by 5-foot square pad.

The setup would be connected to a datalogger and cellular modem with an approximately 10-meter cable to interface digitally with the SCADA system and the PCS.

Site Access Driveways

Access to the solar facility would be through construction of six driveways that would be located at the following five locations (see Figure 1-2 and Figure 1-3 series):

- Access 1 – Full access driveway along Carrizo Gorge Road (east leg), approximately 1,000 feet southeast of the I-8 interchange;
- Access 2 – Full access driveway along Carrizo Gorge Road (west leg), approximately 1,450 feet southeast of the I-8 interchange;
- Access 3 – Full access driveway along Carrizo Gorge Road (east leg), approximately 2,100 feet southeast of the I-8 interchange;
- Access 4 – Full access driveway along Carrizo Gorge Road (west leg), approximately 2,800 feet southeast of the I-8 interchange; and
- Access 5 – North and south leg full access driveways along Old Highway 80, approximately 1,200 feet east of Campo Street.

Each site entrance would feature a manual swing gate, and a sign with a lighted directory map and contact information. All entrance gates would feature a 'Knox Box' to allow ease of access for emergency service providers. All access to the site has been designed per the County Fire Code. All site entrances would be 24 feet wide and paved, and the access road to the switchyard site off Carrizo Gorge Road would be improved to be 30-feet-wide and paved.

Internal Access

The Proposed Project would include dual-purpose internal fire response access and service access. The internal access is shown in Figure 1-2 and the Figure 1-3 series. The perimeter internal access within the fenced solar facility would be constructed to a minimum improved width of 24 feet. The interior on-site vehicle access would be constructed to a minimum improved width of 20 feet. All internal access would be designed to provide a minimum inner turning radius of 28 feet, would be graded and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather driving capabilities. The internal access would allow for two-way access of fire apparatus throughout the solar facility in order to access all of the inverter/transformer pads and battery storage containers.

All internal access surfaces would have a permeable nontoxic soil binding agent in order to reduce fugitive dust and erosion in accordance with County Code Section 87.428, Dust Control Measures, and with San Diego Air Pollution Control District Rule 55, which regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions.

Improvements within SDG&E Transmission Corridor

The SDG&E Transmission Corridor is approximately 600-feet wide and is comprised of three easements. The Proposed Project would include improvements within the SDG&E Transmission Corridor as described below:

- Easement Crossing 1 would be located on the west end of solar facility and would serve to connect two regions of the PV array field to each other across the SDG&E Transmission Corridor. This proposed easement crossing would be comprised of a 24-foot-wide aggregate base driveway. The underground medium voltage collection line would also be installed within this easement crossing.
- Easement Crossing 2 would be located on the east end of the solar facility and would provide access from the east side of Carrizo Gorge Road to the easternmost end of the PV array field. This proposed easement crossing would be comprised of a 24-foot wide aggregate base driveway and an earthen road-side diversion swale. This new crossing would provide access to an existing SDG&E transmission tower in the southernmost 200-foot-wide easement; it would replace the existing access. The existing access to the tower is proposed to be relinquished. The diversion swale is proposed along the southwest side of the new access to protect the access and convey upstream runoff. A low water crossing or culvert would be installed to manage stormwater runoff.
- Easement Encroachment 3 would be needed to interconnect the overhead power lines from the switchyard to the existing SDG&E 138 kV transmission line.

Security Fencing and Signage

The approximately 643-acre solar facility would be fenced along the entire facility boundary (see Figure 1-2 and Figure 1-3 series) for security. The fencing would meet National Electrical Safety Code requirements for protective arrangements in electric supply stations. Fencing would be 7 feet in height total, with a 6-foot-high chain-link perimeter fence and 1 foot of three strands of barbed wire along the top. Signage in Spanish and English for electrical safety would be placed along the perimeter of the solar facility on the fence, warning the public of the high voltage and the need to keep out.

Lighting

Motion sensor lights would be installed at all site access driveway entrances, at the switchyard, and at the substation. These lights would only be used if motion is detected. No other lighting is proposed within the solar facility.

All lighting would have bulbs that do not exceed 100 watts, and all lights would be shielded, directed downward, and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 51.201 et seq. Additionally, lighting for the Proposed Project would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards Section 6320, 6322, and 6324, which guide performance standards for glare, and controls excessive or unnecessary outdoor light emissions.

Water Tanks (Fire Protection)

The Proposed Project would install have six 10,000-gallon water tanks with fire department connections available, as shown on Figure 2.12-5 in Section 2.12 Wildfire of this EIR. Water would be stored in aboveground tanks complying with the San Diego California Fire Agency requirements and with National Fire Protection Act 22, Private Fire Protection Water Tanks. A procedure for ongoing inspection, maintenance, and filling of tanks would be in place. The tank and fire engine connections would be located on the side of the access driveways. The width of the driveway at the water tank location would be at least 18 feet (travel width), plus an additional 10-foot width, for a distance of 50 feet, to allow for fire engines to park and connect to the tank while leaving the road open. The tanks would be labeled “Fire Water: 10,000 gallons” using reflective paint.

Fuel Modification Zones

A minimum 30 feet wide fuel modification zone (FMZ) would be provided along the perimeter of the solar facility between the PV modules and the off-site wildland fuels. This area would include contiguous fuel modification from the perimeter fence inward and would include the perimeter fire access road. Additionally, a minimum 100-foot-wide FMZ would surround the proposed collector substation pad area and switchyard.

Landscaping

Landscaping would be installed to prove visual screening of the PV modules and other Project components as mitigation for visual impacts. The landscaping would be installed on the outside of the perimeter fencing as shown on Figure 1-2 and Figure 1-3 series. These locations include along Old Highway 80 on north and south sides of highway; along the western boundary adjacent to Jacumba Hot Springs, and along the east side of Carrizo Gorge road.

Operational Water Demand

Panel washing would occur approximately four times per year. The operational water demand for panel washing is estimated to be 2.6 acre-feet per year (afy). It should be noted that actual water use during operation for panel washing may be considerably less based on documented water demand for the nearby active Jacumba Solar project. The estimated annual operational water demand for irrigation of the landscape screening is approximately 8.4 afy. Therefore, the total operational water demand would be approximately 11 afy.

1.2.1.2 Construction

Construction of the Project is anticipated to occur over approximately 13 months and would consist of several activities, which are described below. Table 1-1, Proposed Project Construction Duration, Equipment, and Workers by Activity identifies the proposed duration, workers and equipment likely to be associated with each construction activity of the Proposed Project. Construction of the Proposed Project would include the following construction phases:

- Site Mobilization
- Demolition of Dairy and Ranch Structures
- Site Preparation (including access driveways and staging areas), Grading, and Stormwater Protections
- Fence Installation
- Landscaping Installation
- Substation, Switchyard and Meteorological Station Installation
- Pile Driving
- Tracker and PV Module Installation
- DC Electrical
- Underground Medium AC Voltage Electrical
- Inverter/Transformer Platform Installation
- Battery Energy Storage System Installation
- Commissioning

Several construction activities would occur simultaneously during construction as outlined in Table 1-1, Proposed Project Construction Duration, Equipment, and Workers by Activity. The total construction duration of the Solar Facility would be approximately 13 months.

Site Mobilization

Construction of the Proposed Project requires mobilizing the 643-acre site by planning out all parking and construction staging areas and bringing in construction equipment.

Demolition of Dairy and Ranch Structures

The Proposed Project includes demolition of existing structures on the Project site. The structures proposed to be demolished are associated with prior dairy and agricultural operations that are located within one parcel (APN 661-060-12) within the Project site. Asbestos Building Inspection and Lead-Based Paint Testing (Appendix H) was conducted for existing structures and it was determined that some structures contained asbestos and/or lead. Previously identified asbestos and lead-based paint would be removed by a certified abatement contractor in accordance with CalOSHA, California Department of Public Health, and San Diego County Air Pollution Control District. Therefore, these materials would be abated in accordance with federal, state, and local regulations prior to demolition or construction.

Site Preparation, Grading and Stormwater Protection

Construction of the Proposed Project would involve clearing and grubbing of the existing vegetation within the 643-acre development footprint. Grading would be required throughout the development footprint. Grading is expected to be balanced on site, with approximately 264,000 cubic yards of cut redistributed across the site.

The Proposed Project would implement the following measures in compliance with the Grading Ordinance (County Code Section 87.428) to minimize fugitive dust (PM_{10}) during the construction phase of the Proposed Project. These measures would include:

- The applicant would apply water three times per day or as necessary depending on weather conditions to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction. These measures would be applied to all active construction areas, unpaved access driveways, parking areas and staging areas as necessary.
- Sweepers and water trucks will be used to control dust and debris at public street access points.
- Internal construction driveways will be stabilized by paving, chip sealing, or nontoxic soil binders after rough grading.
- Exposed stockpiles (e.g., dirt, sand) will be covered and/or watered or stabilized with nontoxic soil binders, tarps, fencing, or other suppression methods as needed to control emissions.
- Traffic speeds on unpaved driveways will be limited to 15 mph.

- All haul and dump trucks entering or leaving the site with soil or base material will maintain at least 2 feet of freeboard, or cover loads of all haul and dump trucks securely.
- Disturbed areas will be reseeded with a native plant hydroseed mix as soon as possible after disturbance.

Installation of Underground Medium Voltage Collection System

Trenching is required for installation of the AC medium voltage underground electrical collection system and telecommunication lines. Trenches would be approximately 3 to 4-feet-deep and 2 to 3 feet wide. The trenches would be filled with base materials above and below the conductors and communication lines to ensure adequate thermal conductivity and electrical installation characteristics. The topsoil from trench excavation would be set aside the trench before the trench is backfilled and would ultimately comprise the uppermost layer of the trench. Excess material from the foundation and trench excavations would be used for site leveling. Where possible, trenching would be located beneath driveways and roads to minimize disturbance.

PV System Installation

The PV system installation includes foundations, racking, module assembly, and DC wiring as follows:

- Foundations: The foundations are H piles that would be driven into the soil using a pile/vibratory/rotary driving technique like that used to install freeway guardrails. The pile foundations would be driven to approximate depths of 10 to 15 feet deep depending upon required embedment depth. The spacing of the piles is determined by the ultimate ground coverage ratio that are surveyed and pined to exact location.
- Racking: The racking is assembled on top of the H piles manually and tightened and adjusted with handheld electric ratchet guns.
- Module Assembly: The modules are manually lifted and adjusted on top of the racking.
- Above Ground DC Wiring: The modules are strung together and manually connected with twist connectors.

Installation of Battery Energy Storage System

The battery energy storage installation would be completed in four phases:

- Foundation: The foundations are driven H piles driven to the embedment depth required by the manufacturer.
- Containers: The storage containers and integration systems are delivered to the site by truck and are lifted off the truck by a forklift or crane.

- Battery Placement: The battery packs are delivered separately from the containers and integrated into the system onsite.
- Wiring and Commissioning: The fully integrated container is then wired into the inverter/ transformer platforms.

Construction Personnel, Traffic, and Equipment

It is conservatively estimated that during the peak construction of the Proposed Project, up to 500 workers would be on the Project site. It is anticipated that workers would arrive and depart between 6:00 a.m. and 7:00 p.m. Monday through Saturday. It is also anticipated that 30 heavy construction and/or delivery vehicles would travel daily to/from the Project site during construction.

Approximately 462 workers and 22 trucks are anticipated for the construction of the solar facility during peak construction operations with the remaining 38 workers and 8 trucks working at the switchyard site. It is assumed that 65% of the workers (325) would arrive during the a.m. peak hour and depart during the p.m. peak hour. It is also assumed that 30% of the 500 construction workers would carpool to/from the Project site, which is conservative given the long distances between the Project site and populated areas in San Diego County and Imperial County. Additionally, 15% of the worker traffic (64) is assumed to make an additional trip to/from the Project site outside of the AM and PM peak hours. This accounts for workers leaving for lunch and additional miscellaneous trips that are to be expected. The 15% is expected to be conservative for a construction site in an undeveloped area since travel times would discourage these additional trips. A total of 30 heavy construction/delivery vehicles are anticipated to travel to/from the Project site daily and are spread out throughout the day (15% assumed during the peak hours).

Based upon these assumptions, it is estimated that during construction the Project would generate a total of 1,158 daily trips, with 320 (297 in, 23 out) trips during the a.m. peak hour and 320 (23 in, 297 out) during the p.m. peak hour. During peak construction operations and are broken down below.

- Solar facility– 1,036 daily trips, with 292 (270 in, 22 out) a.m. peak hour trips and 292 (22 in, 270 out) p.m. peak hour trips;
- Switchyard – 122 daily trips, with 28 (27 in, 1 out) a.m. peak hour trips and 28 (1 in, 27 out) p.m. peak hour trips.

Construction of the Proposed Project would result in a temporary increase in traffic on Carrizo Gorge Road and Old Highway 80. No road closures are anticipated during Project construction. A County-required Traffic Control Plan to provide safe and efficient traffic flow in the area and on the Project site would be prepared prior to construction. The Traffic Control Plan would be prepared in consultation with the County of San Diego and would contain Project-specific

measures for noticing, signage, policy guidelines, and the limitation of lane closures to off-peak hours (although it is noted that no requirement for lane closures has been identified).

Water Use During Construction

The total estimated water demand during construction is 140 acre-feet. Water during construction would be from on-site groundwater wells.

The Proposed Project would require approximately 358,436 gallons per day (approximately 250 gallons per minute) from on-site groundwater for approximately the first 6 weeks during grading activities. It is anticipated that the existing wells on site would have capacity to supply this water. Following grading, water demand would be lower during construction of solar facility. Total construction water demand would be approximately 140 acre-feet.

During construction, water would also be used to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction. Water would also be used to mix concrete to be used for the substation, energy storage facility foundations, and other concrete pads.

1.2.1.3 Decommissioning

This section describes the dismantling of the solar facility, recycling, and removal surety. All Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E. All decommissioning would occur within the development footprint and disturbance limits of the Proposed Project.

Given the lifespan of the solar facility equipment (35 years), the EIR analysis assumes a conservative 35-year life span for the Proposed Project at which time it will be decommissioned as described below. The decommissioning of the solar facility would last approximately 10 months.

The use of the land would have to return to a use that is consistent with the County of San Diego Zoning Ordinance at the time of dismantling. If a new use is not proposed, the decommissioning would include removal of all ground-level components and preparing the site with a compatible hydroseed mix.

Dismantling

The aboveground (detachable) equipment and structures would be disassembled and removed from the site. Detachable elements include all PV modules and support structures, battery storage units, inverters, transformers, and associated controllers. Removal of the fencing, substation, and aboveground conductors on the transmission facilities would also be implemented. Most of these materials can be recycled or reclaimed. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of offsite, consistent with the County of

San Diego Construction Demolition and Debris Management Plan (County Ordinance 68.508-68.518). Underground collector and transmission components would be abandoned in place and cut off down to three feet below grade.

It is estimated that the amount of water necessary to dismantle the solar facility would be less than that required for construction because there would be no need to use water for concrete mixing or to hydrate and compact on-site fills. The activities associated with decommissioning would not include grading. Water demand for decommissioning dust abatement would be approximately 40 af of water. Additional equipment washing and modest compaction needs, if necessary, would require a further approximately 10 af. The water for equipment washing and modest compaction would be used over approximately 3 months. The total water demand estimated for decommissioning is approximately 50 af over a 10-month period for dust abatement, equipment washing and compaction.

Recycling

The majority of the components of the proposed solar facility are made of materials that can be readily recycled because the components of the PV modules can be broken down. Generally, if the PV panels can no longer be used in a solar facility, the aluminum can be resold, and the glass can be recycled. Any hazardous components of the PV panels would be removed and properly disposed of offsite prior to recycling. Other components of the solar facilities, such as the rack structures and mechanical assemblies, can be recycled as they are made from galvanized steel. Equipment such as inverters, transformers, and switchgear can be either reused or their components recycled. Equipment pads made from concrete can be crushed and recycled. The electrical wiring is made from copper and/or aluminum and can be reused or recycled as well. All recycling would be in accordance with state and County regulations.

Removal Surety

The final decommissioning plan(s) that would be provided within one year of issuance of the building permits for the Proposed Project would comply with Section 6954.b.3 (d) of the County of San Diego Zoning Ordinance (County of San Diego 2014) for removal surety as follows:

> The operator shall provide a security in the form and amount determined by the Director to ensure removal of the Solar Energy System. The security shall be provided to PDS [Planning & Development Services] prior to building permit issuance. Once the Solar Energy System has been removed from the property pursuant to a demolition permit to the satisfaction of the Director, the security may be released to the operator of the Solar Energy System.

Financial responsibility for decommissioning would be an obligation of the owner of the solar facility.

1.2.1.5 Fire Protection

There are several fire stations within the Project area; these include San Diego County Fire Authority (SDCFA), California Department of Forestry and Fire Protection (CAL FIRE), and U.S. Forest Service fire stations. The Jacumba Hot Springs area is serviced by the SDCFA's Jacumba Fire Station (Station 43). Fire emergencies that may occur at the Project site would be primarily responded to by SDCFA's Jacumba Fire Station (Station 43), which is staffed by both volunteer reserve and career firefighters. Additional response would be available from SDCFA's Boulevard and Campo Fire Stations (Stations 47 and 46, respectively), and SDCFA's Lake Morena Fire Station (Station 42). Other fire protection aid would be provided by the CAL FIRE Campo Station, as well as from mutual aid resources from throughout San Diego County and the state, when necessary. Clearing and grubbing of approximately 643 acres would be required for construction and access to the Project site. Consistent with County requirements for discretionary approvals for projects in wildland/urban interface areas, a Fire Protection Plan (FPP) would be prepared for the Proposed Project.

1.2.1.6 Project Design Features

The applicant has incorporated Project Design Features (PDFs) into the Proposed Project to reduce or avoid the potential for environmental effects. The following are a list of PDFs that are included in the Proposed Project. These PDFs would be made conditions of approval for the Proposed Project to ensure these features are implemented.

PDF HYD-1 Prior to approval of final design plans, the County DPW shall verify that all components located within the 100 year floodplain shall comply with the County of San Diego Flood Damage Prevention Ordinance, County Hydrology Manual, and County Hydraulic Design Manual, which includes elevating all solar panels at maximum tilt, inverter/transformer platforms, battery storage containers, and all electrical components one (1) foot above base flood elevation.

PDF-HYD-2 **Groundwater Monitoring and Mitigation Plan**. During groundwater extraction for the Proposed Project's construction and operation, the applicant shall implement the groundwater production and groundwater-level monitoring, groundwater mitigation criteria and, if necessary, the groundwater-habitat monitoring procedures outlined in the Groundwater Monitoring and Mitigation Plan that has been prepared for the Proposed Project.

PDF-TR-1 **Traffic Control Plan.** Prior to obtaining a grading permit from the County of San Diego, the applicant shall implement a construction Traffic Control Plan (TCP) that includes the following measures:

Temporary traffic control devices in accordance with the California Department of Transportation's (Caltrans) California Manual on Uniform Traffic Control Device to identify locations/sections where construction is ongoing. This may include slow-moving-vehicle warning signs, signage to warn of merging trucks, barriers for separating construction and non-construction traffic, use of traffic control flaggers, and any additional measures required for the sole convenience of safely passing non-construction traffic (including transit, bicyclists and pedestrians) through and around construction areas.

Coordination with Caltrans to secure the necessary encroachment and trip permits necessary for specialized haul trucks. Also, any excessive height/length vehicles should use pilot car services to provide safe over-the-road operations and overhead height warnings, if necessary.

Notification of the California Highway Patrol, if necessary, to facilitate slowing freeway traffic to ensure safe access for motorists.

Coordination with Caltrans, California Highway Patrol, and County officials, including the Sheriff's department. For the State Highway System, Caltrans requires a TCP to be submitted to District 11's Transportation Permits Issuance Branch at least 30 days prior to the start of any construction.

Employment of a contract transport company that would be responsible for surveying the route to determine how turns on existing roads would be accomplished and ensuring that is reflected in the TCP.

Establishment of procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities.

PDF-TR-2 **Preparation of Construction Notification Plan.** Forty-five days prior to construction, the project applicant would prepare and submit a construction notification plan to the appropriate land use jurisdiction agency for approval. The construction notification plan would identify the procedures that would be used to inform property owners of the location and duration of construction, identify approvals that would be needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The construction notification plan would address at a minimum two of the following components

Public notice mailer

A public notice mailer would be prepared and mailed no fewer than 15 days prior to construction. The notice would identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice would state the type of construction activities that would be conducted and the location and duration of construction, including all helicopter activities. The project applicant or construction contractor would mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice would be prepared and distributed.

Public liaison person and toll-free information hotline

The project applicant would identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person would be included in notices distributed to the public. The project applicants would also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls would be addressed in the construction notification plan.

PDF-TR-3 **Notify property owners and provide access.** To facilitate access to properties that might be obstructed by construction activities, the project applicant would notify property owners and tenants at least 24 hours in advance of construction activities and would provide alternative access if required.

1.2.2 Technical, Economic, and Environmental Characteristics

The following provides a discussion of the Proposed Project's technical, economic, and environmental characteristics.

1.2.2.1 Technical Considerations

The Proposed Project's PV technology employs single-axis trackers oriented in the north–south direction. Single-axis tracking systems would employ a motor mechanism that would allow the arrays to track the path of the Sun (from east to west) throughout the day. The motors would be installed after the horizontal cross-members are in place. In the morning, the panels would face east. Throughout the day, the panels would slowly move to the upright position at noon, and on to the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.

Depending on the type of technology (PV modules) used, the PV panels would measure between 4 and 7 feet in length, and the total height of the panel system measured from ground surface would be approximately 12 feet. The Proposed Project's rack dimensions are approximately 10 feet top to bottom edge with a tracking range of motion of 65 degrees. Each rack would hold an array of panels approximately 300 feet in length. The array would have approximately 2 feet of clearance from grade and have a peak height at full tilt of approximately 12 feet at the highest edge. Each rack would be mounted on a tubular or beam-shaped post. The rack rows would be spaced at approximately 18 to 22 feet center-to-center with a minimum of 10 feet of clearance between rack edges. A series of north-to-south (spaced approximately every 1,500 to 3,600 feet) and east-to-west (spaced approximately every 600 to 1,000 feet) running all-weather fire access driveways, of minimum 20-foot width interior to the site and 24-foot width around the perimeter of the site, would be provided for maintenance and fire access.

1.2.3.2 Economic Considerations

The Proposed Project would help facilitate the development of a local renewable energy supply, thereby improving the reliability of electrical energy production in the San Diego County and other counties by increasing local sources of electricity rather than increasing electrical energy import. The Proposed Project would also assist the State of California in achieving the state's 50% RPS by 2026 and 60% RPS by 2030, which were put in place by Senate Bill 100. It would further assist the state in meeting a renewable energy target of 100% of total electricity sold to retail customers by 2045, as put in place by Senate Bill 100. The Proposed Project would also provide economic benefits to the region from construction of the Proposed Project.

1.2.3.3 Environmental Considerations

Solar energy can provide a number of environmental benefits, such as reductions in air and water pollution and GHG emissions as compared to other sources of energy. However, solar technology, like other energy technologies, has environmental impacts.

Aesthetics

Impacts associated with visual character or quality are often a factor with solar energy projects due to the contrast with existing visual elements of a neighborhood or community, such as size, massing, coverage, and scale. Installation of the Proposed Project facilities would result in altering the openness of the landscape and quality of existing views. Additionally, the Proposed Project would alter views from surrounding public lands, I-8, and Old Highway 80. Section 2.1, Aesthetics, of this EIR evaluates the potential changes to the existing aesthetic and visual characteristics of the Project area.

Air Quality

During the Proposed Project construction, diesel particulate matter emissions would be emitted from construction equipment and heavy-duty trucks. In addition, the Proposed Project's construction traffic volumes may expose sensitive receptors to localized high concentrations of carbon monoxide that would exceed the County's screening thresholds. The Project's construction activities could also result in Toxic Air Contaminants (TACs) that could exceed the County's thresholds for cancer risk. Section 2.2, Aesthetics, of this EIR evaluates the potential impacts to air quality. and provides mitigation to reduce potential significant impacts.

Biological Resources

Resources within the Proposed Project site include special status plant and wildlife species, riparian and other sensitive habitats, jurisdictional aquatic resources, and wildlife movement corridors. The Proposed Project construction and operation would potentially impact these biological resources. Section 2.3, Biological Resources of this EIR analyzes potential impacts relating to biological resources resulting from the Proposed Project.

Cultural Resources and Tribal Cultural Resources

Construction and decommissioning activities for the Proposed Project could affect cultural resources and tribal cultural resources within the Project site. The Proposed Project design was adjusted to avoid impacts to significant archaeological sites; however, there is a potential for impacts to previously undiscovered cultural resources and human remains within the Project site. Section 2.4 and 2.11 of this EIR evaluate the potential impacts to cultural resources and tribal cultural resources, respectively.

Hydrology and Water Quality

Construction and operational activities for the Proposed Project would potentially impact hydrology, including impeding or redirecting flood flows. Section 2.7, Hydrology and Water Quality of this EIR analyzes potential impacts relating to biological resources resulting from the Proposed Project.

Mineral Resources

The Project does not include any mapped mineral zones; however, a portion of the site is partially underlain by quaternary alluvium. The proposed solar facility would be decommissioned and is therefore considered an interim use. The switchyard and biological open space easements required for mitigation would be permanent uses, which could impact potential mineral resources. Section 2.8, Mineral Resources of this EIR analyzes potential impacts relating to mineral resource resulting from the Proposed Project.

Noise

Construction and operational noise may generate noise levels in exceedance of applicable standards depending on the phasing of the project construction, the layout and type of equipment installed, and panel washing methods. Section 2.9, Noise of this EIR analyzes potential noise impacts resulting from the Proposed Project.

Wildfire

Areas of the Project site are located in High and Very High Fire Hazard Severity Zones. The construction and operation of the Proposed Project has the potential to increase fire hazards. Section 2.12, Wildfire of this EIR analyzes potential wildfire hazard impacts resulting from the Proposed Project.

1.3 Project Location

The Proposed Project would be located on a privately owned 1,356-acre site in southeastern San Diego County (see Figure 1-1, Project Location). The Project site lies within the Jacumba Subregional Group Area within the Mountain Empire Subregion area of the unincorporated County. The Project site is located south of I-8, east of the unincorporated community of Jacumba Hot Springs, and immediately north of the U.S./Mexico border. Access to the Project site is provided by Old Highway 80 and Carrizo Gorge Road. The Project site consists of 24 parcels, which are listed in Table 1-2, Assessor's Parcel Numbers, Existing General Plan Land Use Designations, and Existing Zoning. The location of the parcels is shown in Figure 1-1, Project Location. The Project site includes right-of-way easements for Old Highway 80, SDG&E easements, and an easement for the San Diego and Arizona Eastern Railway.

1.4 Environmental Setting

The baseline for the Project is established by the physical condition that exists at the time the Notice if Preparation (NOP) for the EIR was published, which occurred on March 7, 2019. The environmental setting is summarized below and described in greater detail for each environmental issue at the beginning of each section in Chapter 2 and 3 of this EIR.

A portion of the Project site on the central and southern areas have historically been used for dairy and agricultural operations. Although a portion was used for farming, the Project site is not currently under cultivation and has been fallow since 2014. The Project site contains 11 vegetation communities and/or land covers, including 8 sensitive vegetation communities.

The 1,356-acre Project site varies from relatively level land in the central and southern portions of the site to moderately to steeply sloping hillsides along the western and eastern margins. Elevations

range from approximately 2,745 feet above mean sea level in the lower, northern portion of the Project site to 3,365 feet above mean sea level at the top of Round Mountain in the northwestern portion of the Project site. The Project site is sparsely developed with structures located in the southeast associated with prior dairy and ranching operations and unpaved roads. A section of the San Diego and Arizona Eastern Railway that is no longer in service and a tributary to Carrizo Creek are present along the west portion of the Project site.

Regional access to the Project site is provided by I-8, located to the north, and by Old Highway 80 which traverses the southern portion of the Project site. Both I-8 and Old Highway 80 are designated as County Scenic Highways within this area. The Jacumba Airport is located immediately to the east of the southern portion of the Project site. The southern boundary of the Project site is located along the U.S/Mexico border.

Public land in the surrounding area includes Anza Borrego State Park, located adjacent to the Project site to the west. Federal lands managed by the Bureau of Land Management (BLM) are also located within the surrounding area.

The unincorporated community of Jacumba Hot Springs is located adjacent to the proposed solar facility, to the southwest of the Project site. The 2010 census population was 561. The community includes residential and commercial uses, including a hot springs resort. Jacumba Hot Springs and the surrounding area are totally dependent on groundwater for supply. The Jacumba Community Services District provides groundwater to the village area.

The Jacumba Airport is located to the east of the southern portion of the Project site. The Project site is located within the Airport Influence Area of the Jacumba Airport, specifically within Zone 1 – Zone 6 of the Airport's Airport Land Use Compatibility Plan.

The Project site includes an easement for the San Diego and Arizona Eastern Railway. The railroad's route originates in San Diego and terminates in El Centro. The segment within the Project site is currently not in operation.

Three electric transmission lines transect the northern portion of the Project site, as shown in Figure 1-2. These existing transmission lines include the SDG&E 138kV transmission line, the Sunrise Powerlink, and the Southwest Powerlink. The Proposed Project's switchyard would loop into the existing 138kV line. The Sunrise Powerlink and the Southwest Powerlink are 500 kV transmission lines supported by 150-foot tall steel lattice structures.

1.5 Intended Uses of the EIR

This document is subject to Section 21167.6.2 of the Public Resources Code, which requires the record of proceedings for this project to be prepared concurrently with the administrative process;

documents prepared by, or submitted to, the lead agency to be posted on the lead agency's internet web site; and the lead agency to encourage written comments on the project to be submitted to the lead agency in a readily accessible electronic format.

This EIR is an informational document that will inform public agency decision makers and the public generally about the significant environmental effects of the Proposed Project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the Proposed Project. This EIR has been prepared in accordance with the requirements of the County of San Diego Environmental Impact Report Format and General Content Requirements (County of San Diego 2006), the California Environmental Quality Act (CEQA) statute and the CEQA guidelines (California Public Resources Code, Section 21000 et seq., and 14 CCR 15000 et seq., respectively). The Notice of Preparation (NOP) for the EIR was released for public review on March 7, 2019, and associated comment letters received during the public review period are included as Appendix A to this EIR. The Initial Study prepared for the Proposed Project is also included as Appendix A. This EIR addresses issues identified in the Initial Study and comments received regarding the NOP.

This EIR will be made available for review by members of the public and public agencies for 45 days to provide comments "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" as stated in CEQA Guidelines, Section 15204 (14 CCR 15000 et seq.).

As the designated lead agency, the County is responsible for preparing this document. The decision to approve the Proposed Project is within the purview of the County Planning Commission and Board of Supervisors. When deciding whether to approve the Proposed Project, the County will use the information included in this EIR to consider potential impacts on the physical environment associated with the Proposed Project.

The County will consider written comments received on the Draft EIR in making its decision whether to certify the Final EIR as complete and in compliance with CEQA, and also whether to approve or deny the Proposed Project. Environmental considerations and economic and social factors may be weighed to determine the most appropriate course of action. If the EIR is certified and the Proposed Project approved, agencies with permitting authority over all or portions of the Proposed Project may use the EIR as the basis for their evaluation of environmental effects of the Proposed Project and approval or denial of applicable permits.

1.5.1 Project Approvals/Permits

The Proposed Project requires approval by the County. In addition, approvals or permits may be required by other state and federal agencies. Table 1-3, Approvals/Permits Expected to be

Obtained, includes discretionary approvals/permits that may be obtained during the decision-making process. The table is organized by agency/jurisdiction. In the case where multiple discretionary approvals/permits are necessary from a single agency, the approvals are listed in the order they are believed to occur.

In order to develop a solar facility on the Project site, discretionary actions from the County would be required, including a Major Use Permit (MUP). The Proposed Project is considered a Major Impact Service and Utility type. The Proposed Project is located on a site that is zoned a Specific Planning Area (S88) that has not adopted a Specific Plan. Pursuant to Section 2888.a. of the County Zoning Ordinance, a Major Use Permit may be granted for any use pursuant to a bonded agreement in an amount sufficient to ensure the removal of all buildings, structures, and other improvements within a specified amount of time and/or under specified conditions when the decision-making body finds that such agreement will carry pout the intent of this Ordinance and is enforceable by the County. Prior to approval of any project, the project will be required to provide a bond in an amount that is sufficient to ensure that all of the solar panels, battery storage containers, and other related materials could be removed at the end of the 35-year Major Use Permit.

Other County permits and approvals that would be required include a grading permit, building and demolition permits, County Right-of-Way Permit, and various ministerial permits. A demolition permit is required because the Proposed Project would demolish the dairy and ranch structures located within the Project site to the north of Old Highway 80. The Notice of Preparation (NOP) for the Proposed Project included a General Plan Amendment ("GPA") and a Rezone; however, the applications for the GPA and Rezone were subsequently withdrawn by the Project applicant. No changes to the existing General Plan land use designations or zoning are proposed by the applicant.

1.5.2 Related Environmental Review and Consultation Requirements

Pursuant to the CEQA Guidelines (Section 15365), the County prepared an NOP for this EIR. The NOP was publicly circulated for 30 days beginning March 7, 2019. The County held a public scoping meeting on March 21, 2019 at the Highland Community Center in Jacumba Hot Springs to provide responsible agencies and members of the public with information about the CEQA process and to provide further opportunities to identify environmental issues and alternatives for consideration in the EIR. Public comments received during the NOP scoping process are provided in Appendix A.

1.6 Applicable Regional and General Plans

Planning documents reviewed for the Proposed Project include the County's General Plan, the Mountain Empire Subregional Plan. Project consistency with applicable plans is discussed and analyzed in Section 3.1.4, Land Use and Planning of this EIR.

Other planning documents reviewed for the Proposed Project include the Regional Air Quality Strategy for the San Diego County Air Pollution Control District, the California Regional Water Quality Control Board (Region 9, San Diego, and Region 7, Colorado River) Basin Plans.

1.7 List of Past, Present, and Reasonably Anticipated Future Projects in the Project Area

CEQA Guidelines Section 15355 defines cumulative effects as two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts. The CEQA Guidelines further state that individual effects may include changes resulting from a single project or a number of separate projects, or the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. CEQA Guidelines Section 15130 allows for the use of two alternative methods to determine the scope of projects to analyze cumulative impacts.

List Method: A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.

General Plan Projection Method: A summary of projects contained in an adopted general plan or related planning document, or in a prior environmental document, that have been adopted or certified, which describe or evaluate regional or area-wide conditions contributing to the cumulative impact.

The cumulative analysis conducted for this EIR is based on both the list method and summary of projections method. The summary of projections method uses the County's General Plan and Mountain Empire Subregional Plan (both of which are available at the following website: http://www.sandiegocounty.gov/pds/generalplan.html); the summary project method was used in Section 2.2, Air Quality, and Section 2.7, Hydrology and Water Quality. Each environmental issue area within this EIR includes a discussion of potential cumulative impacts based on these methods. Table 1-4, Cumulative – Reasonably Foreseeable, Approved, and Pending Projects, lists projects that serve as the foundation on which the cumulative analysis approach has been based.

1.8 Growth-Inducing Impacts

CEQA requires a discussion of the ways in which a proposed project could induce growth. Growth-inducing impacts are those that foster economic or population growth, or the construction of new development, either directly or indirectly, in the surrounding environment. In addition, the potential for characteristics of the project to encourage or facilitate additional growth that could significantly affect the environment, either individually or cumulatively, must be considered.

During construction, the Proposed Project would employ a total of approximately 500 workers, with a daily maximum of 500 workers at the peak of construction. These workers are not anticipated to relocate to the area with their families and are not expected to induce substantial population growth in Jacumba Hot Springs or other areas within the Mountain Empire Subregion. It is anticipated that construction workers from the San Diego region to the west or Imperial Valley to the east would construct the Proposed Project. During the operational phase, the Proposed Project would not have any full-time personnel on site but may include up to five people on site during operations inspections, maintenance, and repair activities. The operational workers are not anticipated to relocate to Jacumba Hot Springs or the Mountain Empire Subregion. The limited scale of the solar facility construction and operation would not affect the employment base within the San Diego region as a whole.

Additionally, the development of the solar energy generation and storage project would not induce substantial population growth in the community of Jacumba Hot Springs and the Mountain Empire Subregion. The Proposed Project would not include any physical or regulatory changes that would remove a restriction to, or encourage population growth in an area, including, but not limited to, the following: large-scale residential development; accelerated conversion of homes to commercial or multifamily use; regulatory changes including General Plan Amendments encouraging population growth, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. As previously discussed in Section 1.1, Project Objectives, the Proposed Project is intended to develop a utility-scale solar energy project and energy storage facility that improves electrical reliability in the San Diego County region and other counties. The Proposed Project would supplement the region's energy supply and would not encourage housing growth or result in growth-inducing impacts.

Table 1-1
Proposed Project Construction Duration, Equipment, and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
Site mobilization	2 weeks	N/A	N/A	
Demolition of dairy and ranch structures	1 month (overlapping with Site Preparation, Grading, Stormwater Protection, and Fence Installation)	Excavators	1	
		Trackers/Loaders/ Backhoes	1	
Site preparation, grading, and stormwater protection	3 months (overlapping with Demolition of the Old Farm and Fence Installation)	Graders	2	
		Rubber Tired Loaders	1	
		Scapers	4	
		Tractors/Loaders/ Backhoes	1	
Fence installation	2 months (overlapping with Demolition of the Old Farm and Site Preparation, Grading and	Cement and Mortar Mixers	1	Maximum = 500
		Skid Steer Loaders	1	

Table 1-1
Proposed Project Construction Duration, Equipment, and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
	Stormwater Protection)			
Landscaping Installation	4 months (overlapping with Substation/Switchyard Construction, Pile Driving and Tracker and Module Installation)	Skid Steer Loaders	1	
		Tractors, Loaders, Backhoes	2	
Substation & Switchyard Construction	8 months (overlapping with Landscaping Installation, Pile Driving and Tracker and Module Installation)	Graders	3	
		Plate compactors	4	
		Rubber Tired Dozers	4	
		Rubber Tired Loaders	4	
		Scrapers	2	
		Tractors/Loaders/ Backhoes	1	
		Aerial lifts	1	
		Bore/Drill Rigs	2	
		Crushing/Proc. Equipment	1	
		Trenchers	4	
		Pavers	2	
		Paving Equipment	2	
		Rollers	3	
		Air Compressors	1	
		Bore/Drill Rigs	1	
		Cranes	1	
Pile Driving	2 months (overlapping with Landscaping Installation, Substation/Switchyard Construction, and Tracker and Module Installation)	Aerials Lifts	2	
		Other Construction Equipment	6	
Tracker and Module Installation	6 months (overlapping with Landscaping Installation, Substation/Switchyard construction and Pile Driving)	Aerial lifts	6	
		Off-Highway Trucks	5	
DC Electrical System Installation	6 months (overlapping with Landscaping Installation, Substation/Switchyard Construction, Pile Driving, and Tracker and Module Installation)	Aerial Lifts	2	
		Off-Highway Trucks	10	
Underground Medium AC Voltage Electrical	5 months (overlapping with Landscaping Installation, Substation/Switchyard Construction, Tracker and Module Installation, DC Electrical, and Underground Medium AC Voltage Electrical System installation)	Excavators	2	
		Rollers	1	
		Rubber Tired Loaders	1	

Table 1-1
Proposed Project Construction Duration, Equipment, and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
Inverter/Transformer Platforms Installation	2 months (overlapping with Substation/Switchyard Construction, DC Electrical, Underground Medium AC Voltage Electrical, and Battery Energy Storage System)	Cranes	1	
		Forklifts	1	
Battery Energy Storage System Installation	2 months (overlapping with Substation/Switchyard Construction, DC Electrical and Underground Medium AC Voltage Electrical, and Inverter/Transformer Pad Installation)	Cranes	1	
		Forklifts	1	
Commissioning/Testing	1 month	N/A	N/A	
Total Construction Time	13 months			

Table 1-2
Assessor's Parcel Numbers, Existing General Plan Land Use Designations, and Existing Zoning

Number	Assessor's Parcel Number	Acreage	Existing Regional Category	Existing Land Use Designation	Existing Zoning
1	614-100-20	90.22	Village	Specific Plan and Public Agency Lands	S80/S88/S92
2	614-100-21	27.27	Village	Specific Plan	S88
3	614-110-04	2.74	Village	Specific Plan	S88
4	660-020-05	267.56	Village	Specific Plan	S88
5	660-020-06	39.93	Village	Specific Plan	S88
6	660-150-04	34.96	Village	Specific Plan	S80
7	660-150-07	19.19	Village	Specific Plan	S80
8	660-150-08	23.2	Village	Specific Plan	S80
9	660-150-10	25.71	Village	Specific Plan	S80
10	660-150-14	0.92	Village	Specific Plan	S88
11	660-150-17	15.18	Village	Specific Plan	S88
12	660-150-18	169.74	Village	Specific Plan	S88
13	660-170-09	0.06	Village	Village Residential (VR-2)	RR
14	661-010-02	37.88	Rural	Rural Lands (RL-40)	S92
15	661-010-15	9.11	Village	Specific Plan	S88
16	661-010-26	61.13	Village	Specific Plan	S88
17	661-010-27	80.58	Village	Specific Plan	S88

Table 1-2
Assessor's Parcel Numbers, Existing General Plan Land Use Designations, and Existing Zoning

Number	Assessor's Parcel Number	Acreage	Existing Regional Category	Existing Land Use Designation	Existing Zoning
18	661-010-30	180.70	Village	Specific Plan	S88
19	661-060-12	166.38	Village	Specific Plan	S88
20	661-060-22	36.27	Village	Specific Plan	S80
21	660-140-06	1.79	Village	Rural Commercial	S88
22	660-140-08	16.91	Village	Specific Plan	S88
23	660-150-21	37.5	Village	Specific Plan	S88
24	660-150-16	0.92	Village	Rural Commercial	S88
	Total	**1,345.85***	**—**	**—**	**-**

* The Project site itself is 1,356 acres. The additional 10 acres includes the easement for Old Highway 80, which traverses the Project site.

Table 1-3
Approvals/Permits Expected to be Obtained

Government Agency	Action/Permit
County of San Diego	• Major Use Permit • County right-of-way permits (construction permit, excavation permit, and encroachment permit) • Grading permit (preliminary grading plan PDS2019-LDGRMJ-30240) • Building Permits • Demolition Permits • Improvement plans • Exploratory borings, direct-push samplers, and cone penetrometers permits • Waiver of Board Policy I-111 • Approval for the Transfer of Parcel to SDG&E
Regional Water Quality Control Board	• General Construction Stormwater Permit
Federal Aviation Administration	• Federal Aviation Administration 7460 – Aeronautical Study Determination of No Hazard
California Department of Transportation	• Transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code (1983)
U.S. Department of Homeland Security, U.S. Customs and Border Protection	• Consistency with U.S. Customs and Border Protection safety and access policies
San Diego County Fire Authority	• Fire and Emergency Protection Services Agreement
California Public Utilities Commission	• Section 851 Advice Letter
Miscellaneous	• All other discretionary permits and approvals necessary from local, state, and federal agencies with jurisdiction over the project.

Table 1-4
Cumulative – Reasonably Foreseeable, Approved, and Pending Projects

Project	Type	Status	Distance from Project	Project-Related Impacts
TULE WIND: 12,239 acres of public lands, 186 MW, with 57 wind turbines. The project would deliver power through the project substation via a 138-kV transmission line to run south to an interconnection with the proposed San Diego Gas & Electric (SDG&E) Rebuilt Boulevard Substation.	PF-W	Phase 1 = C Phase 2 = A	Approx. 8.5 miles 3352 McCain Valley Rd. Boulevard, CA 91905	Air Quality, Biological Resources, Cultural Resources, Public Services, and Hazards and Hazardous Materials (Fire)
RUGGED SOLAR: Major Use Permit Modification MUP-12-007W1, MUP-12-007TE; MUP for the construction and operation of a 74 MW solar energy system on an approximately 765-acre site. Original project approved; revised project under review.	PF-S	A/ UR	Approx. 8 miles Boulevard, CA 91905	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hydrology/ Water Quality, Noise, Public Services, and Hazards and Hazardous Materials (Fire)
GOLDEN ACORN CASINO AND TRAVEL CENTER: 33-acre expansion consisting of 15h0-room hotel, 900-space parking garage, surface parking, RV park, casino expansion, bowling alley, arcade, offices, retail, restaurants/food service, wind turbines, and water and wastewater improvements in three phases.	F	C	Approx. 1 2miles 1800 Golden Acorn Way, Campo, CA 91906	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Noise, Public Services, Utilities, and Hazards and Hazardous Materials (Fire)
FREEDOM RANCH: Major Use Permit; MUP 74-011W2; Expand existing facilities from 50 beds to 125 in four phases. (Alcohol/Drug Treatment and Recovery Facility)	R	A	Approx. 18 miles 1777 Buckman Springs Rd, Campo, CA 91906	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Noise, Public Services, Utilities, and Hazards and Hazardous Materials (Fire)
ROUGH ACRES FOUNDATION CAMPGROUND FACILITY; Major Use Permit; MUP-12-021; MUP for a campground/conference center. (wellness center and campground facility)	O	UR	Approx. 7.5miles APN 611-060-08, APN 611-070-03;	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Noise, Public Services, Utilities, and Hazards and Hazardous Materials (Fire)
JCSD Capacity Increase: Project would involve creation of new well at existing monitoring well site (Park Well) to increase capacity of JCSD water supply.	O	A	Adjacent to Project site, Park Well located within Jacumba Community Park	Hydrology Water Quality
BOULEVARD SOLAR: Major Use Permit Modification: MUP-12-010W1 MUP-12-010TE; MUP for the construction and operation of a 60 MW solar energy system on an approximately 420-acre site.	PF-S	UR	Approx. 7 miles	TBD pending completion of environmental analysis
BOULEVARD ENERGY STORAGE: Minor Use Permit; ZAP-17-006; ZAP for the construction and operation of a 100 MW energy storage facility on a 2-acre footprint.	PF	UR	Approx. 6 miles	TBD pending completion of environmental analysis
CAMERON SOLAR: Major use Permit; MUP-	PF-S	UR	Approx. 17miles	TBD pending completion of

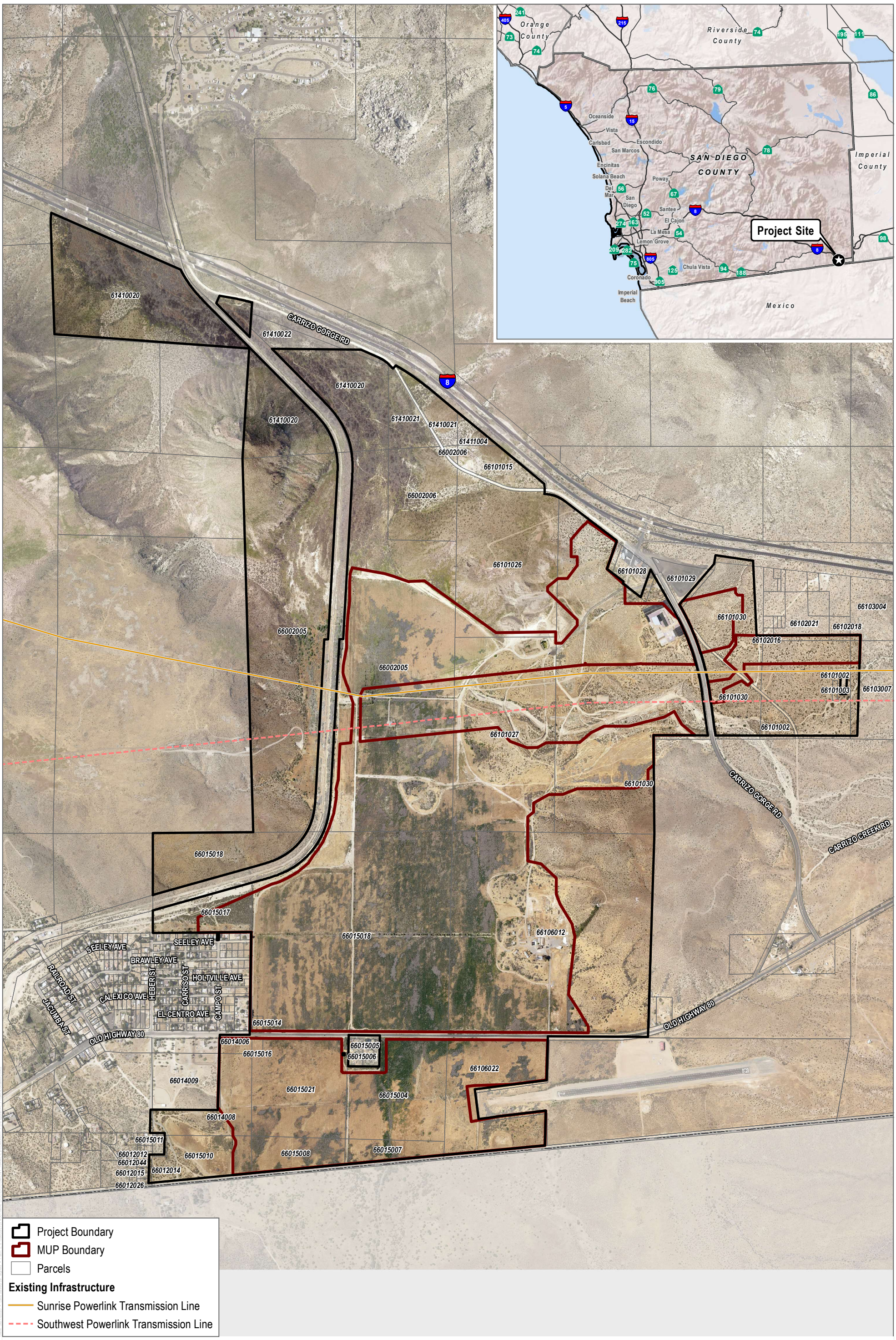
Table 1-4
Cumulative – Reasonably Foreseeable, Approved, and Pending Projects

Project	Type	Status	Distance from Project	Project-Related Impacts
18-004; MUP for the construction and operation of a 1.7 MW solar energy system consisting of approximately 19 acres on a 164.7-acre parcel.				environmental analysis
CAMPO WIND WITH BOULDER BRUSH FACILITIES: Major Use Permit for construction and operation of gen-tie line, switchyard and substation on 320 acres of private lands: MUP PDS2019-MUP-19-002. Construction and operation of a 250 MW wind energy generation facility consisting of 60 wind turbines on approximately 2,200 acres within Campo Reservation.	PF-W	UR	Approx. 11 miles	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Tribal Cultural Resources, Traffic and Transportation, Wildfire
LEVEL 3 COMMUNICATIONS LLC: Minor Use Permit; PDS2001-3400-99-031; For the construction and operation of a Fiberoptic In-Line Application Facility consisting of two equipment shelters measuring 414 square feet and 286 square feet, a second facility consisting of six new shelters comprising 2520 square feet, a 255 square foot generator shelter, the relocation of an existing 255 square foot generator hut, and a 8'6" sound wall.	PF	C	Approx. 15 miles 36549 Old Hwy 80, Pine Valley 609-040-09-00	Negative Declaration
SITE MASTER INC: Major Use Permit; MUP-14-005; MUP for the construction and operation of a 35-foot tall faux elevated water tank with two mounted microwave dishes.	PF	C	Approx. 15 miles 36549 Old Hwy 80, Pine Valley 609-040-09-00	Notice of Exemption
PACIFIC TELEPHONE: Major Use Permit; PDS2011-3300-76-061; MUP for the construction and operation of a 64 square foot equipment shelter.	PF	C	Approx. 16 miles 1746 Tierra Del Sol Rd, Boulevard 610-120-06-00	Special Use Permit
WHITE STAR COMMUNICATIONS SITE: Major Use Permit; PDS2011-3300-88-064; MUP for the construction and operation of a radio communications facility for SAFE (San Diego Authority for Freeway Emergency) consisting of a tower max height of 70', a mounted microwave dish, and a 200 square foot equipment shelter with an antenna max height 40'.	PF	C	Approx. 16 miles 1680 Tierra Del Sol Rd, Boulevard 610-121-07-00 610-062-44-00	Negative Declaration
PACTEL WHITE STAR: Major Use Permit; MUP PDS2003-3300-90-018; MUP for the construction and operation of a 100-foot lattice	PF	C	Approx. 16miles 1676 Tierra Del	Negative Declaration

Table 1-4
Cumulative – Reasonably Foreseeable, Approved, and Pending Projects

Project	Type	Status	Distance from Project	Project-Related Impacts
tower with 10-foot whip antenna on top and two buildings measuring 288 square feet and 567 square feet, a 270 square foot building, 8 panel antennas, a 6-foot dish antenna, a 159.5 square foot emergency standby generator surrounded by a 7'6" CMU block wall with roof and acoustic panel, 15 panel antennas, and a 230 square foot equipment shelter			Sol Rd, Boulevard 610-121-09-00	
SD0716 MANZANITA – FWLL MODIFICATION & T-MOBILE L700: Site Plan; PDS2016-STP-16-022, PDS2014-STP-14-009, PDS2016-STP-16-020; Site Plan for the construction and operation of 8 panel antennas, 4 new RRUs (total 5), 4 RF filters, 4 TMAs, 2 surge suppressors mounted to an existing 35-foot wooden pole, 2 new equipment cabinets (total 4), and one GPS antenna (total 2).	PF	C	Approx. 11 miles 2424 Ribbonwood Rd, Boulevard 612-021-03-00	Notice of Exemption
VZW I-8 BOULEVARD: Site Plan; PDS2014-STP-14-011; Site Plan for the construction and operation of 12 antennas mounted to a new 35 foot faux water tank, an associated equipment shelter, and an emergency generator.	PF	A	Approx. 11 miles 2403 Ribbonwood Rd, Boulevard 612-021-04-00	Biological Resources, Hazards & Hazardous Materials
Torrey Wind Project – PD2018-MUP-18-104; Major Use Permit for construction and operation of a126 MW of wind energy generation project Project proposes 30 new wind turbines (rated up to 4.2 megawatts (MW) each), an underground electrical collection system, a Project collector substation, a new 500 kV substation/switchyard located adjacent to the Sunrise Powerlink, an operations and maintenance (O&M) building, a temporary staging area, a batch plant, meteorological towers, and various access roads. The Project site is located on approximately 2,041 acres on private land in the McCain Valley area, north of the community of Boulevard and I-8.	PF-W	UR	Approx. 8.5 miles McCain Valley, Boulevard, CA 91905	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Traffic and Transportation, Wildfire

PF = Public Facilities & Utilities; S = Solar; W = Wind; T = Transmission; F = Federal; R = Residential; O = Other; MUP = Major Use Permit; A = Approved; UC=under construction; UR = under review C = Completed kV = kilovolt; MW=megawatt; ECO=East County; TM=Tentative Map



Project Boundary
MUP Boundary
Parcels

Existing Infrastructure

Sunrise Powerlink Transmission Line
Southwest Powerlink Transmission Line

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1-1

Project Location

JVR Energy Park Project

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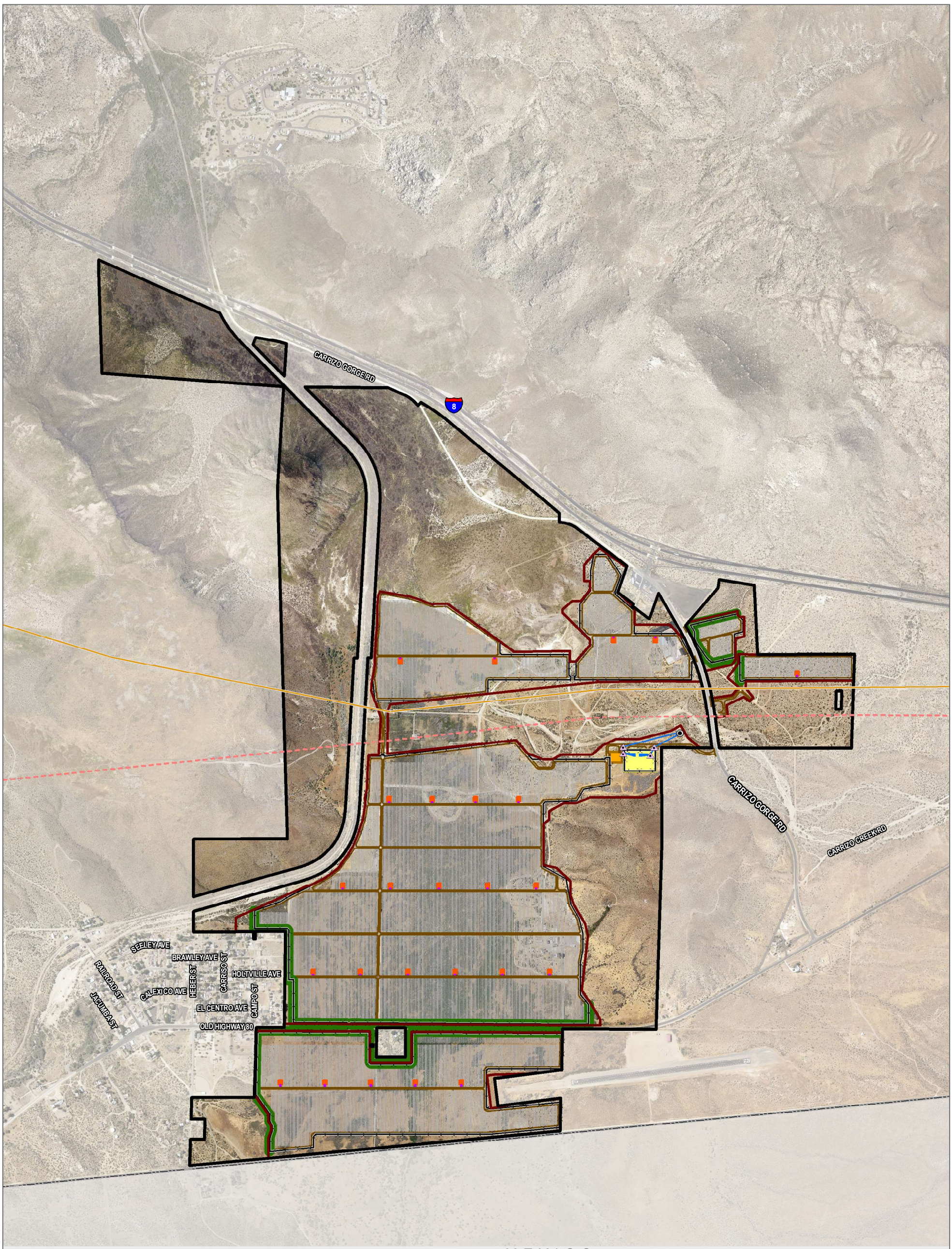

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1-2

Project Components

JVR Energy Park Project

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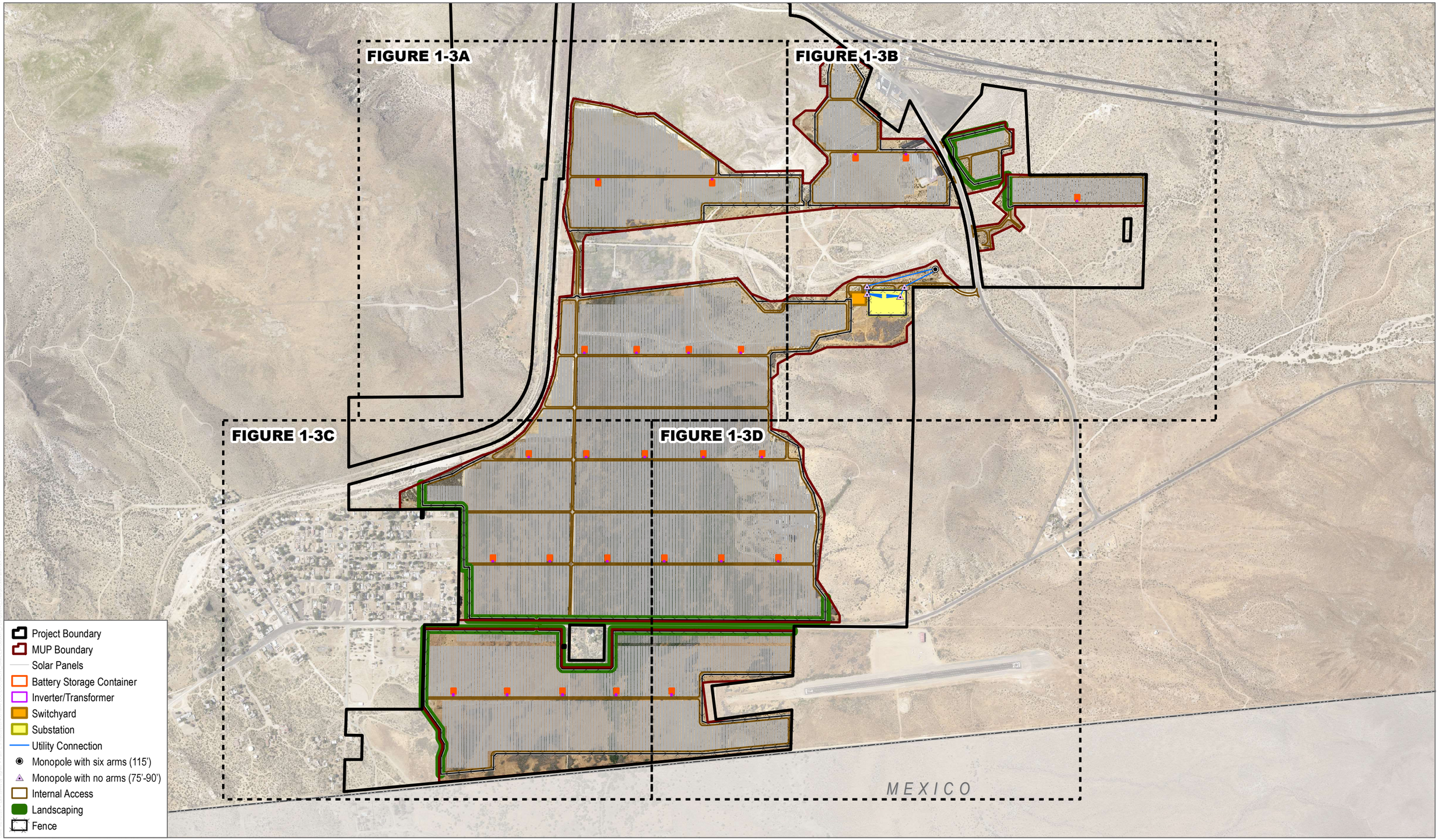

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1-3

Enlarged Site Plan Index

JVR Energy Park Project

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SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 250 500 Feet

FIGURE 1-3A

Enlarged Site Plan

JVR Energy Park Project

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Project Boundary
MUP Boundary
Solar Panels
Battery Storage Container
Inverter/Transformer
Switchyard
Substation
Utility Connection
Monopole with six arms (115')
Monopole with no arms (75'-90')
Internal
Landscaping
Fence

Existing Infrastructure

Sunrise Powerlink Transmission Line
Southwest Powerlink Transmission Line

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 250 500 Feet

FIGURE 1-3B

Enlarged Site Plan

JVR Energy Park Project

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SEELEY AVE
SEELEY AVE
BRAWLEY AVE
CAMPO ST
HOLTVILLE AVE
HEBER ST
CARRISO ST
CALEXICO AVE
RAILROAD ST
JACUMBA ST
EL CENTRO AVE
Jacumba Hot Springs
OLD HIGHWAY 80
Jacumba Community Park
MEXICO

- Project Boundary
- MUP Boundary
- Solar Panels
- Battery Storage Container
- Inverter/Transformer
- Fence
- Internal Access
- Landscaping

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 250 500 Feet

FIGURE 1-3C

Enlarged Site Plan

JVR Energy Park Project

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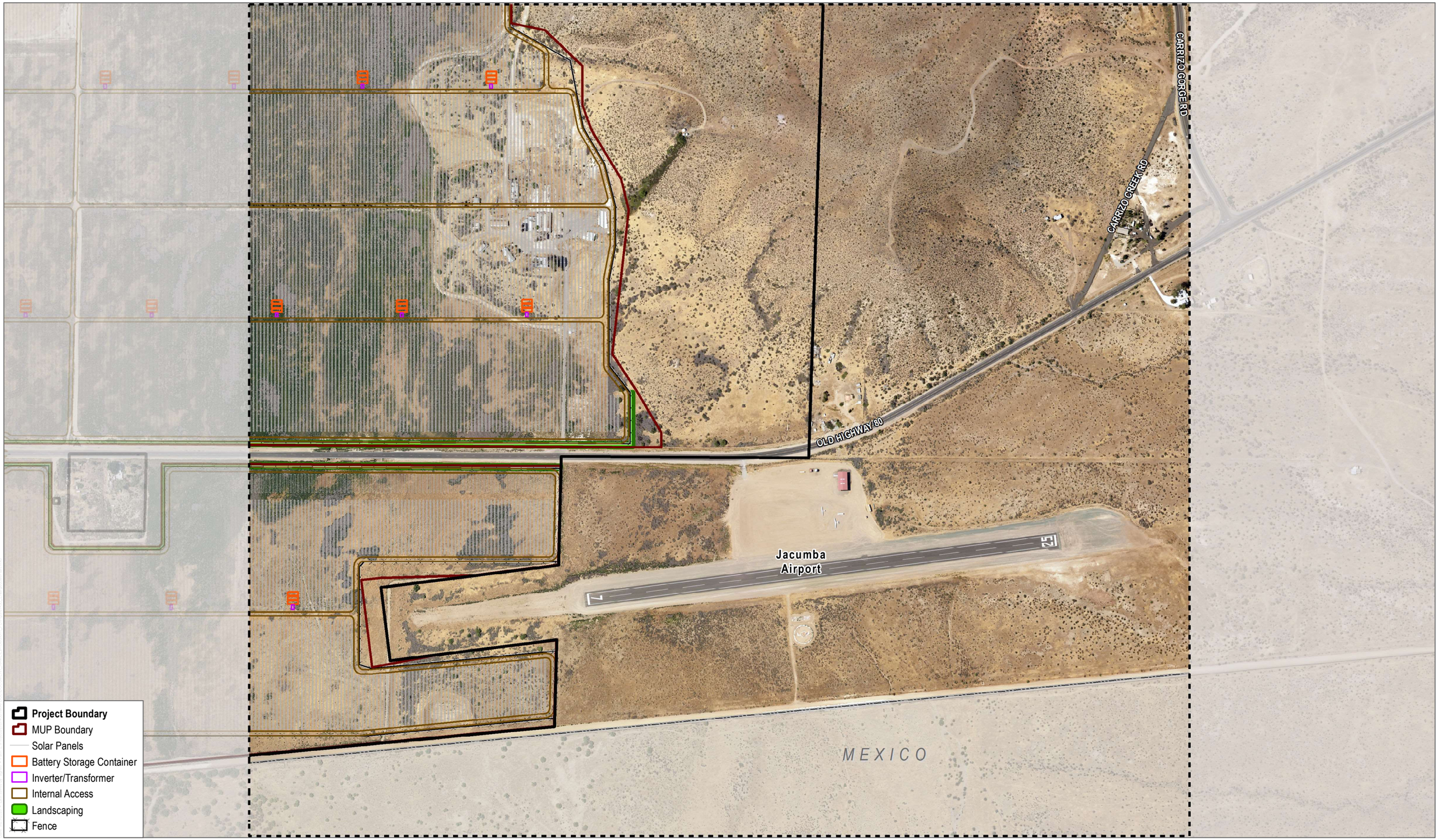

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 250 500 Feet

FIGURE 1-3D

Enlarged Site Plan

JVR Energy Park Project

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FIGURE 1-4

Photovoltaic Module and Support Structure

JVR Energy Park Project

DUDEK

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FIGURE 1-5

Typical Battery Energy Storage Container

JVR Energy Park Project

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CHAPTER 2 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

This chapter of the Environmental Impact Report provides discussions of those effects that, through the course of analyzing the environmental effects associated with the proposed JVR Energy Park Project (Proposed Project), were identified as significant. Each environmental issue area describes existing conditions, regulatory setting, analysis of Proposed Project effects and determination as to significance, cumulative impact analysis, significance of impact prior to mitigation, mitigation, and conclusion. The environmental issue areas addressed in Chapter 2 are as follows:

- Aesthetics (Section 2.1)
- Air Quality (Section 2.2)
- Biological Resources (Section 2.3)
- Cultural Resources (Section 2.4)
- Geology, Soils, and Seismicity (Section 2.5)
- Hazards and Hazardous Materials (Section 2.6)
- Hydrology and Water Quality (Section 2.7)
- Mineral Resources (Section 2.8)
- Noise (Section 2.9)
- Paleontological Resources (Section 2.10)
- Tribal Cultural Resources (Section 2.11)
- Wildfire (Section 2.12)

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2.1 Aesthetics

This section evaluates the potential changes to the existing aesthetic and visual characteristics of the Project site and vicinity that could result from development of the proposed JVR Energy Park Project (Proposed Project). The analysis focuses on the change in visual character, effects on views from scenic roads, visual compatibility with surrounding uses, and potential daytime or nighttime views that potentially could be disturbed by light and glare generated by the Proposed Project. The analysis is based on a review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical reports prepared for this Proposed Project:

- JVR Energy Park Project Visual Resources Technical Report (Appendix B)
- JVR Solar Project Glare Study (Appendix A of Visual Resources Technical Report)

The JVR Energy Park Project Visual Resources Technical Report (Appendix B) was prepared in accordance with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Visual Resources (County of San Diego 2007) and Guidelines for Determining Significance and Report Format and Content Requirements – Dark Skies and Glare (County of San Diego 2009).

As a component of the Visual Resources Technical Report, photographs of the Project site and surrounding area were taken during site visits conducted in fall 2018, winter 2018, and winter and spring 2019. The photographs illustrate the existing visual character and quality of the Project site and surrounding area as experienced during the site visits. The photograph locations are depicted in Figure 2.1-1, Existing Conditions Photographs Key Map.

Comments received in response to the Notice of Preparation (NOP) included concerns regarding glare and glint, scale of the Proposed Project footprint and proximity to community of Jacumba, visual intrusion, effects to visual quality and views from scenic vistas, light pollution, and effects to neighborhood character. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this Environmental Impact Report (EIR).

2.1.1 Existing Conditions

2.1.1.1 Project Site and Surrounding Area

This section provides a regional overview of the Project area, and describes the existing visual character and quality of the Project site and surroundings.

Project Site

The Project site is located within unincorporated San Diego County in the Jacumba Valley area. Composed of 24 privately owned parcels covering 1,357 acres, the Project site is located south of Interstate (I) 8 and north of the U.S./Mexico international border. Landforms on the Project site include the conical form of Round Mountain (the eastern slopes are within the Project site boundary), east-facing slopes west of the San Diego and Arizona Eastern Railway, and the valley floor that includes a dense to moderately vegetated floodplain. The site also features low, mounded hills in the northern portion, and a wide, pronounced hill in the eastern portion. The central and southern portions encompass flatter portions of the site that were previously used for farming.

According to the Biological Resources Technical Report for the Jacumba Valley Solar Energy Project (Appendix D), 11 vegetation communities and/or land covers occur on the Project site, including eight sensitive communities. Native vegetation communities within the boundaries of the Project site include Sonoran mixed woody scrub, Sonoran mixed woody and succulent scrub, mesquite bosque, and desert saltbush scrub. Two non-sensitive land covers, disturbed habitat and urban/developed, also occur on the Project site.

Although most of the northern area of the Project site is dotted with low to moderately tall woody shrubs, including creosote bush, clusters of relatively tall, spreading shrubs and occasionally trees, also occur on site. The areas of southern riparian forest are located outside of the development footprint of the solar facility. Pockets of semi-desert chaparral mark the westernmost and easternmost extents of the Project site. As viewed from I-8 and Carrizo Gorge Road, these higher-elevation areas are marked by low to moderately high chamise shrubs featuring light to dark green foliage with seasonal clusters of small, white flowers, and upright and woody bigberry manzanita. The solar facility is primarily proposed on areas that were previously used for agriculture; however, due to inactivity of previous agricultural activities, vegetation has recolonized areas located north and south of Old Highway 80. Figure 2.1-2, Existing Conditions Project Site, contains photographs of the existing terrain, vegetation, and development on the Project site.

Although the central and southern areas of the Project site have historically been used for farming and dairy operations, the Project site has been fallow since 2014. Buildings and other structures associated with a prior diary, creamery, and ranch are located north of Old Highway 80 within the southern portion of the Project site. These buildings and structures were constructed over 45 years ago and are in various states of disrepair. Figure 2.1-3, Existing Conditions Project Site, includes views of the buildings and structures (see Photographs E and F). In addition to a collection of dilapidated wood frame, rusted metal siding, and broken concrete masonry unit structures, several vertical tanks/silos, a metal storage container, and concrete foundations are scattered in the area. Weathered wooden corrals and fencing, discarded and rusted farming machinery and equipment, empty concrete troughs, and a weathered and neglected barn and livestock house provide

additional evidence of past development. A narrow spur road extends east of the area and provides access to three vertical water tanks constructed east and upslope of the abandoned structures. Lands south and north of Old Highway 80 are situated at a lower elevation than the structures that are constructed atop a low hill. The lower-lying lands are disturbed and are traversed (or bordered) by dirt access roads or occasionally, by east/west and north/south irrigation ditches.

The central portion of the Project site is crossed by existing utility development. For example, two 500-kilovolt (kV) transmission lines (i.e., Southwest Powerlink and Sunrise Powerlink) supported by over 150-foot-tall lattice steel structures traverse the Project site in an east/west alignment. In addition, a 138 kV transmission line that supported the East County Substation 138 kV transmission line that is supported by vertical tubular steel poles parallels the 500 kV transmission lines across a portion of the Project site. Specifically, the transmission line transitions from underground to overhead on the Project site, as evidenced by the steel cable riser pole located west of Carrizo Gorge Road and near the Sunrise Powerlink and Southwest Powerlink crossings. Figure 2.1-3 includes photographs of the existing transmission lines (see Photographs G and H).

In the north-central area of the Project site, a hill has been visibly altered by excavation associated with production of construction aggregate materials. The top of the hill has been graded and leveled, and mounded piles of soil have been spread nearby to the northwest. The hill is accessed via a narrow gravel road that extends northeast to Carrizo Gorge Road. A portion of the Carrizo Gorge Road right-of-way (ROW) near the gravel road has been graded and leveled. At the time of the site visits, the area supported a construction materials storage/laydown yard featuring blue, rectangular dumpsters, and short and tall stacks of plastic bulk bins and lids. The laydown area extended west of Carrizo Gorge Road and stack materials were covered with black tarps/screens and setback from the road. Figures 2.1-2 and 2.1-3 include photographs of existing transmission infrastructure traversing the Project site and adjacent off-site lands. See Photographs A and B in Figure 2.1-2 and Photographs G and H in Figure 2.1-3. In addition, distribution facilities installed parallel to Old Highway 80 are shown in Figure 2.1-2 (see Photograph C).

Surrounding Area

I-8 is located north of the Project site, with hilly to mountainous terrain farther north. The Project site extends to the U.S./Mexico international border to the south. A prominent hill, desert wash, and primarily undeveloped lands are located immediately adjacent to the Project site. Hilly to rugged terrain is located to the east beyond the Jacumba Airport. The existing 20-megawatt (MW) Jacumba solar development is located 1.75 miles east of the Project site boundary, and a regional 138 kV electrical substation (i.e., San Diego Gas & Electric [SDG&E] East County Substation) is located 1.9 miles away. North of Old Highway 80 and Jacumba Hot Springs, the western Project site boundary abuts undeveloped hilly and mountainous terrain, including Round Mountain and a mesa. As previously stated, the eastern slopes of Round Mountain are located within the Project

site. The unincorporated community of Jacumba Hot Springs is located adjacent to the southwestern portion of the Project site (see Figure 2.1-4A, Surrounding Lands and Public Lands Ownership in Vicinity). Recreational lands/facilities in the surrounding area comprise potential public vantage points to the Project site. The discussion below pertains to surrounding land uses and visual features that mark the general area. In addition, public lands in the vicinity are discussed, and Figure 2.1-4A is referenced as needed to clarify the location of these lands in the context of the Project site.

North

The segment of Carrizo Gorge Road bordering (and occasionally traversing) the Project site is an approximately 30-foot-wide dirt road that extends northwest, passes under I-8, and provides access to a private resort (De Anza Springs). The dirt road is the sole access road to the De Anza Springs development. Although the resort is located approximately 0.50 miles north of the northwestern corner of the Project site, the proposed solar facility would not be visible due to intervening terrain. The northeastern corner of the Project site abuts two gas stations that include small convenience stores (see Photograph I in Figure 2.1-4, Existing Conditions Surrounding Area).

Terrain to the immediate north of Carrizo Gorge Road gradually climbs toward the separated travel lanes of I-8. In the Project area, I-8 consists of four total travel lanes (two in each direction) with paved shoulders and an approximately 80-foot-wide median covered with boulders of varying size; areas of exposed and rocky, brown/tan colored soils; and shrubs of low to moderate height. Sections of medians are mounded or swale-like and are occasionally crossed by short turnouts for law enforcement. North of I-8, the terrain is rocky and covered with low scattered shrubs that display olive to dark green to greyish tones. Prominent mountain terrain north of the Project site and I-8 includes Gray Mountain (3,780 feet above mean sea level) and Table Mountain (4,089 feet above mean sea level), both of which occur on public land managed by the Bureau of Land Management (BLM) and within the Table Mountain Resource Management Zone (RMZ). Table Mountain is located approximately 2 miles northeast of the Project site. Photograph J in Figure 2.1-4 illustrates the existing view north from Carrizo Gorge Road toward I-8 (obscured by terrain and vegetation) and boulder-covered mountains, including Gray Mountain (lower peak to the northwest).

Both Gray Mountain and Table Mountain are located in a large swath of primarily undeveloped land managed by BLM. Although designated/official trails have not been established by BLM, the peaks and surrounding BLM-managed lands are within the Table Mountain RMZ that provides opportunities for landscape viewing, off-highway-vehicle use, wildlife and wildflower viewing, hunting, and camping (BLM 2008).

East

To the east, the landscape is largely undeveloped and features scrubby vegetation and boulders traversed by several dirt roads. Photograph K in Figure 2.1-4 provides a representative northwestward view from Old Highway 80 across the local desert landscape and toward the Project site (approximately 0.5 miles away). The Sunrise Powerlink and Southwest Powerlink transmission lines, which feature regularly spaced lattice steel towers, extend to the east and beyond the Project site. In addition, scattered rural residential development is located east of the Project site (generally near the Old Highway 80 and Carrizo Gorge Road intersection), and the Jacumba Airport is located south of Old Highway 80 and adjacent to the southeastern portion of the Project site. The East County Substation and Jacumba Solar facility are located more than 1.7 miles away and beyond the Airport Mesa landform. The existing facilities are not visible from Jacumba Hot Springs due to intervening terrain, and have limited visibility from Old Highway 80 due to setbacks.

Limited rural residential development occurs east of the Project site and along Old Highway 80. An approximately 2-acre fenced property located at the base of a prominent hill partially within the Project site and with direct access to Old Highway 80 includes several lightly colored, wood and stucco mobile and permanent residential buildings. The windows of several of the single-story buildings have been boarded, but signs of activity on site during the fall 2018 site visit suggests that one or more of the buildings is occupied. An electrical distribution and telephone line parallel Old Highway 80 and provide service to the property. Three additional rural residential properties are located near the base of the hill's east-facing slope and near the intersection of Old Highway 80 and Carrizo Creek Road. Photograph L in Figure 2.1-4 provides a westward view from Old Highway 80 at Carrizo Gorge Road toward rural residential development.

Jacumba Airport is located south of Old Highway 80, south and east of the Project site. Unattended and unlighted, the airport is used mainly as an operation area for gliders and receives most use on the weekends (County of San Diego 2019). The County of San Diego (County) owns the 2,562-foot-long asphalt runway (AirNav 2019), dirt helipad, two small single-story tan metal storage structures, and surrounding airport property. The property is protected by a gated driveway (permission to access the property is required) with direct access off Old Highway 80. A cleared dirt area north of the runway is used for facility parking. According to the County, approximately 1,162 "operations" occurred at the airport in 2018 (County of San Diego 2019). The parking area and runway are visible from Old Highway 80 (see Photograph M in Figure 2.1-5, Existing Conditions Surrounding Area).

The tall and broad form of Airport Mesa rises from the otherwise low desert terrain east of the Project site and Jacumba Airport. See Figure 2.1-4A for location and Photograph M in Figure 2.1-5 for a representative view of the landform from Old Highway 80. The majority of the steep-sloped

Airport Mesa landform and undeveloped desert lands to the north are managed by BLM as the Airport Mesa RMZ. Airport Mesa abuts the U.S./Mexico international border fence on the south, and a graded road to the summit provides an elevated vantage point from which U.S. Customs and Border Protection staff scan the border-adjacent landscape. The road is regularly patrolled by federal law enforcement and is within the portion of the mesa managed by BLM. Although primary recreation activities in the Airport Mesa RMZ are identified as target shooting, hiking, and hunting in the Eastern San Diego Planning Area Resource Management Plan (BLM 2008), a prohibition of target shooting on Airport Mesa was subsequently enacted by BLM in 2009. Official use is not recorded; however, BLM estimates that the area experiences low annual use (i.e., less than 200 visitors per year) (Williams, pers. comm. 2020).

The existing Jacumba Solar and East County Substation and facility are located approximately 1.75 and 1.9 miles east, respectively, of the Project site. See Figure 2.1-4A for location. Due to variations in terrain and the presence of a tall, broad hill, these facilities are not visible from the Project site and are obscured from view of motorists on Old Highway 80. Photograph N in Figure 2.1-5 provides a representative view of the substation from Old Highway 80. Relatively clear, albeit short-duration, views to the facilities are available from eastbound I-8. The electrical substation encompasses a large area (approximately 58 acres) and includes two separately fenced and graveled yards that support a variety of equipment, including air insulated electrical buses; steel support structures, including vertical buses and bays; transformers; disconnect switches; and communication gear (CPUC and BLM 2011). As a regional hub for electrical conveyance, numerous tall lattice steel towers and tubular steel poles are installed north, east, south, and west of the substation yards.

The Jacumba Solar facility consists of approximately 81,000 photovoltaic (PV) panels on approximately 2,200 fixed-title racks (approximately 12 feet tall) across 108 acres (County of San Diego 2016a). A collector substation is also located in the fenced site that is surrounded by the characteristic vegetation and terrain of the local desert landscape. In addition to the low profile of solar panels, the presence of Airport Mesa, a tall and broad hill to the west, the U.S./Mexico international border fence to the south, and the Jacumba Mountains to the east limits viewing opportunities from Old Highway 80 and the surrounding area.

South

The U.S./Mexico international border fence parallels the southern boundary of the Project site. In the Project area, the border fence is a straight, 15-foot-tall, tan and brown slatted steel structure that traverses the desert landscape from east to west. Although nearly continuous, unconstructed gaps in the fence occur at particularly steep terrain in the Project area, including the west and east slopes of Airport Mesa (see Figure 2.1-5, Photograph N that partially depicts Airport Mesa) and at the west-facing slope of the Jacumba Mountains. South of the border within Mexico, a wide

valley is bordered by the rugged and rocky Sierra de Juarez Mountains to the east and hilly terrain to the southwest. Within Mexico, scattered rural residential development and the village of Jacume are located in the vicinity.

West

South of Round Mountain and west of the Project site, the local terrain gradually rises to create a moderately sloped mesa landform. The mesa encompasses lands recently acquired by the California Department of Parks and Recreation and added to Anza-Borrego Desert State Park (SP). Existing utility development that traverses the Project site continues west across the rising east-facing slopes and the relatively flat mesa. The slopes and mesa are also traversed by access roads used by utilities to maintain the transmission lines. Photograph O of Figure 2.1-5 provides a representative northwestward view from Old Highway 80 across the Project site and toward the mesa landform and Round Mountain. Existing steel lattice towers are faint but visible atop the mesa. The pyramidal landform visible in Photograph O, Jacumba Peak, is managed by State Parks, included within Anza-Borrego Desert SP, and is approximately 0.75 miles west of the Project site.

The unincorporated community of Jacumba Hot Springs is located south of the mesa landform and west of the Project site. The community is bisected by Old Highway 80, which functions as the sole commercial corridor and access road in the community. The area predominantly consists of single-story residences on fenced lots dotted with mature trees. Photograph P in Figure 2.1-5 depicts an eastward view from Old Highway 80 near the community library. As illustrated in the photograph, residences and mature trees line the highway corridor through the eastern extent of the community. Although most properties support one single-family residential structure, an approximate 2.4-acre lot located immediately west of the Project site and north of Old Highway 80 is developed as the 20-lot Wagon Wheel Trailer Park. In addition to local residences located north of Old Highway 80 (approximately 150 residences are located north of the highway), approximately 20 single-family residences are scattered on the hilly terrain south of the highway and west of Jacumba Community Park. Photograph Q in Figure 2.1-5 provides a view across Old Highway 80 at Jacumba Street toward hillside and hilltop rural residences.

In addition to residential land uses, the community of Jacumba Hot Springs includes limited commercial development, a post office, and County library branch. These uses, and Jacumba Elementary School, are located off Old Highway 80. See Photograph R in Figure 2.1-6, Existing Conditions Surrounding Area. Vacant one- and two-story structures are scattered north of Old Highway 80. The vacant structures display a rustic aesthetic characterized by wood and tan painted stucco exteriors, small overhangs, and high-fronted facades (see Figure 2.1-6, Photograph S). The small and rectangular post office building fronts Railroad Street and is located north of a vacant car wash business housed in a blocky white and teal-trim structure.

The Jacumba Branch Library and adjacent Jacumba Community Park are located south of Old Highway 80. The library property is planted with several mature pine and deciduous trees. In addition to the rectangular, single-story library building that features a pink-red exterior with dark green trim, a dirt parking lot and playground are featured on the property. The community park is located south of the library and consists of a single basketball court and a dirt baseball/softball field. Photograph T in Figure 2.1-6 shows the park's basketball court and more distant baseball/softball field. The park property is bordered by the Project site on the east and south.

2.1.1.2 Scenic Vistas, Scenic Highways, and Recreation Areas

Scenic Vistas

There are no designated scenic vistas or lookouts in the local area that include views of the Project site. In addition, there are no segments of an adopted County or state trail system in the Jacumba area, and no segments of trails within the Boulevard Community Trails and Pathways Plan offer views to the Jacumba Valley area or Project site (County of San Diego 2005). However, mountain terrain, including Round Mountain, Table Mountain, the southern extension of the Jacumba Mountains in San Diego and Imperial Counties, and Airport Mesa are in the surrounding area and are potential vantage points for scenic views. In addition, the Project site is visible from Old Highway 80, I-8, Jacumba Community Park, and Anza-Borrego Desert SP lands. Although each area receives infrequent use, an assessment of existing views available to recreational users at Jacumba Community Park (managed by the County of San Diego), Anza Borrego Desert SP lands adjacent to the site and to the north, and Carrizo Canyon and Jacumba Mountains Wildernesses located north of I-8 is provided. Quality of existing views to the surrounding area, including the Project site, are also assessed from BLM-managed lands, including Round Mountain, Table Mountain (and mesa to the south; both located in the Table Mountain RMZ), Airport Mesa, and the Jacumba Mountains. These detailed assessments are provided in the Visual Resources Report (Appendix B).

Scenic Highways

There are no official state-designated highways in the surrounding area of the Project site. The closest officially designated state scenic highway is State Route 78, located approximately 35.5 miles north of the site and in Anza Borrego Desert (Caltrans 2017). The majority of I-8 that extends through San Diego County is an eligible state scenic highway and a component of the County Scenic Highway System (Caltrans 2017; County of San Diego 2011a). Old Highway 80, which parallels the Project site for approximately 1 mile, is also included in the County Scenic Highway System (County of San Diego 2011a).

Views to the Project site are intermittently available from I-8 for approximately 1.2 miles. East of Round Mountain, the Project site is visible to eastbound motorists, but partially obstructed by vegetation within the Carrizo Creek corridor to the southeast. The brief, partially obstructed views to the Project site are available for seconds and are abruptly blocked by an intervening hill south of I-8. Near the Carrizo Gorge Road off-ramp, motorists pass the intervening hill, and views to the south briefly open to reveal the Project site and a prominent hill east of the Project site. The presence of mounded, rocky, and vegetated median terrain regularly blocks the Jacumba Valley and Project site from view of westbound motorists. However, uninterrupted views to the Project site are available to westbound motorists for approximately 0.40 miles, roughly from the Carrizo Gorge off-ramp to the intervening hill south of I-8, as described above.

Regarding public roads, views toward the Jacumba Valley area and nearby hills and mountains are available from Old Highway 80 and Carrizo Gorge Road. The Project site parallels Old Highway 80 to the north and south from approximately Laguna Street to the Jacumba Airport/glider port driveway (0.95 miles). From westbound Old Highway 80 near Airport Mesa, a prominent hill blocks most of the Project site from view. However, views to portions of the northern and southern Project site are occasionally available, and visibility of the southern Project site increases on the approach to Jacumba Airport. As the highway descends and approaches Jacumba Hot Springs from the west, hilly terrain, residential structures, and mature trees along the corridor block views to the Project site. Within the community of Jacumba Hot Springs, mature trees planted parallel to the highway screen the Project site from view of eastbound motorists.

Recreation Areas

Recreation areas within the Proposed Project viewshed include local, state, and federal lands. Specifically, these include Jacumba Community Park that is located immediately west of the southern portion (i.e., south of Old Highway 80) of the Project site. State lands include Anza-Borrego Desert SP, which is located west and northwest of the Project site. Federal lands include BLM-managed lands encompassing the summit of Round Mountain (and its west- and south-facing slopes), Airport Mesa RMZ, Table Mountain RMZ, and the Jacumba Mountain Wilderness. As shown in Figure 2.1-4A, the RMZs are located east and northeast of the Project site, respectively, and the Jacumba Wilderness is located approximately 4 miles east of the site in Imperial County.

The local, state, and federal recreation facilities and lands in the surrounding area receive low use throughout the year. For example, the Jacumba Community Park is assumed to receive relatively low regular use throughout the year, but the Jacumba Community Services District occasionally holds seasonal festivals for the community at the park (a fall festival was held in October 2019; East County Magazine 2020). Table Mountain receives occasional use by the Jacumba Hikers and Walkers group. Actual usage is not recorded; however, the BLM estimates that the Table Mountain

RMZ receives low use throughout the year (i.e., less than 20 visitors per year) (Williams, pers. comm. 2020). Lastly, the southern extent of the Jacumba Mountains and adjacent wilderness are also estimated to receive low public use (i.e., approximately 1,500 visitors per year) (Williams pers. comm. 2020).

2.1.1.3 Project Viewshed

The Proposed Project viewshed is primarily defined by the presence of hilly and mountainous terrain west, north, and east of the Project site. Views to the Project site are available from prominent terrain in the area, including Round Mountain, State Park lands to the west and northwest, Table Mountain to the northeast (approximately 2 miles away), Airport Mesa (approximately 1 mile away), and the Jacumba Mountains (approximately 3 miles away). These areas are public lands managed by BLM for dispersed recreation, designated wilderness (Jacumba Wilderness), and conservation (Table Mountain Area of Critical Environmental Concern). Views are also available to Jacumba Hot Springs. For example, based on the viewshed, views to the Project site are available to local residents near the western and southwestern boundary of the Project site and a limited number of homes constructed along Boundary Creek near the paved extent of Railroad Street. Further, the viewshed encompasses properties adjacent to the southwest corner of the Project site (including Jacumba Community Park), and homes on elevated, east-facing slopes near South Railroad Street.

The viewshed also extends to segments of I-8, Old Highway 80, and several local roads in the immediate surrounding area. Although the segment of I-8 in the viewshed is located at a greater elevation than the Project site, and the local terrain tends to fall south from the interstate, the presence of mounded embankments (road cuts) and median and interstate-adjacent shrubs occasionally screen or obscure the Project site from view of passing motorists.

Lastly, the U.S./Mexico international border fence is taller than the proposed solar modules to be installed, but components, including 138 kV generation transmission (gen-tie) line poles and equipment at the proposed collector substation, would be taller than the border fence. As such, views to proposed components would extend south into Mexico, and more specifically, to the small community of Jacume and to the slopes of the Sierra de Juarez Mountains.

A topographic viewshed of the Proposed Project is presented in Figure 2.1-7, Topographic Viewshed of Proposed Project. The figure illustrates the approximate viewshed of the Proposed Project based on topography and the tallest solar facility component (65-foot-high support poles for the 138 kV overhead slack span transmission line). The viewshed represents a worst-case assessment of the potential extent of available views to the Proposed Project from the surrounding area. Potential screening effects due to vegetation and/or structures at specific locations or viewpoints are not considered or reflected in Figure 2.1-7.

2.1.1.4 Viewer Groups

Viewer groups analyzed in this analysis consist of individuals that frequent public viewpoints in the surrounding area. Three viewer groups were identified: motorists, residents, and recreationists.

Motorists

Mobile views of the Jacumba Valley, including the Project site, are available to motorists on I-8, Old Highway 80, and Carrizo Gorge Road. Views from I-8 are relatively brief and occasionally impeded by intervening terrain and median boulders and vegetation. Old Highway 80 parallels the Project site for approximately 1 mile. Carrizo Gorge Road parallels the northeastern portion of the Project site, and the dirt segment west of the Jacumba Shell gas station borders the northern portion of the site. Visibility to the Project site from Carrizo Gorge Road is typically limited by the presence of rising terrain and vegetation north of the road, and by development and vegetation south of the road.

Given the scenic designation of these roads and high to moderate usage of I-8 (approximate average daily traffic of 16,000 vehicles) (Caltrans 2019) and Old Highway 80 (approximate average daily traffic of 500 vehicles) (SANDAG 2019), motorists on these roads are assumed to have high viewer awareness for changes occurring in the visual environment. Although view exposure of the Project site from Carrizo Gorge Road is relatively brief and occasionally screened, motorists on Carrizo Gorge Road are considered to have high awareness to changes in the landscape.

Residents

In 2010, the total population of the community of Jacumba Hot Springs was 561 persons (Census Viewer 2019). Jacumba residents would be highly aware of changes in the landscape. Further, residents typically have high concern regarding potential effects to the quality of existing views available from their homes.

Residential land uses border the western boundary of the Project site. Although uninterrupted views to the Project site are available to the closest properties, views to more distant residences, such as those west of Campo Street, are blocked by intervening residential development and private yard landscaping. South of Old Highway 80, a single residence is bordered by the Project site on three sides. Further, approximately 25 residential structures are constructed on a collection of low hills located south of Old Highway 80 and west of Jacumba Community Park, and views to the Project site are likely available from these residences. Lastly, three to five homes are located off Old Highway 80 north and northeast of the Jacumba Airport. Views to the Project site from homes located north of Old Highway 80 and immediately west of Carrizo Gorge Road are blocked by intervening terrain. Clear and uninterrupted views to the southern Project site (i.e., south of Old Highway 80) are available from the homes north of the Jacumba Airport.

Recreational Users

Recreational opportunities in the Project area are briefly described in Section 2.1.1.2, Scenic Vistas, Scenic Highways, and Recreation Areas. Except for Jacumba Community Park, each of the identified recreational areas primarily supports passive trail-based recreation, such as hiking, nature viewing, and photography. Because trail users typically move through the landscape at a walking rate of speed, opportunities for longer-duration views are available. However, given the relatively remote location of the Project site and lack of formal trailheads and staging areas for trails, and based on the estimated annual use of nearby BLM-managed lands, the daily volume of recreationists actively recreating near the Project site and on nearby public lands (and at Jacumba Community Park) on a daily basis is assumed to be low. Despite low usage and temporary view exposure, viewer awareness for trail-based recreationists is moderately high.

2.1.2 Regulatory Setting

Federal Regulations

Bureau of Land Management Eastern San Diego County Resource Management Plan and Record of Decision

The Eastern San Diego County Resource Management Plan and Record of Decision guide the development and management of the Eastern San Diego County Planning Area, an area spanning an eastern escarpment of Southern California's Peninsular Ranges and including more than 100,000 acres of public land administered by the BLM (BLM 2008). The Resource Management Plan also addresses conflicts among various recreational users accessing BLM lands; provides direction for future site-specific development, including renewable energy projects; and provides for plan monitoring to determine the effectiveness of BLM land management strategies. Further, the Resource Management Plan stresses that future policy decisions and land management strategies be compatible with the multiple-use mission of BLM that entails the management of recreational use and responsible development on public lands while also maintaining environmental quality (BLM 2008).

State Regulations

California Scenic Highway System

Created by the California State Legislature in 1963, the California Scenic Highway Program includes highways designated by the California Department of Transportation (Caltrans) as scenic. There are five officially designated scenic highways in San Diego County, and is the nearest (State Route 78 from the west to east boundary of Anza-Borrego Desert SP) is located within 30 miles of the Project site. However, I-8 is an eligible state scenic highway from State Route 67 to the

eastern San Diego County border (Caltrans 2017). At its closest location, I-8 is located approximately 220 feet north of the northern Project site boundary.

California State Historic Routes

Old Highway 80 is a designated California State Historic Route. In 2006, the state legislature granted this designation in recognition of the highway's "outstanding natural, cultural, historic, and scenic qualities." Despite this description, the designation does not influence the development of public and private properties adjacent to Old Highway 80 (Assembly Concurrent Resolution 123; State of California Legislature 2006).

Anza-Borrego Desert State Park General Plan

Although the Project site is located entirely on private lands under the land use jurisdiction of the County, the proposed development would be visible from lands within Anza-Borrego Desert SP. The overall long-range purpose and vision for the park is established in the Anza Borrego Desert State Park General Plan that was approved by the California State Parks and Recreation Commission in February 2005 (California State Parks 2005). Since then, the Parks and Recreation Commission approved a Cultural Preserve Management Plan in November 2012, but no updates to the 2005 General Plan have been made. Because the General Plan is only applicable to State Park lands, the goals and guidelines of the Anza-Borrego Desert State Park General Plan are not applicable to the Proposed Project.

Local Regulations

San Diego County General Plan

The San Diego County General Plan, through elements established to address the various issues accompanying planning and development, provides guidance for the protection of visual resources. Select policies within the Land Use, Mobility, and Conservation and Open Space Elements of the General Plan address the protection of existing visual character and quality of areas, and contain general direction regarding the minimization of adverse impacts to visual resources. Policies from the remaining elements of the San Diego County General Plan are not considered applicable since they do not concern the protection of visual resources.

The following goals and policies of the Land Use (LU), Mobility (M), and Conservation and Open Space (COS) Elements concern the preservation of visual and scenic resources. Although pertinent to protection of visual quality and quality, the County's visual resource guidelines (County of San Diego 2007) do not specifically require a consistency evaluation between General Plan goals and policies and developments proposed in the County. Still, the goals and policies below apply to

visual resources, and therefore are included for informational purposes (County of San Diego 2011a, 2011b, 2011c):

- **Goal LU-2: Maintenance of the County's Rural Character.** Conservation and enhancement of the unincorporated County's varied communities, rural setting, and character.
  - **Policy LU-2.8: Mitigation of Development Impacts.** Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.
  - **Policy LU-2.9: Maintaining Rural Character.** Consider level of service criteria, in accordance with Policy M-2.1, to determine whether adding lanes to a Mobility Element road would adversely impact the rural character of a community or cause significant environmental impacts. In those instances, consider other options to mitigate LOS [level of service] where appropriate.
- **Goal LU-6: Development – Environmental Balance.** A built environment in balance with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities.
  - **Policy LU-6.6: Integration of Natural Features into Project Design.** Require incorporation of natural features (including mature oaks, indigenous trees, and rock formations) into proposed development and require avoidance of sensitive environmental resources.
  - **Policy LU-6.9: Development Conformance with Topography.** Require development to conform to the natural topography to limit grading; incorporate and not significantly alter the dominant physical characteristics of a site; and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.
  - **Policy LU-10.2: Development – Environmental Resource Relationship.** Require development in Semi-Rural and Rural areas to respect and conserve the unique natural features and rural character, and avoid sensitive or intact environmental resources and hazard areas.
  - **Policy LU-11.2: Compatibility with Community Character.** Require that commercial, office, and industrial development be located, scaled, and designed to be compatible with the unique character of the community.
  - **Policy LU-12.4: Planning for Compatibility.** Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas. Require context sensitive

Mobility Element road design that is compatible with community character and minimizes visual and environmental impacts; for Mobility Element roads identified in Table M-4, an LOS D or better may not be achieved.

- **Policy M-4.5: Context Sensitive Road Design.** Design and construct roads that are compatible with the local terrain and the uses, scale and pattern of the surrounding development. Provide wildlife crossings in road design and construction where it would minimize impacts in wildlife corridors.
- **Policy COS-11.1: Protection of Scenic Resources.** Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.
- **Policy COS-11.2: Scenic Resource Connections**. Promote the connection of regionally significant natural features, designated historic landmarks, and points of regional historic, visual, and cultural interest via designated scenic corridors, such as scenic highways and regional trails.
- **Policy COS-11.3: Development Siting and Design.** Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:
  - Creative site planning;
  - Integration of natural features into the project;
  - Appropriate scale, materials, and design to complement the surrounding natural landscape;
  - Minimal disturbance of topography;
  - Clustering of development so as to preserve a balance of open space vistas, natural features, and community character; and
  - Creation of contiguous open space networks.
- **Policy COS-11.7: Underground Utilities.** Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.
- **Policy COS-12.1: Hillside and Ridgeline Development Density.** Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.

- **Policy COS-12.2: Development Location on Ridges.** Require development to preserve the physical features by being located down and away from ridgelines so that structures are not silhouetted against the sky.
- **Policy COS-13.1: Restrict Light and Glare.** Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.
- **Policy COS-13.2: Palomar and Mount Laguna.** Minimize, to the maximum extent feasible, the impact of development on the dark skies surrounding Palomar and Mount Laguna observatories to maintain dark skies which are vital to these two world-class observatories by restricting exterior light sources within the impact areas of the observatories.

In addition to goals and policies, the General Plan Conservation and Open Space Element establishes a County Scenic Highway System that is composed of scenic corridors that includes County roads, state routes, and interstate freeways. Within the Project area, I-8 and Old Highway 80 are included in the County Scenic Highway System (County of San Diego 2011a).

Mountain Empire Subregional Plan

The Project site is located within the Mountain Empire Subregion of San Diego County. The Mountain Empire Subregional Plan contains policies applicable to visual resources, and thus are applicable to the Proposed Project. The following goals, policies, and recommendations established in the Subregional Plan are relevant to the Proposed Project (County of San Diego 2016b):

- **Land Use – General Goal (Policy and Recommendation 1):** The landforms of the Subregion are an important environmental resource that should be respected in new development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.
- **Conservation – Environmental Resources (Policy and Recommendation 4):** The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.
- **Conservation – Environmental Resources (Policy and Recommendation 6):** Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.
- **Scenic Highways Goal:** Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.

Jacumba Subregional Group Area

Although a community plan has not been prepared for Jacumba Hot Springs, the community has developed a Vision Statement that includes "beautiful scenery" as a community "want" (County of San Diego 2011d). In regards to new development, the Vision Statement includes the following:

> The community supports new development that is compatible with, and preserves the natural and historical environment, including water resources, and protects existing neighborhoods, manages growth to reinforce the rural small town character of the area, which includes agriculture, open space, and trails as important elements of the community.

The Vision Statement does not include a list of goals or policies.

San Diego County Zoning Ordinance – Section 6322 Outdoor Lighting and Section 6324 Lighting Permitted in Required Yards

These sections of the County Zoning Ordinance establish regulations to control excessive or unnecessary outdoor light emissions that produce unwanted illumination of adjacent premises within the unincorporated area of the County. In addition to the prohibition of certain lighting sources, including searchlights, lighting for advertisements and lighting for recreational facilities (see Section 6322), requirements for yard lighting are established in Section 6324.

San Diego County Zoning Ordinance – Section 6954 Solar Energy Systems

Section 6954 of the County Zoning Ordinance regulates Solar Energy Systems. Section 6954(b)(2) specifies that a PV solar energy system for off-site uses with a project area greater than 10 acres is considered a Major Impact Service and Utility within all zones and requires a Major Use Permit. In addition, Section 6954(b)(3) specifically relates to visual resources and requires that the following measures be implemented to minimize the visual impacts of a project:

- Removal of existing vegetation shall be minimized.
- Internal roads shall be graded for minimal size and disruption.
- Any accessory buildings shall be painted or otherwise visually treated to blend with the surroundings.
- A structure shall be non-reflective in all areas possible to blend with the surroundings.

San Diego Light Pollution Code

The Light Pollution Code was developed by the County of San Diego Department of Planning & Development Services and Department of Public Works in cooperation with lighting engineers, astronomers, and land use planners from SDG&E and the Palomar and Mount Laguna Observatories. In addition, local planning and sponsor groups from the County aided in the development of the Light Pollution Code that is intended to address and minimize the impact of new sources of light pollution on nighttime views.

For purposes of establishing lighting regulations, the Light Pollution Code separates the unincorporated portion of San Diego County into Zone A and Zone B. Zone A includes all unincorporated lands located within a 15-mile radius of the Palomar or Mount Laguna Observatories, and Zone B includes all areas outside of Zone A. Section 59.105 includes general lighting requirements applicable to all unincorporated lands in San Diego County, and Section 59.106 includes shielding requirements per fixture by lighting type (i.e., outdoor lighting used for outdoor sales, eating areas, or advertisements [Class I]; security lighting [Class II]; and decorative lighting [Class III]) and according to location (Zone A or B). Because the Mount Laguna Observatory is located greater than 15 miles from the Project site, the Proposed Project is in Zone B (San Diego County Code of Regulatory Ordinances, Title 5, Chapter 2, Light Pollution).

2.1.3 Analysis of Project Effects and Determination as to Significance

Impacts to visual resources are evaluated based on specified thresholds identified in the County of San Diego's Guidelines for Determining Significance: Visual Resources (County of San Diego 2007) and Dark Skies and Glare (County of San Diego 2009).

For the purposes of this analysis, the switchyard is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have California Environmental Quality Act (CEQA) obligations related to the switchyard.

Methodology and Assumptions

Baseline information pertaining to aesthetics was obtained through a site visit and a review of the Final EIR for the Jacumba Solar Energy Project (County of San Diego 2016a). The following discussion summarizes the methodology and assumptions pertaining to the analysis.

Locations in the Proposed Project viewshed from which views of the Proposed Project would be available were identified on a satellite and aerial photography program (i.e., Google Earth) prior to the initial site visit. Site visits were conducted in fall 2018, winter 2018, and winter and spring 2019. Winds were mild, and local conditions were generally sunny and clear, except for the site

visit conducted in February 2019 during which local conditions were mostly cloudy. Digital photographs of the Project site and surrounding area were taken with a location-services-enabled iPhone 6s to document the characteristics of the Project site and surrounding area. Photographs were also taken to capture views from public vantage points to the Project site and for baseline images for Proposed Project visual simulations. Photographs were taken from multiple locations on the Project site, public roads in the surrounding area, Jacumba Community Park, an undeveloped residential lot west of the Project site, State Park lands west of the Project site, the mesa below Table Mountain, and Airport Mesa.

Nine key views were selected from which to evaluate effects to existing views and visual change resulting from implementation of the Proposed Project. The locations of selected key views are shown in Figure 2.1-8A, Key Views. The key views are representative of views to the Project site available from public roads, residential areas, and recreational lands in the Project area. Further and consistent with County requirements, the key view locations were selected because these would clearly display the visual effects of the Proposed Project.

Except for Key View 6, key views were not established on private property (neither CEQA nor County Guidelines specifically protect private views). However, the selected key views are representative of the viewing angles and distances available to viewer groups in the Jacumba area, including residents.

Visual Simulations

Photographs of the Project site taken from the key views were used to create 3D simulations of the Proposed Project. True-scale 3D models were rendered onto the photographs that were taken during the fall and winter 2018, and winter 2019 site visits from the key view locations.

Visual simulations were created to illustrate the anticipated visual change and characteristics associated with development and buildout of the Proposed Project. Using available topography maps or digital elevation maps, a 3D surface was created for the existing terrain and then imported into 3D Studio Max. This 3D surface was used to camera-match the background photos to the terrain model. 3D models were created for all proposed facilities that are visible from the selected key views. These 3D models were then merged into the 3D scene at their finished grade elevations. Lighting was added to the scene to match the time of day the photos were taken and to cast realistic shadows. Each view was rendered to a high-resolution image. The final product depicts a photorealistic before-and-after simulation. Upon completion of the visual simulations, the existing setting photographs were compared to the Proposed Project conditions to outline the potential impacts of the Proposed Project and determine the significance of anticipated visual change. Figure 2.1-8B shows the Conceptual Landscape Plan. Existing photographs and visual simulations from the identified Key Views are provided in Figures 2.1-9 through 2.1-17.

2.1.3.1 Visual Character or Quality

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance, Report Format and Content Requirements – Visual Resources (County of San Diego 2007) was used to establish significance thresholds. As stated in the County guidelines, a significant impact to existing visual character or quality would occur if (i.e., Threshold 1):

- The project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines.

Analysis

Proposed Project

According to the Mountain Empire Subregional Plan, the Jacumba Subregional Group Area is unique both in natural and created settings, which includes hot springs and a desert environment (County of San Diego 2016b). Although the existing character of the Project site and surrounding area is largely defined by undeveloped desert landscape, including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation, the surrounding area also includes the community of Jacumba Hot Springs, I-8, Old Highway 80 and local roads, high-voltage transmission lines, and commercial development at I-8. More specifically, high-voltage transmission lines traverse the Project site from east to west and are a constant presence in existing views from I-8, Carrizo Gorge, and Old Highway 80. Residential development and limited commercial development is located to the immediate west of the Project site within Jacumba Hot Springs. A few single-family homes are also scattered to the east along Old Highway 80. Two gas stations are located adjacent to the Project site and I-8.

Of the visual elements included in Threshold 1, theme, style, size, massing, scale, color building materials, and setbacks are particularly relevant to the solar facility and substation. Density, coverage, and architecture are not particularly applicable to the Project site or the primary visual impacts associated with the Proposed Project. In addition, the Mountain Empire Subregional Plan does not include design guidelines, and therefore, consistency with design guidelines is not included below.

Theme and Style

Construction and operation of the solar energy generation and storage facility and associated access roads would occur on approximately 643 acres within the 1,357-acre Project site. The solar facility components would include 300,000 PV modules mounted on support structures (single-axis solar trackers). The solar panels would be approximately 12 feet high each as measured from the upper panel edge to the adjacent ground level. Other components would include an underground collection line system, 25 inverter/transformer platforms, an on-site collector substation, a switchyard, and two 138 kV overhead gen-tie lines. The Proposed Project would also include a 90 MW battery energy storage system. The battery storage system would include 75 steel containers (approximately 55 feet long by 10 feet high by 19 feet wide) installed next to the inverter/transformer platforms at 25 locations within the solar facility.

The theme and style of the visual character of the Project area, including the Project site, is defined by a largely undeveloped desert landscape marked by sandy to rocky hills, low-lying rugged shrubs, and rugged mountains. Landforms on the Project site range from mountain terrain (i.e., Round Mountain; outside of the impact area) and east-facing slopes, to vegetated floodplains, low rolling hills in the northern portion, and a wide hill in the eastern portion. In addition, the traditional pattern of development in the larger area is characterized by single-family residences within the center of Jacumba and slightly larger lots and scattered structures on the periphery of the community. High-voltage transmission lines traverse the Project site and adjacent properties to the east and west.

The solar facility and substation would not replicate the traditional theme and style of the Jacumba area characterized by single-family residences, large and small ranches, and natural topography and terrain. The introduction of the solar facility adjacent to a small rural town would result in a noticeable change in the visual character of the community. The anticipated visual effects associated with Proposed Project construction is discussed in Section 2.1.3.2, Valued Visual Character or Image of Neighborhood or Community. In addition, the anticipated effects of the Proposed Project are shown in visual simulations from Key Views 1 through 9 as depicted in Figures 2.1-9 through 2.1-17. Although existing high voltage transmission lines and distant wind development in Mexico are currently visible, the solar facility and substation would contrast strongly with the existing theme and style of the landscape and predominant development (i.e., residential) in the Jacumba area. In addition, development of the Project site as proposed would result in a permanent and prominent change in the visual theme and style of the community. Impacts to theme and style would be adverse.

Size, Scale, and Massing

The proposed solar panels would feature a maximum panel edge height of approximately 12 feet above ground surface. Although the height of the panels would be less than the typical height of a single-family residence in the Jacumba community, additional Proposed Project components, including the collector substation, 138 kV overhead slack span transmission line, and 138 kV loop-in gen-tie lines, would exceed the vertical scale of nearby residential development. For example, tall components associated with the collector substation, including a 138 kV dead-end structure and switching gear, and support poles for the slack span transmission line, would be 65 feet high (approximately). These components would be distant but visible from I-8 near the Carrizo Gorge Road exit. In addition, up to five 70- to 115-foot-high (approximately) steel poles would be installed to support the proposed 138 kV loop-in gen-tie lines and would be visible to motorists on Carrizo Gorge Road. For a brief duration, these elements would also be visible to I-8 motorists. Although the taller components of the Proposed Project would have limited visibility from residences in Jacumba Hot Springs (the proposed facilities and lines would be located more than 1 mile northeast of Laguna Street and nearby residences), the size and scale of taller Proposed Project components would be dissimilar to that of Jacumba area residential development and predominantly low vegetation across the Project site.

Although existing transmission line infrastructure displays comparable vertical size, scale, and massing as taller Proposed Project components, the wide distribution of solar panels across the Project site would strongly contrast with the size and scale of existing nearby development. More specifically, repeating rows and racks of proposed solar panels would be distributed across a large, 643-acre area that previously supported dairy farming and ranching uses. The broad distribution of proposed solar panels would be particularly noticeable in available views from I-8 at Key View 1 (Figure 2.1-9) and from elevated vantage points on State Park lands to the immediate west of the Project site (Key View 7[Figure 2.1-15]), Airport Mesa (see Key View 8 [Figure 2.1-16])), and from the mesa south of Table Mountain (see Key View 9 [Figure 2.1-17]). Traditional development patterns associated with the community of Jacumba Hot Springs are also visible from State Park Lands (see Key View 7 [Figure 2.1-15]).

As viewed from Old Highway 80, the upper portion of the solar panels would be visible above the slatted fencing which would be installed to screen the solar facility (see Key View 3 [Figure 2.1-11] and Key View 5 [Figure 2.1-13]). , These key views also show the landscaping that would be installed as screening along the Project site frontage of Old Highway 80. Landscaping and slatted fencing would also be implemented along the western Project site boundary that adjoins Jacumba Community Park and residential properties (see Key View 4 [Figure 2.1-12] and Key View 6 [Figure 2.1-14].

On its western boundary, a portion of the Project site is located adjacent to small-lot residential properties featuring modest, single-family residences and mobile homes. With the exception of scattered residences south of Old Highway 80 and east of the Project site, the majority of development in Jacumba Hot Springs is concentrated on a less than 100-acre area located north of Old Highway 80, east of Railroad Street, and west of Laguna Street. The existing Jacumba Solar facility is located to the east; however, this facility is blocked from view of the community and has limited visibility from Old Highway 80. As such, the horizontal scale and massing of the Proposed Project would conflict with the established scale and massing of existing development in the Jacumba Hot Springs community.

Color and Building Materials

Earth-tone colors are prevalent on the Project site and consist of green to greyish grasses, dark green to grey shrubs, and light tans displayed by access roads, hills, drainages, and patches of exposed soils. The abandoned ranch structures are typically white or metallic grey. Vegetation on nearby rural residential properties tends to display a similar earth-tone palette, but these areas may include larger expanses of lightly colored tones due to vegetation clearance near structures. Colors displayed by existing on-site elements, including terrain and vegetation, are illustrated in the photographs of existing conditions from Key Views 1 through 9 (see Figures 2.1-9 through 2.1-17).

Proposed solar panels would be uniformly dark in color. As demonstrated in the visual simulations prepared for the Proposed Project, the dark color of solar panels would be visible to varying degrees from public vantage points in the surrounding areas (see Key Views 1 through 9 [Figures 2.1-9 through 2.1-17]). Other proposed components on the Project site would include the on-site substation, gen-tie lines supported by 70- to 115-foot-high poles, an overhead slack line supported by 65-foot-high poles, inverters and a battery energy storage system composed of 75 steel containers (55 feet long by 10 feet high by 19 feet wide each). In general, these facilities would be metallic grey in color and would be constructed of steel.

Although dark grasses and shrubs are seasonally present throughout the Project site, the introduction of up to 300,000 uniformly dark solar panels would create strong color contrast with the general earth tones displayed by vegetation on the Project site and in the surrounding area. Further, the wide distribution of dark tones of proposed solar panels would conflict with the typically white or off-white color of residential and commercial buildings in Jacumba Hot Springs, and with abandoned structures on the Project site. Also, unlike the on-site substation that would be distant from public viewing locations, inverters and battery energy storage system containers would be scattered between rows of solar panels, including along the perimeter of solar development. If these components are painted with light colors, they would contrast with dark solar panels. Due to the wide distribution of dark solar panels across the site and the colors expressed by prominent perimeter screening elements and other potential color contrasts described

above, Proposed Project components would conflict with the dominant colors displayed by terrain and vegetation in the landscape and by existing residential and commercial development in Jacumba Hot Springs.

Setbacks

Due to the proximity of rural residences and public roads and the visual prominence of Proposed Project components, substantial contrasts with existing visual character would occur. Along the western Proposed Project boundary, solar panels are proposed near occupied rural residences.

At the closest location (i.e., near the driveway to be constructed off Carrizo Gorge Road to provide access to panels located west of the road), proposed solar panels would be set back approximately 60 feet from the Carrizo Gorge Road ROW. At this location, solar panels would be located beyond a perimeter fence and a 24-foot-wide site perimeter access road. East of the road, the nearest solar panels within an isolated T-shaped tract of the Proposed Project would be similarly set back approximately 67 feet from the Carrizo Gorge Road ROW.

As shown in Figure 1-2, Project Components, in Chapter 1 of this EIR, and Figure 2.1-8B, the Project site parallels Old Highway 80 to the south and north generally from Carrizo Gorge Road west to the community of Jacumba Hot Springs. Solar panel set backs from the highway ROW would vary, ranging from a shorter distance of approximately 45 feet from the southerly ROW on the south to a longer distance of approximately 85 feet from the northerly ROW.

The western Project site boundary parallels residential property lines for approximately 0.25 miles north of Old Highway 80. The nearest solar panels would be set back approximately 75 feet from the closest residential property line.

Lastly, the western Project site boundary parallels Jacumba Community Park for approximately 0.18 miles south of Old Highway 80. The setback of the solar panels from the park property line would vary, ranging from approximately 48 feet to 65 feet.

Threshold 1 – Assessment Summary

As detailed above, the height of the proposed panels (up to12 feet high) would be consistent with the scale of the typical residential development in the adjacent community of Jacumba. In addition, the proposed scale of prominent collector substation components (including the 138 kV dead end structure that is approximately 65 feet high), and switchyard loop-in gen-tie line poles (approximately 70 to 115 feet high each) would be consistent with or shorter than existing electrical transmission poles and towers in the landscape. However, the wide distribution of repeating rows of solar panels on the approximately 643-acre site would create noticeable horizontal scale and massing contrasts with adjacent areas of residential development. In addition,

installation of thousands of uniformly dark solar panels in an area that consists mostly of earth tones, modest and lightly colored residential structures, and undeveloped lands would strongly contrast with the established theme and style of the Jacumba area. While not visually prominent in comparison to solar panels, inverters, battery energy, and gen-tie lines may also create noticeable color contrasts when viewed against the background of thousands of uniformly dark solar panels. Thus, the color of proposed solar panels would not be consistent with the predominant colors displayed by features in the existing landscape and internal color contrasts would further degrade the existing visual environment. Although the existing Jacumba Solar development is located further to the east of the Project site, this facility is located outside of the rural village boundary and is fully screened by intervening terrain from viewers in Jacumba Hot Springs. Unlike the Proposed Project, the Jacumba Solar facility also has limited visibility from Old Highway 80. Therefore, the characteristics of the Proposed Project would conflict and be inconsistent with the undeveloped, desert landscape and small town character of Jacumba, and impacts would be **potentially significant (Impact AE-1)**.

Switchyard

The switchyard would be constructed on undeveloped desert land in the northeastern portion of the Project site. The proposed switchyard would be sited adjacent to the proposed substation and would be bordered by undeveloped, previously disturbed land to the east, north, and west. A visually prominent hill is located south of the switchyard site. The nearest developed uses consist of two gas stations off Carrizo Gorge Road that are approximately 1 mile north. Scattered rural residences are located within 1 mile of the switchyard site, but views to the site from these areas are blocked by a hill. Residences in Jacumba Hot Springs are located more than 1.5 miles southwest, and due to distance, the switchyard would not be particularly visible.

The switchyard would not represent the traditional development theme and style of the Jacumba area. Although views of the switchyard and gen-tie lines from I-8 and Carrizo Gorge Road would be brief and visual contrasts would be muted by distance (see Key View 1[Figure 2.1-9]), both the nature of the development and the scale and massing of the approximately 140,000-square-foot facility would create moderately strong contrasts in the landscape. Although the existing 138 kV transmission line, Southwest Powerlink, and Sunrise Powerlink are adjacent to the switchyard, these transmission lines and the proposed switchyard would not replicate the traditional predominant theme and style of the Jacumba area.

Regarding color, the proposed switchyard and loop-in components would generally display a consistent metallic grey color and would be constructed of steel or similar metal. Switchyard and gen-tie line components would display colors consistent with those displayed by electrical and substation infrastructure in the immediate area. Still, metallic tones would contrast with the drab tones of vegetation and tans of desert terrain, and the concentration of these metallic components would be dissimilar to the linear distribution of nearby transmission lines.

In addition, the height of prominent switchyard components and gen-tie line structure would not be consistent with the scale of the typical residential and nearby gas station development in the Jacumba area. The proposed scale of prominent switchyard components (bus work, switches, and controls) and switchyard loop-in gen-tie line poles (approximately 70 to 115 feet high each) would be consistent with or shorter than existing electrical transmission poles and towers in the immediate area. Despite these consistencies with existing electrical infrastructure, the character of the proposed switchyard would detract from the character of the larger Jacumba area and would conflict with the established theme and style of the area that is predominantly associated with an undeveloped desert landscape, including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation. Therefore, impacts would be **potentially significant (Impact AE-1)**.

2.1.3.2 Valued Visual Character or Image of Neighborhood or Community

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance, Report Format and Content Requirements – Visual Resources (County of San Diego 2007) was used to establish significance thresholds. As stated in the County guidelines, a significant impact would result if:

- The project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localize area, including but not limited to landmarks (designated), trees, and rock outcroppings.

Proposed Project

There are no designated landmarks or historic resources present on the Project site. Further, the proposed impact area generally consists of flat terrain that was previously disturbed by agricultural operations. Prominent rock outcroppings are not present on the proposed development footprint. Trees are present on the Project site and are grouped in orderly east/west and north/south lines near the center of the Project site. Although these features are visible from Old Highway 80, they are proportionately minor features within the context of the 643-acre Project site. Although specific landmarks, historic resources, and rock outcroppings are not present on the Project site and trees are limited, the Project site does feature an undeveloped desert environment, with open views of the Jacumba Valley and surrounding mountainous areas.

The existing scenery of the Jacumba area would be substantially altered and affected during construction. Construction activities and the installation of fencing around the perimeter of the development footprint would result in the removal of 643 acres of currently vacant and primarily undeveloped lands from the local area. The construction phase of the Proposed Project would last approximately 13 months, and a workforce of up to 500 employees per day may be required during peak activities.

The physical effects of construction activities would alter the existing open character of the Project site. Roads and other previous disturbances have created visible lines and gaps across the Project site, but proposed grading and vegetation removal would create precise and geometric forms and lines. These new forms and lines would be noticeable and would contrast with adjacent areas of undisturbed vegetation. Following the clearance of vegetation and grading of the site, underground trenching work and installation of the proposed solar panels would occur. During this period, the Project site would begin to display an orderly appearance. Although order created by repeating rows of support racks and panels and straight roads would be somewhat compatible with the grid-like pattern of residential development in Jacumba, the Project site would contrast with the dynamic, open appearance of the existing site and of undeveloped terrain and native vegetation in the surrounding area.

Similarly, clearing, grading, and construction of the on-site collector substation would introduce straight and rectangular building pads and geometric vertical forms where none currently occurs on site. Available views to these facilities would generally be limited to motorists on I-8 and Carrizo Gorge Road. One 220-foot-long 138 kV overhead slack span transmission line (supported by poles approximately 65 feet high) is proposed and would connect the collector substation to the switchyard. The proposed overhead slack span transmission line would be located more than 0.50 miles away but would be visible to eastbound and westbound I-8 motorists over distances of approximately 0.25 miles and 0.21 miles, respectively. From Carrizo Gorge Road, the proposed slack span transmission line would be more than 0.25 miles away, but would be visible to southbound Carrizo Gorge Road motorists over an approximate distance of 0.52 miles. At 65 feet tall, proposed slack span transmission line poles would be substantially shorter than steel poles and towers of the existing 500 kV Southwest Powerlink, 500 kV Sunrise Powerlink, and 138 kV East County Substation transmission line (approximately 150 feet tall). These transmission lines traverse the Project site immediately north of the proposed switchyard.

Proposed solar panels would be visually prominent and experienced as the dominant features of the Proposed Project. Landscaping and slatted fencing would partially screen solar panels from view of motorists along Old Highway 80, Jacumba Community Park users, and nearby residents (see Key Views 3, 4, 5, and 6 [Figures 2.1-11 through 2.1-14]); however, the Proposed Project would substantially alter the currently open and unimpeded character of views across the Project site from these areas.

The existing undeveloped character of the Project site would also be altered by construction of less-prominent Proposed Project components. The inverter/transformer platforms and battery energy storage containers would generally be screened from public view. Grading and trenching associated with the underground electrical collection system would result in similar lines as the proposed internal access road (lines would be installed beneath roads). Inverter/transformer platforms and up to three storage containers (55 feet long by 10 feet high by 19 feet wide) would

be installed at 25 locations throughout the proposed solar facility site (total of 75 battery storage containers) . Despite the height of the storage containers, these components would generally be set back from the perimeter of the solar facility and visually screened by solar panels located closer to viewers. For example, the nearest storage containers would be located approximately 410 feet from Carrizo Gorge Road, and rows of solar panels, a 24-foot-wide access road, and perimeter fencing would be installed between the storage containers and motorists. Storage containers would be located approximately 750 feet from Old Highway 80.

As proposed, the Proposed Project would result in an adverse visual change to the existing small-town character of the area and open characteristics of the site. Although agricultural operations on the Project site have not be active for years, the site is primarily undeveloped and displays open and unimpeded characteristics. Installation of the solar facility would substantially change existing visual quality and result in the adverse alteration of the open and unencumbered qualities of the Project site. As experienced from I-8, the proposed solar facility would substantially interrupt the existing open and unencumbered views across the Project site. For example, see the visual simulations prepared from Key View 1 (Figure 2.1-9), Key View 3 (Figure 2.1-11), and Key View 5 (Figure 2.1-13).

Visual simulations prepared from Key View 3 (Figure 2.1-11), Key View 4 (Figure 2.1-12), and Key View 5 (Figure 2.1.13) show the visibility of the Proposed Project along Old Highway 80 and from Jacumba Community Park. The visual simulation from Key View 6 (Figure 17) shows the visibility of the Proposed Project from adjacent residential properties in Jacumba Hot Springs. Under existing conditions, clear and open views across the Project site are available from Old Highway 80, the community park, and adjacent residential properties. With implementation of the Proposed Project, the currently unimpeded views would be substantially altered and shortened. As such, views of the Proposed Project by Old Highway 80 motorists, Jacumba Community Park users, and Jacumba Hot Springs residential properties adjacent to the Project site, would be substantially altered and the length of available views would be shortened.

The introduction of visually prominent Proposed Project components, including 300,000 PV modules, would substantially change the quality of existing views across the site. Further, the proposed solar facility development would conflict with the small-town character of the Jacumba area and the existing open and unencumbered visual characteristics of the Project site that are important elements. As such, Proposed Project's impacts would be **potentially significant (Impact AE-2)**.

Switchyard

The proposed switchyard site encompasses undeveloped yet previously disturbed lands located approximately 0.60 miles south of I-8 and 0.25 miles west of Carrizo Gorge Road. On-site terrain gradually slopes from east to west, but the site is generally flat and is covered with tan-colored soils and scrubby shrubs. The site is also crossed by several dirt access roads. The site does not

contain landmarks, trees, or prominent rock outcroppings. Although development of the switchyard and gen-tie line would alter the existing character of the previously developed site, it is situated near the base of a prominent hill and visually screened from most public vantage points in the area, including Old Highway 80 and the Jacumba residential area. In addition, the proposed switchyard would not substantially shorten available views across Jacumba Valley. Still, the construction and operation of an approximately 140,000-square-foot switchyard surrounded by security fencing and housing a 138 kV insulated electrical bus, steel support structures and foundations, and a concentration of additional electrical equipment would adversely alter the valued open and unencumbered characteristics of the Jacumba area. Therefore, impacts would be **potentially significant (Impact AE-2)**.

2.1.3.3 Focal or Panoramic Vistas

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance, Report Format and Content Requirements – Visual Resources (County of San Diego 2007) was used to establish significance thresholds. As stated in the County guidelines, a significant scenic vista impact would occur if:

- The project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
  - a public road,
  - a trail within an adopted County or State trail system,
  - a scenic vista or highway, or
  - a recreational area.

Also, pursuant to Appendix G of the CEQA Guidelines:

> In non-urbanized area, 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).

Proposed Project

Public Roads

Interstate 8

As discussed in Section 2.1.1.1, Project Site and Surrounding Area, views of the Project site are intermittently available from I-8 for approximately 1.2 miles. From eastbound I-8, the duration of available views to the Project site is brief, lasting less than 30 seconds as I-8 passes a low hill that blocks southward views and approaches the Carrizo Gorge Road off-ramp. The duration of available views to the Project site available to westbound I-8 motorists is longer, but views are non-continuous and are routinely interrupted by intervening median elements, including elevated road cut terrain, boulders, and vegetation.

Although the southward views offered to I-8 eastbound and westbound motorists near the Project site are occasionally broad and stretch to mountainous terrain in Mexico (see Key View 1, Figure 2.1-9), existing elements detectable in south-oriented views include the 500 kV Southwest Powerlink, 500 kV Sunrise Powerlink, and 138 kV transmission line. As shown in the existing conditions photograph from Key View 1 (see Figure 2.1-9), these facilities traverse the Project site and are visible from I-8. In addition to transmission facilities, southward views offered to eastbound motorists near the Project site include scattered development (i.e., gas station development and signage) and remnants of a quarried hill in the foreground (see Figure 2.1-9).

Despite the brief and intermittent nature of the views from I-8 and the present disturbance of the viewshed by existing electrical transmission infrastructure, the installation of the Proposed Project, including the introduction of up to 300,000 solar panels across the Project site would interrupt existing southward views across the Jacumba Valley landscape and alter the mostly undeveloped and open character of the site (see Key View 1 [Figure 2.1-9]). The visual effects of vegetation removal and the introduction of thousands of dark solar panels across approximately 643 acres of mostly undeveloped, flat terrain would be stark and would attract attention. As previously stated, I-8 is an eligible state scenic highway (and included on the County Scenic Highway System), which implies a heightened sensitivity to modifications along the corridor. As demonstrated in visual simulation from Key View 1 (see Figure 2.1-9), development of the Project site as a solar energy park would substantially detract from the available long view from I-8. As such, impacts would be **potentially significant (Impact AE-3)**.

Old Highway 80

Old Highway 80 transects the Project site from approximately Laguna Street to the Jacumba Airport driveway (0.95 miles). Along this segment of the highway, existing southward and northward views offered to motorists (and occupants) are unimpeded except for regularly spaced

wooden poles that support local electrical distribution lines. More specifically, southward views extend across the flat grass and scattered shrub-covered terrain to the international border fence and a rugged ridgeline in Mexico (see Key View 3 [Figure 2.1-11]). Northward views spread across the Project site and extend to local hills traversed by electrical transmission lines (and associated access roads) and mountain terrain, including Round Mountain and Mount Tule (see Key View 5 existing conditions [Figure 2.1-13]).

From eastbound Old Highway, Project site views are available over approximately 0.95 miles, which is the approximate length that the highway parallels the Project site boundary. From westbound Old Highway 80, view duration to the Project site is longer. In addition to the segment paralleling the Project site, views to portions of the northern and/or southern Project site are available starting approximately 0.8 miles east of Carrizo Gorge Road. From this segment of westbound Old Highway 80, views to the Project site are partially screened by vegetation adjacent to the highway and by the large hill situated west of the Carrizo Gorge Road/Old Highway 80 intersection and east of the Project site. In total, the Project site is visible to westbound motorists on Old Highway 80 for a discontinuous 2.25 miles. According to the San Diego Association of Governments, average daily traffic on Old Highway 80 near the Project site is approximately 500 vehicles (SANDAG 2019). Lastly, Old Highway 80 is included on the County's Scenic Highway System.

As shown from Key View 3 (see Figure 2.1-11), southeasterly views from eastbound Old Highway 80 are drawn to the rugged ridgeline of mountain terrain beyond the international border fence. Except for the border fence that is constant in the Old Highway 80 landscape, existing views across the Project site are open and unencumbered. The Proposed Project would include installation of solar panels and other solar facility components, and perimeter fencing south of Old Highway 80 for a distance of approximately 0.83 miles. As shown in the visual simulation from Key View 3 (see Figure 2.1-11), the solar panel setbacks from the highway ROW would vary, ranging from a shorter distance of approximately 45 feet from the southerly ROW on the south to a longer distance of approximately 85 feet from the northerly ROW.

As shown from Key View 3 (see Figure 2.1-11), the Proposed Project would alter the existing quality of views from eastbound Old Highway 80 across the Project site. Although the dark, rugged ridgelines of distant topography would remain visible, the continuity of views to these prominent landscape elements would be severed by Proposed Project components introduced to the foreground of Old Highway 80. For example, currently open views to the south and southeast would be replaced with routinely broken and intermittently blocked views. Although not depicted in Figure 2.1-11, northerly views from eastbound Old Highway 80 across the Project site and toward I-8 and prominent topography, including Gray Mountain (located approximately 2.1 miles away), would similarly be altered by implementation of the Proposed Project.

For westbound motorists (and occupants), views in the foreground would be interrupted by Proposed Project components as shown in the visual simulation from Key View 5 (see Figure 2.1-13). Existing views are occasionally long, stretching to Mount Tule (approximately 6.5 miles away). Solar panels would be set back approximately 59 feet to 85 feet from the highway ROW adjacent to the westbound travel lane. North of the highway, the Proposed Project components would parallel the westbound travel lane for approximately 0.80 miles.

Due to their interesting form and vertical prominence, Round Mountain, Mount Tule, and Gray Mountain are focal features in northward views along the Proposed Project frontage of Old Highway 80. Both Mount Tule and Round Mountain are visible from the westbound travel lane of Old Highway 80. Although views of Round Mountain and other higher terrain would be visible above the tops of the solar panels and the fencing that would be installed along the perimeter of the solar facility, implementation of the Proposed Project, and specifically the introduction of thousands of solar panels, would substantially alter the existing character of the view across the Project site.

As described above, solar panels would parallel Old Highway 80 and would substantially alter the existing quality of views available to highway motorists and passengers. Numerous racks of solar panels would be aligned perpendicular to Old Highway 80, and although solar panels would be set back at least 75 feet from the paved extents of the highway, their wide distribution across relatively flat and open desert terrain would reduce existing visual quality and create strong contrast with existing conditions. Therefore, due to the wide distribution of solar panels across the site and related alteration of existing visual quality as experienced from eastbound and westbound Old Highway 80, including occasionally obscured views to mountainous terrain in the area, the Proposed Project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista. Impacts would be **potentially significant (Impact AE-4)**.

Carrizo Gorge Road

In 2015, daily traffic volumes on Carrizo Gorge Road between Old Highway 80 and I-8 was approximately 300 vehicles (SANDAG 2019). Because the Project site abuts Carrizo Gorge Road, views to the Project site are available to motorists. Carrizo Gorge Road is a two-lane, light collector, paved and dirt road that generally provides local access between Old Highway 80 and I-8. A segment of Carrizo Gorge Road also extends to the northwest from the Carrizo Gorge Road/I-8 on-ramps intersection near the existing gas stations. From this location, the road is maintained by the County generally to the I-8 crossing. North of I-8, Carrizo Gorge Road becomes a privately maintained road and provides access to the private De Anza Springs Resort located north of I-8. Carrizo Gorge Road parallels the Project site for approximately 1.8 miles; however, development areas do not encompass the entirety of the Project site. As such, views to areas proposed for solar facility development are available over a discontinuous, approximately 1.25-mile segment of the road.

A representative view to the Project site from Carrizo Gorge Road was established at Key View 2 (Figure 2.1-10). Key View 2 is located on a segment of Carrizo Gorge Road that does not parallel the Project site and is located approximately 0.4 miles south of the nearest area proposed for solar development. From Key View 2 (see Figure 2.1-10), solar panels of the Proposed Project would be located approximately 0.4 miles away, and the hard line displayed by dark solar panels would stand out when experienced alongside the local terrain and vegetation. The Key View 2 landscape contains scenic features (i.e., tan and boulder covered Gray Mountain north of I-8 and darker Mount Tule to the northwest); however, the low angle of the view, presence of a prominent hill to the west (not visible in Figure 2.1-10), and visible mountains limits the panoramic qualities of the view. The solar panels would display a rectangular and relatively low-profile form, and although the dark color of these elements would create noticeable visual contrast, the quality of existing views to Gray Mountain and Mount Tule would be weakly affected at Key View 2. In addition, Proposed Project components would not block views or substantially interrupt views to prominent topographical features.

Where the solar facility would parallel Carrizo Gorge Road, existing views of the Project site would be altered by the Proposed Project components. However, motorists would experience these immediate foreground views over a distance of approximately 600 feet. Despite the proximity of Proposed Project components to the road (proposed solar panels would be set back approximately 75 feet from the paved extents of Carrizo Gorge Road), Gray Mountain and Mount Tule would remain visible. In addition, Carrizo Gorge Road is not included in the County Scenic Highway System and is not designated scenic by the state. Focal views to scenic features from Carrizo Gorge Road would not be substantially blocked, interrupted, or otherwise degraded by implementation of the Proposed Project. Therefore, due to the short distance over which solar development areas would parallel Carrizo Gorge Road, the brief duration of views to solar development within the foreground, the low number of daily vehicles on Carrizo Gorge Road, and the lack of scenic designation, impacts to focal or panoramic vistas would be **less than significant.**

Trails

As discussed in Section 2.1.1, Existing Conditions, there are no segments of an adopted County or state trail system in the Jacumba area. Further, no segments of trails within the Boulevard Community Trails and Pathways Plan (County of San Diego 2005) offer views to the Project site or the Jacumba Valley area, and the community of Jacumba does not have a Community Trails and Pathways Plan. Since views to the Proposed Project would not be available to users of an adopted County or state trail system, **no impacts** to a valued focal and/or panoramic vista from a trail within an adopted County or state trail system would occur.

Scenic Highways

There are no official state designated highways in the viewshed of the Proposed Project. One eligible state scenic highway, I-8 (also included in the County Scenic Highway System), is located in the Project area (Caltrans 2017). In addition, Old Highway 80, a two-lane road included in the County Scenic Highway System, bisects the Project site (County of San Diego 2011c).

Impacts to focal and panoramic vistas from I-8 and Old Highway 80, both included in the County Scenic Highway System, are described under the Public Roads heading, above.

Recreation Areas

Recreation areas within the Proposed Project viewshed include local, state, and federal lands. Specifically these include Jacumba Community Park, which is located immediately adjacent to the southern portion of the Project site. State lands include Anza Borrego Desert SP, which is located to the west and northwest of the Project site. Federal lands include BLM-managed lands encompassing the summit of Round Mountain (and its west- and south-facing slopes), Airport Mesa RMZ, Table Mountain RMZ, and the Jacumba Mountain Wilderness. Both the Airport Mesa RMZ and Jacumba Mountain Wilderness are located east of the Project site, and the Table Mountain RMZ is located to the northeast.

Location/County Recreational Areas

Jacumba Community Park

Jacumba Community Park is located south of Old Highway 80 and immediately west of the southern portion of the Project site. As shown in in the existing conditions photograph from Key View 4 (see Figure 2.1-12), the existing eastward view from the park looks across the undeveloped and open views in the southern portion of the Project site. With implementation of the Proposed Project, solar panels would be installed south of Old Highway 80 and east of the community park. Solar panels would be set back approximately 40 feet from the eastern boundary of the park property, and although active recreational facilities (i.e., basketball court and baseball/diamond) are located in the center and southwestern corner of the park property, solar panels would be visible from locations throughout Jacumba Community Park. Specifically, the dark, rectangular form and horizontal line of proposed solar panels would be visible and would stretch over the Project site and toward the Jacumba Airport and Airport Mesa, as shown in the visual simulation from Key View 4 (see Figure 2.1-12). Implementation of the Proposed Project would substantially alter the existing open character of the Proposed Project and the unimpeded quality and intactness of the existing view. Therefore, impacts to focal or panoramic vistas from Jacumba Community Park would be **potentially significant (Impact AE-5)**.

State Recreational Areas

Anza-Borrego Desert State Park Lands

Although most of the Anza-Borrego Desert SP land in the surrounding area is located north of I-8, discontinuous tracts of State Parks land are included within the current boundary of the State Park northwest of the Project site. In addition, lands recently acquired by the state for inclusion in the State Park are located west of the Project site from generally the base of Round Mountain south to the San Diego and Arizona Eastern Railway alignment. As shown in Figure 2.1-7, north of I-8 the Proposed Project viewshed extends to sections of the Jacumba Mountain Wilderness Area within the Anza-Borrego Desert SP. No designated trails, points of interest, or campgrounds are currently located on the State Parks lands nearest to the Project site. As such, these remote areas are assumed to currently receive very little public recreation use. In regards to the State Park lands located to the immediate west of the Project site, proposed solar panels would be relatively close (i.e., within 0.30 miles), and the lack of intervening topography creates opportunities for clear and unimpeded views to the central and south potions of the Project site. In addition, most State Parks lands would be located more than 1 mile from solar panels on the Project site, and due to intervening mountainous terrain, the partially blocked views to the Project site would not substantially obstruct or interrupt a valued focal or panoramic.

Key View 7 (see Figure 2.1-15) shows existing views from the mesa encompassing Anza-Borrego Desert SP lands to the immediate west of the Project site. From the eastern edge of these lands, the central and southern portions the Project site are visible and display an open, undeveloped character. With implementation of the Proposed Project, contrasts would be visually prominent and strong a shown in the visual simulation from Key View 7 (see Figure 2.1-15). The installation of repeating rows of dark, rectangular solar panels would create form and color contrast across the visible extent of the Project site. Further, the installation of thousands of solar panels would produce a repetitive, orderly quality that is not currently present on the open and undeveloped Project site. Although the State Parks lands to the west are located 200 feet or greater in elevation than the Project site, and Proposed Project components would not substantially block or shorten the available long view, the Proposed Project would display a large horizontal scale and footprint that would cover a wide area of visible valley floor as shown from Key View 7 (see Figure 2.1-15). In addition, solar panels and other visible Proposed Project components would substantially interrupt and detract from existing views. As such, impacts to panoramic vistas available from State Parks lands west of the Project site would be **potentially significant (Impact AE-6)**.

Federal Recreational Areas

Round Mountain

The western portion of Round Mountain is located on BLM-managed lands. Round Mountain is assumed to receive sporadic use by individual hikers and small, informal hiking groups.

Due to its elevated vantage points and the general lack of intervening topography, the entirety of the solar facility would be visible from the summit of Round Mountain. Ground disturbance and activities during construction would be apparent, and once constructed, the distribution of thousands of solar panels and the grid-like layout of access roads and panels would be clear and prominent across the flat valley floor. As previously stated, views from the summit and southern slope of Round Mountain are long and broad, stretching to the Jacumba Mountains to the east and the southerly extension of this range into Mexico.

The proximity of the Project site and visibility of the entire development footprint would substantially interrupt the long view available from Round Mountain. The solar facility would be a focal point in the landscape and would detract from the available expansive view to the southeast and south. As such, impacts would be **potentially significant (Impact AE-7)**.

Airport Mesa RMZ

Airport Mesa is managed by BLM for its rural recreational qualities, but the lone access road to the summit is managed by U.S. Customs and Border Protection. In addition, the access road and summit are regularly used by U.S. Customs and Border Protection agents to conduct patrols of the area. No staging or parking areas for hikers or other trail-based recreationists are provided near the Airport Mesa landform, and no visible trails were identified on the east-, north-, or west-facing slopes. Therefore, limited recreational use of Airport Mesa occurs. However, because Airport Mesa provides opportunities for long views and has not formally been closed by the BLM for recreational use, effects to existing views from Airport Mesa are considered in this report.

A shown in the existing conditions photograph from Key View 8 (see Figure 2.1-16), Airport Mesa offers a westward views toward the Jacumba Valley and community of Jacumba Hot Springs. As shown in Figure 2.1-16, the existing westward view is long and includes mesas and several hills and valleys west of Jacumba, and the generally horizontal horizon of the Tecate Divide. With implementation of the Proposed Project, contrasts in color and line would be strong as viewed from Key View 8, and the current character of the Project site would be fundamentally altered by the solar facility. Although the view would remain long and broad, and surrounding hills and mountains would remain unaltered, development of the solar facility would interrupt and detract from the available view. The Proposed Project would display flat forms somewhat consistent with the flat valley floor, but the existing visual pattern of flat, undeveloped valley terrain and

mountains would be visibly altered by dark rectangular forms separated by the thin, tan lines displayed by access roads. With maximum exposure to the Proposed Project components from the elevated vantage point at Key View 8, the large horizontal scale and footprint of the Proposed Project would be visible and would substantially interrupt and detract from the available long view. As such, impacts to a focal or panoramic vista from Airport Mesa would be **potentially significant (Impact AE-8)**.

Table Mountain RMZ

As depicted in Figure 2.1-7, the viewshed of the Proposed Project would extend to portions of Table Mountain and the more accessible mesa to the south. Both areas are located on BLM-administered lands and are accessible via narrow trails. Also, both receive limited use from the local Jacumba Hikers and Walkers group, and sporadic use from individual hikers and small hiking groups.

Key View 9 was established on the mesa located south of Table Mountain and offers southwestward views toward the Jacumba Valley. In addition to the mesa, Key View 9 is representative of the available view from the summit of Table Mountain. As shown in the existing conditions photograph taken from Key View 9 (see Figure 2.1-17), the Project site is visible from the mesa south of Table Mountain, and therefore, views to the Proposed Project components would be available to an assumed limited number of hikers accessing the elevated vantage point. The nearest solar panels on the Project site would be located more than 1.5 miles away from viewers at Key View 9, and except for locations in the north and south, the majority of proposed solar panels installed across the Project site would be visible. From the mesa, the Proposed Project would primarily be viewed as a flat and geometric expanse of dark color on the valley floor. Although the details of proposed solar panels and the grid-like layout of the Proposed Project would be indistinct or difficult to detect, and Proposed Project components would not block visually prominent terrain from view, the concentration of dark color and geometric form of the developed Project site would interrupt the available open, unencumbered view to the southwest, and would detract from the panoramic vista. Therefore, impacts would be **potentially significant (Impact AE-9)**.

Jacumba Wilderness

Accessible trails offering westward views to the Jacumba Valley and Project site are located more than 3 miles to the east. Apart from peaks and west-facing slopes, the occurrence of available westward views to the Project site is irregular, and motorists must typically perform some overland scrambling to access these views. Given these factors and the remote location of the Jacumba Wilderness and its associated network of roads, the number of users of the Jacumba Wilderness as a recreational resource is very low.

Where long westward views are available, the southern portion of the Project site is entirely blocked from view by Airport Mesa. This elevated landform is situated between the Jacumba Wilderness and the Project site and is a limiting factor in views. In addition, a portion of the Project site is blocked from view by the prominent hill located west of the Old Highway 80/Carrizo Gorge Road intersection. As viewed from the Jacumba Wilderness, the details of components on the Project site (primarily solar panels) would be indistinct, yet color contrast would be detectable. Still, this contrast would appear low in the landscape and would be generally viewed as a thin, horizontal feature. Visible yet distant Proposed Project components would not result in view blockage, and due to distance and the partially blocked view to the Project site, detectable contrast would neither substantially interrupt nor detract from the available view. Therefore, as viewed from the BLM-administered Jacumba Wilderness, impacts to focal or panoramic vistas would be **less than significant**.

Switchyard

Public Roads

Interstate 8

The proposed switchyard site is located approximately 0.6 miles from the eastbound I-8, and once constructed, the facility would be visible to interstate motorists. As with the other elements of the Proposed Project, views to the switchyard site offered to eastbound I-8 motorists would be brief, lasting approximately seconds as the interstate passes a low hill that blocks southward views and approaches the Carrizo Gorge Road off-ramp. Duration view exposure to westbound I-8 motorists would be longer, and the proposed switchyard would be in the foreground for approximately 13 seconds. A photosimulation of the Proposed Project as experienced from I-8 near the Carrizo Gorge Road exit is included as Key View 1 (see Figure 2.1-9). Although less noticeable than proposed solar panels and ground disturbance within the Proposed Project fence line, ancillary Proposed Project components, including the switchyard, would be visible from the elevated vantage point. As shown in Figure 2.1-9, vertical racks and bays, and up to five 70- to 115-foot-high support poles of the short gen-tie lines, would be distant but detectable in southerly views from I-8 near Carrizo Gorge Road. In addition to distance, the presence of a hill to the immediate south of the switchyard would reduce the visual prominence of the switchyard as viewed from I-8. Similarly, the presence of the hill and comparatively low vertical profile of switchyard components would avoid the potential for the facility to be silhouetted against the sky. From I-8, the visual effects of the switchyard would be visually subordinate to those of the Proposed Project and may be overlooked by interstate motorists. Due to distance between viewers and components, and the location of the facility in the landscape as viewed from I-8, the proposed switchyard would result in **less than significant impacts** to a focal or panoramic vista from I-8.

Old Highway 80

The switchyard site is located approximately 0.7 miles from Old Highway 80. From westbound Old Highway 80, views to the switchyard site are generally blocked from view by terrain, including the mounded hill located west of Carrizo Gorge Road and north of the highway. As westbound highway motorists approach Carrizo Gorge Road, views toward the site narrow and view blockage associated with the hill increases. At Carrizo Gorge Road, northwestward views offered to westbound Old Highway 80 motorists are limited to a foreground distance due to the rising terrain of the hill.

East of Laguna Street, northeasterly views across the Project site available to eastbound Old Highway 80 motorists are generally unimpeded. Specifically, motorists are offered views that generally stretch to the switchyard site. However, upon implementation of the Proposed Project, the majority of equipment installed at or associated with the proposed switchyard would be screened from view by the slatted perimeter fencing and landscape screens that would be installed during construction of the Proposed Project and maintained during Proposed Project operations. Motorists would be offered partially obstructed views to 70- to 115-foot-high gen-tie line support poles; however, these new poles would be located more than 1 mile away and viewed in combination with visually prominent poles and towers of the Southwest Powerlink and Sunrise Powerlink transmission lines. Due to the prominence of other intervening Proposed Project components, distance, and the presence of visually prominent transmission line towers and poles, the proposed switchyard would not substantially obstruct, interrupt, or detract from existing views from Old Highway 80. As such, impacts would be **less than significant**.

Carrizo Gorge Road

Northbound motorists on Carrizo Gorge Road would have limited view exposure to the proposed switchyard. Due to intervening terrain generally located west of the Old Highway 80/Carrizo Gorge Road intersection, views to the switchyard would not be available to northbound Carrizo Gorge Road motorists. From southbound Carrizo Gorge Road, construction and operation of the switchyard would be partially blocked by intervening desert shrubs and occasional trees, and would be somewhat obscured by proposed perimeter fencing. Where visible, the switchyard would be experienced in concert with existing towers and poles of regional electrical lines, and would be revealed to motorists after passing proposed solar panels that would be in the foreground of Carrizo Gorge Road. Although the switchyard would be more visually distinct from Carrizo Gorge Road as compared to from I-8, the facility would remain visually subordinate to the proposed PV modules. In addition, existing views across the JVR Energy Park site from southbound Carrizo Gorge Road that would include the switchyard are not particularly panoramic due to the presence of prominent hills. Further, as viewed from Carrizo Gorge Road, the proposed switchyard would not block a focal feature from view and would not substantially interrupt or detract from a view to

a prominent focal feature. As such, the proposed switchyard would not obstruct or substantially interrupt or detract from a valued focal vista from Carrizo Gorge Road, and impacts would be **less than significant**.

County or State Trail System

There are no segments of an adopted County or state trail system in the Jacumba area, and no segments of trails within the Boulevard Community Trails and Pathways Plan that offer views to the switchyard site (County of San Diego 2005). In addition, the community of Jacumba does not have a Community Trails and Pathways Plan. Since views to the switchyard site would not be available to users of an adopted County or state trail system, **no impacts** to a valued focal and/or panoramic vista from a trail within an adopted County or state trail system would occur.

Recreation Areas

Local/County Recreational Areas

Jacumba Community Park

Except for 70- to 115-foot-high gen-tie line poles, the proposed switchyard would be blocked from view of Jacumba Community Park users. Proposed gen-tie line poles may be visible from the park, but poles would be located more than 1.25 miles away and would appear relatively low in the landscape. In addition, the proposed poles would be viewed in context of existing 150-foot-tall steel lattice towers and tubular steel poles that support the Southwest Powerlink and Sunrise Powerlink (both 500 kV transmission lines), and the East County Substation 138 kV transmission line. Due to distance and because switchyard components would generally be blocked from view and would not substantially interrupt or detract from the available views, impacts to focal or panoramic vistas from Jacumba Community Park would be **less than significant**.

State Recreation Areas

Anza-Borrego Desert State Park

The proposed switchyard and associated support poles would be visible from nearby state recreational areas, including State Parks lands adjacent to the Project site that are within the Anza-Borrego Desert SP. State recreational areas and their proximity to the Project site (the switchyard and gen-tie line poles are located within the Proposed Project boundary) are depicted in Figure 2.1-7. As stated above for the JVR Energy Park Project, no trails, points of interest, or campgrounds are located on Anza-Borrego Desert SP lands nearest to the switchyard site, and as such, nearby Anza-Borrego Desert SP lands are assumed to receive relatively low use by the public.

The proposed switchyard and support poles would be visible from prominent locations in the southern area of Anza-Borrego Desert SP, such as mountainous terrain east of Goat Canyon. In addition, the switchyard and gen-tie line poles would be visible from elevated vantage points on State Park lands to the immediate west of the Project site and State Parks lands located north of I-8. However, the proposed switchyard (approximately 3.2 acres) and gen-tie line poles would be located more than 3 miles away from Anza-Borrego Desert SP locations within the Proposed Project viewshed. Due to distance, the footprint and apparent scale of the switchyard would be substantially reduced when viewed from Anza-Borrego Desert SP lands, and the proposed switchyard and features would not be visually prominent or substantially detract from existing views. In addition, the proposed switchyard and gen-tie line poles would be located on lower-elevation lands, and as viewed from elevated vantage points located approximately 3 miles from Anza-Borrego Desert SP, the new facilities would not result in view blockage or substantial view interruption. Therefore, construction and operation of the proposed switchyard and associated gen-tie line poles would not substantially obstruct, interrupt, or detract from an existing focal or panoramic vista available from Anza-Borrego Desert SP, which are assumed to receive limited annual usage. Impacts would be **less than significant**.

Federal Recreation Areas

Round Mountain

As viewed from the summit and south- and east-facing slopes of Round Mountain, the switchyard and gen-tie line poles (approximately 70 to 115 feet high) would be located approximately 1.15 miles away within the Project site boundary. Although visible to the limited number of annual hikers on Round Mountain, these elements would be located approximately 560 feet lower in elevation and near the base of a prominent hill. Due to distance and the difference in elevation, the proposed switchyard and gen-tie line poles would not result in view blockage from Round Mountain. Although the graded and leveled surface of the approximately 3.2-acre switchyard footprint, and metallic, horizontal, and vertical components within its fenced boundary would contrast with nearby hills covered with low desert shrubs, the switchyard site has been previously disturbed. In addition, the proposed switchyard would occupy a small portion of the available view from Round Mountain. As such, development of the previously disturbed site to a switchyard facility would not substantially detract from the views available from Round Mountain. Up to five 70- to 115-foot-tall poles for the 1,860-foot-long 138 kV gen-tie line would be introduced to the landscape; however, because these poles would be viewed alongside existing poles and towers traversing the area, and would be viewed against a backdrop of hilly terrain and brown-grey-colored vegetation, they would not substantially interrupt or detract from the available view. Therefore, impacts to focal or panoramic vistas from Round Mountain associated with the proposed switchyard would be **less than significant**.

Airport Mesa RMZ

Although partially visible, the proposed switchyard would not be prominent or particularly distinct in northwestward or northward views from Airport Mesa. Where visible and not blocked by intervening terrain, the thin, grey lines of switchyard components and the gravel surface of the site would create color and line contrast. However, the assumed limited annual number of viewers at Airport Mesa would be focused on the wide distribution, color, and lines create of hundreds of thousands of solar panels (and horizontal access roads) across the 643-acre development footprint (see Figure 2.1-16). In addition, visible components of the proposed switchyard would be low in the landscape and would not block a particularly scenic feature from view. Lastly, the approximately 3.2-acre switchyard would occupy a small portion of the visible landscape as viewed from Airport Mesa, and would not substantially affect the panoramic and expansive qualities of the view. Therefore, impacts to focal or panoramic vistas would be **less than significant**.

Table Mountain RMZ

Although visible within the Project site, the switchyard would be located approximately 4 miles away and 1,000 feet lower in elevation than the mesa located south of Table Mountain. When viewed from the elevate vantage point accessed annually by a limited number of hikers accessing the mesa, proposed grading and surfacing of the switchyard would create detectable color and line contrast. Further, the installation of hardware and equipment would introduce metallic grey color to a previously disturbed site displaying tan and gold tones. From 4 miles away, proposed gen-tie line poles would be perceived as thin lines in the landscape and would not be visually prominent. From the mesa, neither the switchyard nor 70- to 115-foot-high gen-tie line poles would result in view obstruction. Significant scenic features would not be blocked or obscured. The visible contrast would not create substantial interruption in the available long and expansive views, since hikers would not typically fixate on the relatively small, 3-acre area. Similarly, the switchyard and gen-tie line poles (and associated color and line contrast) would not substantially reduce the existing quality of the southwestward view from the mesa. Therefore, impacts to focal or panoramic vistas from the mesa south of Table Mountain (and from Table Mountain) would be **less than significant**.

Jacumba Wilderness

Relative to the mesa located south of Table Mountain, the switchyard would be located a greater distance from potential viewers within the Jacumba Wilderness. As previously stated and similar to other recreational areas in the Jacumba area, the Jacumba Wilderness is assumed to receive a limited annual number of visitors, including hikers that may seek out opportunities for scenic vistas. The proposed switchyard and gen-tie line poles would be visible from elevated peaks and east-facing slopes in the Jacumba Wilderness. However, due to distance and the small apparent

scale of switchyard and gen-tie line poles relative to the expansive westward view, neither the switchyard nor the gen-tie line poles would substantially interrupt or diminish the quality of the existing views. Lastly, relative to peaks and slopes in the Jacumba Wilderness, the switchyard and gen-tie line poles would be situated low in the landscape and would not obstruct or block scenic from view. Therefore, impacts to focal or panoramic vistas from the Jacumba Wilderness due to the switchyard would be **less than significant**.

2.1.3.4 Plan Compliance

Guidelines for the Determination of Significance

For the purpose of this EIR, the County of San Diego Guidelines for Determining Significance, Report Format and Content Requirements – Visual Resources (County of San Diego 2007) was used to establish significance thresholds. According to the guidelines, a significant impact would result if the Proposed Project would not comply with applicable goals, policies, or requirements of an applicable County community plan, subregional plan, or historic district zoning.

Analysis

Proposed Project

As detailed in Table 2.1-1, Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park, the solar facility, including the substation, would comply with the relevant aesthetics goals and policies of the Mountain Empire Subregional Plan. Therefore, impacts concerning conflicts with goals and policies of the applicable County Subregional Plan would be **less than significant**.

Since Jacumba Hot Springs does not have an adopted community plan and the Jacumba Vision Statement and Background does not contain goals or policies, only the applicable subregional plan (i.e., Mountain Empire Subregional Plan) is assessed in Table 2.1-1. Lastly, the Project site is not located in a Historic District.

Switchyard

The proposed switchyard is a part of the project and thus would also be consistent with relevant goals and policies of the Mountain Empire Subregional Plan as detailed in Table 2.1-1. As with the Proposed Project, the switchyard site and loop-in alignments are not located in a Historic District.

2.1.3.5 Light and Glare

Guidelines for the Determination of Significance

For the purpose of this EIR, the County of San Diego Guidelines for Determining Significance, Report Format and Content Requirements – Dark Skies and Glare (County of San Diego 2009) was used to establish significance thresholds. According to the dark skies and glare guidelines, a significant impact would result if:

a. The project will install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

b. The project will operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

c. The project will generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property.

d. The project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color, that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties.

e. The project does not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code.

Analysis

Proposed Project

Lighting

Construction

Construction of the Proposed Project is anticipated to last approximately 13 months. Construction activities would generally occur during the County's allowable hours and days of operation, but may involve extended hours, as needed, to complete certain construction activities and/or during emergencies or as approved by the County. For most of the year, nighttime construction lighting would not be required. However, during emergencies, tasks requiring extended hours and during

late fall and winter months, the lack of adequate natural light may dictate that portable lighting sources be used at specific construction sites.

When required, portable construction night lighting would temporarily illuminate and be focused on active areas of construction. All temporary construction lighting would be compliant with the County's Light Pollution Code. Specifically, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code. Lighting would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. Due to the anticipated limited frequency of night construction lighting use and through compliance with the lamp type and shielding requirements of the County Light Pollution Code, short-term construction lighting impacts to nighttime views would be **less than significant**.

Operation

> *Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?*

Because the Proposed Project is subject to compliance with applicable ordinances and regulations of the County, all outdoor light fixture would conform to the lamp type and shielding requirements of the San Diego County Light Pollution Code. Motion-sensored lights would be installed at all site access driveway entrances and would only be used if motion is detected. No other lighting is proposed within the solar facility. The motion-sensored lights would have bulbs that do not exceed 100 watts, and all lights would be shielded and directed downward to minimize potential effects to nighttime views and dark skies in the surrounding area. These efforts would also minimize the potential for light trespass onto adjacent off-site properties. Except for lights installed off Old Highway 80 at the site entrance that would be on after 5:00 p.m., lighting would be used on an as-needed basis and would normally be turned off unless nighttime access to the site is required. Entrance lights would be shielded and would conform to the Light Pollution Code's lamp type requirements. Since maintenance activities are not anticipated to be completed during the evening hours, lights within the interior of the substation site would normally be turned off. Maintenance crews would carry lights when performing maintenance work after 5:00 p.m. As such, the Proposed Project would conform to the lamp type and shielding requirements of the San Diego County Light Pollution Code, and impacts would be **less than significant**.

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

No Class I or Class III outdoor lighting is proposed to be installed on the JVR Energy Park site. As a solar energy park facility, outdoor lighting for an outdoor sales or eating area, vehicle fueling area, assembly or repair area, billboard or other sign, recreational facility, or other similar application (i.e., Class I lighting) would not be required. In addition, outdoor lighting used for decorative effects, such as architectural illumination, flag and monument lighting, and landscape lighting (i.e., Class III lighting), is not proposed to be installed on the site. As such, Class I or Class III lighting would not be installed, and operation of the Proposed Project would not be inconsistent with Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code. **No impacts** would occur.

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Under existing conditions, no sources of nighttime lighting operate on the Project site. Upon implementation of the Proposed Project, operational nighttime lighting sources would be introduced to the site, and more specifically, lighting would be provided at the site entrance gates/driveways off Carrizo Gorge Road and Old Highway 80 and within the Project site interior at the on-site substation. The nearest entrance gates off Carrizo Gorge Road would be located approximately 1,000 feet southeast of the Chevron Jacumba gas station. There are no occupied residential properties near the proposed entrance gates, and the area is exposed to nighttime lighting associated with nearby gas station development. Gates would be set back approximately 200 feet or greater from non-Proposed-Project-controlled property north and east of Carrizo Gorge Road, and this property is currently developed as a parking lot and features overhead lighting around the perimeter of the lot. The driveways and entrance gates constructed off Old Highway 80 would be located near an assumed occupied rural residential property that is not included in the Proposed Project boundary.

The driveway entrance to the substation would have motion-sensored lights that would only be used if motion is detected. No other lighting is proposed within the substation. The motion-sensored lighting would have bulbs that do not exceed 100 watts, and all lights would be shielded and directed downward and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance (Section 51.201 et seq.). With these measures, all measurable lighting would be retained at the access driveway and would not trespass onto non-Proposed-Project properties or occupied properties in the surrounding area. Therefore, light trespass impacts would be **less than significant.**

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Although the Proposed Project does not propose to install traditional highly reflective building materials, such as glass windows or metallic siding, the Proposed Project would entail the introduction of glass-surfaced solar panels on single-axis racks across an approximate 643-acre fenced site. The proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. In addition, Proposed Project components, including the on-site substation, inverters, batter energy storage system containers, and the overhead slack span transmission line, would be constructed of steel and/or other metallic materials and depending on daily atmospheric conditions, may be sources of daytime glare. The Project site is visible from I-8, Carrizo Gorge Road, and Old Highway 80, and the Proposed Project boundary abuts residential properties in Jacumba and the Jacumba Airport. To determine the potential for proposed solar panels to generate distraction glare that could be received by viewers within 1 mile of the Project site on local roads (specifically I-8, Old Highway 80, and Carrizo Gorge Road), at residential properties in Jacumba, or the Jacumba Airport runway approaches (i.e., east and west), Power Engineers Inc. prepared a Glare Study, which is included in the Visual Resources Report (Appendix B).

The glare study used the Solar Glare Hazard Analysis Tool licensed by GlareGauge, and meets Federal Aviation Administration (FAA) requirements for airport operations. Runway approaches, residential, I-8, Old Highway 80, and Carrizo Gorge Road motorist analysis points within 1 mile of the Project site were identified and assessed by Power Engineers. Details of solar technologies to be constructed at the Project site, including tracking axis orientation (180 degrees due south), maximum tracking angle (55 degrees), wake angle (5 degrees), stow angle (5 degrees), mount height, and application of anti-reflective-coated smooth-surface glass, was provided by BayWa Renewable Energy. The anti-reflective coating is a treatment to solar panel glass designed to reduce reflected light and increase panel efficiencies. Proposed solar operations were analyzed from the perspective and viewpoint of motorists, residents, and pilots. The locations of the points analyzed are shown in Figure 5 of the Glare Study (Appendix A of Appendix B).

For all arrays, the 55-degree array tracker rotational limits combined with the 5-degree wake/stow angle would cause any potential glare to be redirected above and away from analyzed sensitive viewers (i.e., residential locations and motorists on I-8, Old Highway 80, and Carrizo Gorge Road) throughout the day and year. Specifically, no annual glare was calculated to be received at the 14 discrete plotted locations on Carrizo Gorge Road and Old Highway 80 or at the 20 discrete plotted locations on I-8 near the Project site. Regarding analyzed receptor locations, proposed tracker rotational limits, and the presence of slatted fencing and landscaping would result in any potential glare being angled above

these locations. To clarify, Power Engineers determined that local area motorists and residents would receive no glare during Proposed Project operations. As such, the daytime views of these receptors, and outdoor activities on adjacent properties, would not be substantially affected by Proposed-Project-generated glare. Impacts would be **less than significant**.

After review of the GlareGauge analysis, Power Engineers determined that potential glare visible from the proposed solar operations would be limited to the Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months, lasting for less than 1 hour per day. Potential glare reported has a hazard level of "green" (low potential for temporary after-image), which is acceptable by the FAA. During the morning hours, the modified wake angle of arrays south of Old Highway 80 would redirect any potential glare up and out of the view of pilots landing on the Runway 7 approach. Given that the exposure of pilots to Proposed-Project-generated glare would be limited throughout the year and would be within the range deemed acceptable by the FAA, the Proposed Project, and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, glare impacts associated with solar panels would be **less than significant**.

As previously stated, in addition to solar panels, the Proposed Project includes other components/facilities that may produce daytime glare due to use of metallic materials. Regarding to the on-site substation, the facility would not be visible from pedestrian walkways or areas on adjacent properties used for outdoor activities. The substation would be visible from I-8 (see Key View 1; Figure 2.1-9) but would be distant from motorist. Due to distance, the on-site substation would tend to blend into background terrain in the views of I-8 motorists. Brief views to the on-site substation would be available from Carrizo Gorge Road; however, potential glare received by motorists would be minor, located in the periphery of views, and would not be expected to create nuisance or distraction that would result in unsafe driving conditions. Components including inverters, battery energy storage system containers, and overhead slack span transmission line would be visible from public roads, including I-8 and Carrizo Gorge Road. In absence of non-reflective or reduce reflectivity design measures, these components may create daytime glare that could be visible from roadways. As such, impacts are considered **potentially significant (Impact AE-10)**.

> *Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?*

For the construction phase, please refer to the construction lighting analysis above, under the "Construction" heading.

Similar to construction lighting, operational lighting would be shielded and directed downward to minimize potential effects to nighttime views and dark skies in the surrounding area. These efforts

would also minimize the potential for light trespass onto adjacent off-site properties. Lighting would be used on an as-needed basis and would typically be turned off unless nighttime access to the Project site is required. In addition, since maintenance activities are not anticipated to be completed during the evening hours, lights within the interior of the substation site would normally be turned off. If nighttime maintenance is required, maintenance crews would carry lights when performing maintenance work after 5:00 p.m. Further, all lighting sources installed at the solar facility would have bulbs that do not exceed 100 watts and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 59.101 et seq., regarding lamp type and shielding requirements. Lastly, the Proposed Project would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards, Sections 6322 and 6324, that guide performance standards for control of excessive or unnecessary outdoor light emissions. Due to the limited installation and use of nighttime lighting on site during operations, through compliance with County Light Pollution Code requirements and zoning ordinance standards regarding lighting, and based on the glare analysis presented above, lighting installed at the JVR Energy Park would conform to applicable federal, state, and local statutes and regulations related to dark skies and glare. Impacts would be **less than significant**.

Switchyard

> *Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?*

At the switchyard, lighting would be installed primarily for security and safety. Lighting would be placed near major electrical equipment in the switchyard and would be mounted near the entry gate to safely illuminate the switchyard entry. Yard lights would normally be turned off and would only be used during nighttime for security and safety reasons. An entry light to the switchyard facility would be installed and would be left on during nighttime hours to allow the entry to be illuminated if nighttime emergency repair or maintenance are needed. All lighting at the switchyard would be shielded and directed downward to minimize the uplighting and light trespass onto surrounding properties. Further, except for the entry light, lights would typically be off when not in use. Lastly, all lighting sources installed at the solar facility would have bulbs that do not exceed 100 watts, would comply with the County of San Diego Light Pollution Code, and would be designed in accordance with the San Diego County Zoning Ordinance Performance Standards Sections 6322 and 6324. Through compliance with County Light Pollution Code requirements and zoning ordinance standards regarding lighting, lighting installed at the switchyard would conform to applicable federal, state, and local statutes and regulations related to dark skies and glare. Therefore, impacts would be **less than significant**.

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

No Class I or Class III outdoor lighting would be installed at the switchyard. As a switchyard facility, outdoor lighting for outdoor sales or eating area, vehicle fueling area, assembly or repair area, billboard or other sign, recreational facility, or other similar application (i.e., Class I lighting) would not be required. Further, decorative outdoor lighting (i.e., Class III lighting) would not be installed on the switchyard site. Therefore, **no impacts** would occur.

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Operational lighting at the switchyard would be shielded and directed downward to minimize potential effects concerning light trespass onto adjacent properties. The proposed switchyard is located approximately 500 feet from the Proposed Project boundary and adjacent to undeveloped property. Through the inclusion of shielded and downward-casting lighting, and due to the distance between the facility and occupied properties outside of the Project site, impacts associated with light trespass generated by entry gate lighting would be **less than significant**.

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Highly reflective building materials, such as glass windows and metallic siding, would not be installed at the switchyard. However, the switchyard would include metallic equipment and components constructed of steel and other similar materials. The switchyard would have limited visibility from pedestrian walkways and immediately adjacent properties that are used for outdoor activities. The switchyard would be visible from I-8 and Carrizo Gorge Road. However, metallic components and equipment installed at substations and switchyards, including the existing East County Substation that is visible from I-8, are not particularly reflective and would not be expected to create nuisance or distraction glare that would result in unsafe driving conditions on either I-8 or Carrizo Gorge Road. Regarding the gen-tie line, the materials under consideration for support poles are already used by electrical infrastructure in the existing landscape, and rust-colored steel or galvanized tubular steel are not typically considered to be highly reflective. Therefore, glare impacts would be **less than significant**.

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Please refer to the lighting- and glare-related discussions for the switchyard, above. Lighting controls, including the use of shielded fixtures and downward casting of lighting, would be implemented to minimize opportunities for impacts to dark skies and impacts concerning the creation of new glare conditions. Based on the analysis presented above, impacts related to dark skies and glare would be **less than significant**.

2.1.4 Cumulative Impact Analysis

Methodology

For most projects, the cumulative study boundary for visual resources encompasses the project viewshed. The character elements of cumulative development occurring within a viewshed contribute to the overall visual character of the viewshed and affect, either negatively or positively, the quality of existing views of the landscape. However, when scenic roads are included in a viewshed, an expanded cumulative study area is warranted. A project and other development occurring or planned within the viewshed of a designated scenic road could combine to permanently alter the visual character of the landscape and diminish the quality of existing views of valued scenic resources. For purposes of this analysis, the "List of Projects" method was used for the cumulative impacts discussion.

Cumulative Projects

Cumulative projects considered in this analysis are those in the study area that would produce similar visual effects as the Proposed Project. Therefore, for purposes of this analysis, electric substation, solar energy, wind energy, transmission line, and energy storage projects within the cumulative study area were considered, and they include highly visible and distinct elements (e.g., wind turbines) or would create similar form, line, color, and texture contrasts as the Proposed Project. Table 1-4, Cumulative Projects, describes the cumulative projects considered in this analysis.

The following projects were considered in the cumulative impact analysis provided below.

Tule Wind Project (Operational; Phase II Approved)

Phase I of the Tule Wind project consists of 57 wind turbines, an underground electrical collection system linking the wind turbines to the collector substation, a 5-acre collector substation site and adjacent 5-acre operations and maintenance facility site, and meteorological towers. The Tule Wind project is located in the McCain Valley area of Boulevard, approximately 8 miles northwest of the Project site. The Tule Wind project delivers power through a substation via a 138 kV gen-tie line running south to an interconnection with the existing SDG&E rebuilt Boulevard substation.

In October 2016, Avangrid Renewables received approval from the California State Lands Commission to construct Phase II of the Tule Wind project. Phase II would consist of an additional 24 wind turbines constructed in the area that would generate approximate 69 MW. The wind turbines of Phase II would be located atop a ridgeline west of Phase I on both state lands and tribal lands of the Ewiiaapaayp Band of Kumeyaay Indians. Seven wind turbines would be sited on lands managed by the California State Lands Commission and 17 turbines would be constructed on tribal lands. Construction of Phase II is likely to take 6 months to 1 year, and would employ between 100 and 200 workers per day during the peak construction period.

Kumeyaay Wind Project (Operational)

The existing Kumeyaay Wind project consists of a 25-wind-turbine energy-generation facility on tribal lands of the Campo Band of Diegueño Mission Indians Reservation. Wind turbines are installed atop the Tecate Divide, approximately 9.85 miles northwest of the Project site.

Jacumba Solar Energy Project (Operational)

The existing 20 MW, 108-acre solar facility is located 2 miles east of the Project site. The Jacumba Solar Energy project consists of approximately 81,108 PV modules fitted on 2,253 fixed-tilt rack panels.

East County Substation Project (Operational)

The East County Substation consists of the construction of a 500/230/138 kV substation on approximately 86 acres, a short loop-in of the existing Southwest Powerlink to the East County Substation, a new overhead 138 kV transmission line that would connect the substation to the Boulevard Substation, and rebuild of the Boulevard Substation to provide 138 kV and 69 kV facilities on a 3.2-acre site. The substation, segments of the 138 kV transmission line (part of the transmission line would be installed within Old Highway 80), and the rebuilt Boulevard Substation are visible from I-8. The East County Substation is located approximately 2 miles east of the Project site, and a segment of the proposed 138 kV transmission line passes through the central portion of the Project site.

Energia Sierra Juarez U.S. Transmission Line (approved and constructed as of January 2015)

As approved by the County Board of Supervisors in August 2012, this project would construct approximately 1-mile-long, dual-circuit 230 kV power lines from the U.S./Mexico border north to the East County Substation. The power lines would deliver power generated at the Energia Sierra Juarez wind project located in the town of La Rumorosa in Mexico to the East County Substation. The East County Substation is located approximately 2 miles east of the Project site.

Rugged Solar Project (proposed modification to approve Major Use Permit in progress)

As proposed, the Rugged Solar Project would include construction and operation of a 74 MW solar energy system in the McCain Valley. In addition to solar panels and inverter and transformer units, the Rugged Solar Project would include an on-site collector substation, a 138 kV overhead and underground transmission line, and an approximately 20 MW battery energy storage system. The Rugged Solar Project is located approximately 4.5 miles northwest of the Project site.

Torrey Wind Project (currently in planning stages)

The proposed Torrey Wind project would consist of an approximately 126 MW wind energy facility. The project would include approximately 30 new wind turbines (rated up to 4.2 MW each), an underground electrical collection system, a high-voltage substation, a 500 kV switchyard, an operations and maintenance facility and associated parking areas, a temporary staging area, a batch plant, meteorological towers, various access roads, and off-site improvements. The Torrey Wind project site is located approximately 7.6 miles northwest of the Project site.

Campo Wind Project with Boulder Brush Facilities (currently in planning stages)

The Campo Wind Project proposes a 250 MW wind energy generation facility consisting of 60 wind turbines on approximately 2,200 acres within the Campo Band of Diegueño Mission Indians Reservation (Reservation). In addition to wind turbines, the Campo Wind Project would include a collector substation; operations and maintenance facility; on-Reservation gen-tie line; access roads; and temporary areas, including a laydown yard and concrete batch plant on the Reservation. The Boulder Brush Facilities would include construction of a gen-tie line, high-voltage substation, and switchyard on approximately 200 acres of private lands under the County's jurisdiction. The Campo Wind Project and Boulder Brush Facilities are located approximately 7.6 miles northwest of the Project site.

Boulevard Solar (currently in planning stages)

Modification to a Major Use Permit is currently proposed for a 60 MW solar energy system on an approximately 420-acre site located north of I-8 and east and west of McCain Valley Road on private land under the County's jurisdiction. The Boulevard Solar project site is located approximately 9 miles from the Project site.

Boulevard Energy Storage (currently in planning stages)

The Boulevard Energy Storage project would include a 100 MW energy storage facility (2-acre development footprint). The Boulevard Energy Storage Project site is located approximately 4.75 miles northwest of the Project site.

Cameron Solar (currently in planning stages)

The Cameron Solar project would include a 1.7 MW solar energy storage system consisting of approximately 19 acres on a 164.7-acre parcel. The Cameron Solar Project site is located approximately 18 miles west of the Project site.

Cumulative Impact Analysis

Visual Character and Quality and Valued Visual Character

The Proposed Project would not be consistent with the undeveloped, desert landscape and small town character of Jacumba. Cumulative projects in the area include existing and proposed electric substations, solar energy facilities, wind energy facilities, and transmission projects located within the Proposed Project viewshed and the greater surrounding area. This composite viewshed was determined to be an appropriate cumulative boundary based on the type and geographic extent of the Proposed Project's visual impacts, further described below. In addition, the composite viewshed would encompass projects resulting in similar visually prominent impacts as the Proposed Project, which would have the potential to change the character of the landscape as viewed from the I-8 corridor and other local roads traversing the Jacumba area, including Old Highway 80 and Carrizo Gorge Road.

In addition to existing utility development in the area, including the Tule Wind project, Kumeyaay Wind project, Jacumba Solar, East County Substation, and Energia Sierra Juarez transmission line, implementation of the Proposed Project and other foreseeable projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. Contrasts in structure and facility scale, size, massing, color, and materials associated with cumulative projects and less-intensely developed (and undeveloped) lands would be visible to a relatively large volume of viewers within the cumulative study area, including motorists on federal and state highways, local roads (including County-designated scenic corridors), users of County- and state-designated trails, users of recreational lands, and rural and tribal communities. As further described under the "Focal or Panoramic Vista" discussion below, the effects of identified cumulative projects from a given vantage point would ultimately be dependent on the vertical scale of components, proximity of observers to projects, and presence (or lack) of intervening elements (terrain, structures, vegetation) to screen or obstruct specific components from view.

However, the sheer number of completed and proposed wind and solar energy generation developments, electrical substations, and electrical transmission lines in the Boulevard and Jacumba areas and, specifically, within the I-8 viewshed, would entail viewshed-scale visual change that would be impossible to overlook. Further, the introduction of numerous prominent and

bold structures and facilities would moderately to strongly contrast with the valued visual character of the local communities in the cumulative study area.

Existing development in the cumulative study area primarily has a rural residential and ranching/grazing character. However, the area is also marked by interstate and local road development, regional electrical infrastructure and substations, and utility-scale solar and wind energy development. Regional electrical infrastructure and solar and wind development, including the Tule Wind Project, Kumeyaay Wind Projects, and Jacumba Solar Project, occur along the I-8 corridor. Power lines, including the East County Substation 138 kV transmission line and the 500 kV Southwest Powerlink and Sunrise Powerlink lines, traverse the Jacumba and McCain Valley landscapes. These existing transmission lines also crosses the Project site. In addition to the Proposed Project, elements of cumulative projects in the planning stage, including Rugged Solar, Torrey Wind, and Campo Wind, would be visible from the I-8 corridor. As with the Proposed Project, solar and wind projects with visually prominent components and/or large footprints of development would typically result in the removal or substantial adverse change of one of more features that contribute to valued visual character. For example, the Campo Wind and Torrey Wind Projects would result in diminished openness in the landscape and the removal of oak vegetation—elements that are identified in the Boulevard Community Plan as contributing to the valued visual character of the community. Similarly, the Proposed Project would result in the removal of vegetation throughout the site, and would degrade the open, unencumbered characteristic of the Project site.

Except for developed sites supporting wind, electrical transmission, solar energy, or substation facilities, landscapes throughout the cumulative study area generally have moderate to high scenic integrity. In these areas, rural residential, commercial, and public service development and other modifications display relatively unobtrusive characteristics and design features, and a consistency in scale, form, and theme. As a result, these traditional types of existing development are well-integrated into the landscape and tend not to command the attention of receptors in the area.

Implementation of projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. For example, development of 30 wind turbines on approximately 2,226 acres proposed by the Torrey Wind project and 2,400 acres of wind development proposed under Campo Wind, in conjunction with the Proposed Project and others in the area, would dominate views in the Project region and result in prominent visual change within the largely undeveloped landscape. Therefore, the Proposed Project would result in a **cumulatively considerable impact (Impact AE-CU-1)** on the existing visual character and valued visual character or image of neighborhoods, communities, and localized areas.

Focal or Panoramic Vistas

As discussed in Section 2.1.1.1, views to the Project site are available from I-8; Old Highway 80; Carrizo Gorge Road; nearby recreation areas, including Jacumba Community Park and Anza-Borrego Desert SP; and federal recreational areas, including Round Mountain, Airport Mesa, and Table Mountain RMZs and the Jacumba Wilderness. Although proximity to the Proposed Project from these locations and the clarity of Proposed Project components would vary, each of the identified recreation areas are located in the Proposed Project viewshed (see Figure 2.1-7). The existing Jacumba Solar, Energia Sierra Juarez transmission line, and East County Substation are located east of the Project site and visible from similar public roads and scenic corridors, and recreational areas; therefore, cumulative projects outside of the Proposed Project viewshed would also be experienced by similar receptors. For example, the Proposed Project would be visible from I-8, and cumulative wind and solar projects, including the Kumeyaay, Campo, Torrey Wind, and Rugged Solar projects would also be visible from I-8 and would cumulatively affect the quality of the interstate viewshed. However, because the Proposed Project would not result in a significant impact to focal or panoramic vistas from I-8, the Proposed Project would not combine with existing and proposed wind and solar development in the study area to create a cumulative impact on interstate vistas.

Similarly, from Airport Mesa and the mesa south of Table Mountain, existing wind turbines of the Kumeyaay Wind Project atop the Tecate Divide and Tule Wind Project are faint but visible, and proposed wind turbines of the Campo and Torrey Wind Projects would likely be detectable in future views. However, due to distance and the thin, faint lines displayed by tall wind turbines, a cumulative impact to the existing panoramic views from Airport Mesa and the mesa south of Table Mountain would not occur. Views would not be obstructed by components of the Proposed Project or by distant yet visible elements of cumulative projects. However, as viewed from the mesa south of Table Mountain, projects, including the East County Substation, Jacumba Solar, and the Proposed Project, would alter the existing character and quality of the visible landscape. Although components of these projects would not result in substantial view blockage, the large footprints of the development and contrasting forms, lines, and colors are particularly noticeable in the local desert environment and tend to interrupt the panoramic view from the mesa south of Table Mountain. Therefore, combined with the existing East County Substation and Jacumba Solar projects, the Proposed Project would result in a cumulatively considerable impact (**Impact AE-CU-2**) on the panoramic vista available from elevated vantage points in the Airport Mesa and Table Mountain RMZs.

Community and Subregional Plan Conflicts

As identified in Section 3.1.4, Land Use and Planning, of this EIR, the Proposed Project would be consistent with the Mountain Empire Subregional Plan. Similarly, related projects considered in the cumulative scenario and located on County lands would be required to demonstrate compliance

with the applicable policies and regulations of the Mountain Empire Subregional Plan and/or additional plans, including the Boulevard Community Plan, Campo/Lake Morena Community Plan, and Potrero Community Plan. Public lands projects (i.e., Tule Wind Project) and projects proposed on tribal lands (i.e., Campo Wind Project) would be required to demonstrate compliance with the relevant plans and policies of lead agencies. For all projects considered in the cumulative analysis, project-specific analysis would be required to ensure that projects considered in the cumulative scenario are compatible with applicable plans and policies. Because the Proposed Project would comply with the goals, policies, and requirements of the Mountain Empire Subregional Plan, and because similar development has occurred and is proposed in the subregional plan area, the Proposed Project **would not result in a cumulatively considerable impact** associated with plan conflicts.

Light and Glare

Similar to the Proposed Project, identified cumulative projects would be evaluated on a project-by-project basis to determine the severity of lighting and glare impacts. Outdoor lighting at the Project site would only contain motion-sensored lights that would be installed at all site access driveway entrances and would only be used if motion is detected. No other lighting would be included in the Proposed Project. The motion-sensored lights would be shielded and directed downward, per the requirements of the County's Light Pollution Code and the San Diego County Zoning Ordinance. Furthermore, all outdoor lighting installed at the Proposed Project would conform to the B lamp type and shielding requirements of the Light Pollution Code. Conformance with the San Diego Light Pollution Code Zone B lamp type and shielding requirements would minimize the potential for light trespass onto adjacent properties and excess illumination of the nighttime sky. All other proposed cumulative solar facilities are anticipated to have similar operational lighting scenarios as the Proposed Project. In addition, all of the proposed cumulative projects located on private lands under County land use jurisdiction would be required to conform to the applicable lighting and shielding requirements of the San Diego Light Pollution Code. Through conformance with existing County regulations, the Proposed Project would not contribute to a potential cumulative lighting effect associated with facility lighting. Since the Proposed Project would not install FAA obstruction lighting, which is required of vertical elements taller than 200 feet above ground plane, operation of the Proposed Project would not generate blinking lighting within the Proposed Project boundary. As such, the Proposed Project would not combine with the existing and proposed wind energy projects in the cumulative scenario to create a cumulative nighttime lighting impact.

As previously discussed, the Project site is visible from I-8, Carrizo Gorge Road, and Old Highway 80, and the Project site abuts residential properties in Jacumba and the Jacumba Airport. Adjacent properties, including Jacumba Community Park, Anza-Borrego Desert SP, and Round Mountain, are also used (albeit infrequently) for outdoor recreation. The Glare Study prepared for the

Proposed Project (see Appendix B) determined that proposed tracker rotational limits and the presence of slatted fencing and landscaping along the property frontage of Old Highway 80 and the eastern Proposed Project boundary would result in any potential glare being angled above these locations and away from potential viewers. Although local area motorists on Old Highway 80, Carrizo Gorge Road, and I-8, and residents of Jacumba, would receive no glare during Proposed Project operations, the conclusions of the Glare Study suggest that Proposed Project glare may be angled such that glare is received at the summit or slopes of Round Mountain and at adjacent State Park lands west of the Project site. However, as detailed in Section 2.1.3, Round Mountain and adjacent State Park lands west of the Project site receive limited use from local hiking groups. As such, potential glare received at Round Mountain and adjacent State Park lands **would not result in a cumulatively considerable impact**.

As discussed in Section 2.1.3.5, potential glare visible from the proposed solar operations would be limited to the Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than 1 hour per day. The glare study indicated that no glare from proposed solar panels would be received by motorists on roadways, walkways, or other areas. Given that the exposure of pilots to Proposed-Project-generated glare would be limited throughout the year and would be within the range deemed acceptable by the FAA, the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. It is anticipated that all related projects would also be required to analyze and mitigate potential impacts to glare. As such, glare from Proposed Project components would not combine with the anticipated glare effects associated with other solar projects to create a cumulative glare impact to daytime views in the area. Therefore, the Proposed Project **would not result in a cumulatively considerable impact** associated with light and glare.

2.1.5 Significance of Impacts Prior to Mitigation

Threshold 1

> *Would the project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines?*

The proposed theme and style of Proposed Project development (i.e., solar energy development) would not be consistent with the undeveloped, desert landscape and small-town character of Jacumba. The height of the proposed panels (approximately 12 feet high) would be consistent with the height of typical single-story residential development in the Jacumba area. Components within

the collector substation, including a 65-foot-high, 138 kV dead-end structure (steel A or H-frame design), and switchyard, including five 70- to 115-foot-tall loop-in support poles, would be consistent with the scale of the existing electrical transmission development in the local landscape. However, the wide distribution of repeating rows of solar panels on the disturbed approximately 643-acre site would create noticeable horizontal scale and massing contrasts with adjacent areas of residential development. In addition, the Proposed Project would install thousands of uniformly dark solar panels (and potentially light-colored inverters, battery energy storage system containers, and reflective transmission line conductor) to an area that consists mostly of earth tones, modest and lightly colored residential structures, and undeveloped lands. Thus, the color of proposed solar panels would not be consistent with the predominant colors displayed by features in the existing landscape. Solar panel contrasts would be further heightened by lightly colored inverters and battery energy storage system containers, and reflective transmission line conductor. Therefore, the characteristics of the Proposed Project would conflict with the established character of the Jacumba community, and would result in a **potentially significant** impact **(Impact AE-1).**

Switchyard

Similar to the JVR Energy Park Project, the switchyard would not represent the traditional development theme and style of the Jacumba area. Although views of the switchyard and gen-tie line from I-8 and Carrizo Gorge Road would be brief and visual contrasts would be muted by distance, both the nature of the development and the scale and massing of the approximately 140,000-square-foot facility would create moderately strong contrasts in the landscape. Although there are existing transmission lines in the vicinity of the proposed switchyard, like these uses, the proposed switchyard would not replicate the predominant theme and style of the Jacumba area. The character of the proposed switchyard would detract from the established character of the larger Jacumba area and would conflict with the established theme and style of the area that is predominantly associated with an undeveloped desert landscape, including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation. The impact of the switchyard would be **potentially significant (Impact AE-1)**.

Threshold 2

> *Would the project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings?*

Implementation of the Proposed Project and the transformation of the Project site to a solar energy facility would result in the removal of vegetation throughout the site. The introduction of visually prominent Proposed Project components, including solar panels, would substantially change the

quality of existing views across the site. Further, the proposed solar facility would conflict with the small-town character of Jacumba and open, unencumbered characteristics of the Project site. The Proposed Project's anticipated visual change and effects to existing visual character would result in a **potentially significant impact (Impact AE-2)**.

Switchyard

The proposed switchyard site encompasses undeveloped yet previously disturbed lands located approximately 0.60 miles south of I-8 and 0.25 miles west of Carrizo Gorge Road. On-site terrain gradually slops from east to west; however, the site is generally flat and is covered with tan-colored soils and scrubby shrubs. The site is also crossed by several dirt access roads. The site does not contain landmarks, trees, or prominent rock outcroppings. Although development of the switchyard and gen-tie line would alter the existing character of the previously developed site, it is situated near the base of a prominent hill and visually screened from most public vantage points in the area, including Old Highway 80 and the Jacumba residential area. In addition, the proposed switchyard would not shorten available views across the Jacumba Valley. Still, construction and operation of an approximately 140,000-square-foot switchyard surrounded by security fencing and housing a 138 kV insulated electrical bus, steel support structures and foundations, and a concentration of additional electrical equipment would adversely alter the valued open and unencumbered characteristics of the Jacumba area. Therefore, the switchyard impacts would be **potentially significant (Impact AE-2)**.

Threshold 3

> *Would the project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:*
>
> - *a public road,*
> - *a trail within an adopted County or State trail system,*
> - *a scenic vista or highway; or*
> - *a recreational area?*

The Proposed Project would create visible contrast that would result in reduced visual quality from viewing locations in the surrounding area. In addition to notably reduced visual quality associated with the introduction of solar panels (and other Proposed Project components) as viewed from I-8, implementation of the Proposed Project would substantially obstruct a focal vista, Old Highway 80. Further, the distribution of 300,000 PV modules across the Project site and alteration of the open, primarily undeveloped character of the Project site to a solar facility displaying repeating visual elements would create strong visual contrast. Following implementation of the Proposed Project, reduced intactness and unity (i.e., reduced visual quality) is anticipated in scenic views

available from local recreational areas (e.g., Jacumba Community Park). State Park lands located to the immediate west of the Project site, and federal recreational areas, including Round Mountain and the Airport Mesa and Table Mountain RMZs, experience relatively low annual recreation use by the public (BLM 2020), but the visual change associated with the Proposed Project as experienced form these locations would be pronounced. In addition, the proximity of these recreational lands would heighten perceived form, line, and color contrast, and the Proposed Project would occupy a substantial portion of the visible landscape in available views.

Thus, impacts to focal or panoramic vistas (i.e., Threshold 3) from I-8 (**Impact AE-3**), Old Highway 80 (**Impact AE-4**), Jacumba Community Park (**Impact AE-5**), Anza-Borrego Desert State Park lands (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), and Table Mountain and the nearby mesa to the south (**Impact AE-9**) would be **potentially significant** .

Switchyard

The switchyard and associated gen-tie to the existing transmission line would be visible from public roads, including County-designated scenic corridors, Jacumba Community Park, and State Recreational areas (i.e., Anza-Borrego Desert SP lands located to the west, northwest of the switchyard site). In addition, the switchyard site may be visible from federal recreational areas, including Round Mountain, elevated vantage points in the Airport Mesa and Table Mountain RMZs, and Jacumba Wilderness. Although remote, views to the switchyard site may also be available from elevated vantage points in the Carrizo Gorge Wilderness (managed by BLM and located approximately 4 miles northwest of the switchyard site). However, the approximately 3-acre switchyard and gen-tie would be relatively distant from the elevated vantage points provided at these locations, and the new facilities and features would not be visually prominent. The new switchyard facilities would also not result in view blockage from scenic corridors or local state or federal recreational areas. Lastly, because the switchyard and gen-tie would occupy a small area within the visible landscape, the switchyard and associated gen-tie line poles would not substantially obstruct, interrupt, or detract from an existing focal or panoramic vista available on a scenic corridor or at a nearby recreation area. Impacts would be **less than significant**.

Threshold 4

> *Would the project not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning?*

As shown in Table 2.1-1, the Proposed Project was determined to be consistent with the identified aesthetic and visual policies and goals of the Mountain Empire Subregional Plan. A specific community plan for Jacumba has not been prepared, and the Proposed Project boundary does not overlie a Historic District. Therefore, the Proposed Project would have **less than significant**

impacts related to compliance with applicable goals, policies, or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's zoning.

Switchyard

The switchyard would be consistent with the visual-resource-related policies of the Mountain Empire Subregional Plan (See Table 2.1-1). As such, impacts would be **less than significant**.

Threshold 5

Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Use of nighttime lighting during construction would be irregular (construction would primarily occur during daylight hours), and operational lighting sources would be limited to motion-detected lighting at site entrance gates and at the on-site substation. Construction lighting and permanent operational lighting used and installed at the Project site (i.e., at entrance gates and the on-site collector substation) is required to and would be fully compliant with the County's Light Pollution Code and the San Diego County Zoning Ordinance. Therefore, through compliance with existing County regulations and the installation of shielded and downward-directed outdoor lighting fixtures, construction and operational effects to day and nighttime views in the area would be less than significant. Further, the Proposed Project would be compliant with applicable sections of the County Light Pollution Code related to lamp type and shielding requirements, and operation of

Class I or Class II lighting. In addition, operational lighting is not anticipated to exceed the County's light trespass threshold of 0.2 foot-candles measured 5 feet onto adjacent property.

Although the Proposed Project does not propose to install traditional highly reflective building materials, the proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. In addition, Proposed Project components, including the on-site substation, inverters, batter energy storage system containers, and the overhead slack span transmission line, would be constructed of steel and/or other metallic materials and depending on daily atmospheric conditions, may be sources of daytime glare.

According to the Glare Study prepared for the Proposed Project (see Appendix B), the 55-degree array tracker rotational limits combined with the 5-degree wake/stow angle of proposed solar panels would cause any potential glare to be redirected above and away from analyzed residential and motorists locations throughout the day and year. Potential glare visible from the proposed solar operations would be limited to the Jacumba Airport Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than 1 hour per day. During the morning hours, the modified wake angle of arrays south of Old Highway 80 would redirect any potential glare up and out of the view of pilots landing on the Runway 7 approach. The exposure of pilot's Proposed-Project-generated glare on the westbound approach to the Jacumba Airport Runway 7 would be limited throughout the year and would be within the range deemed acceptable by the FAA (i.e., "green" hazard level). As such, the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, Proposed-Project-generated glare impacts would be **less than significant**.

Proposed Project components, including inverters, battery energy storage system containers, and overhead slack span transmission line, would be visible from public roads, including I-8 and Carrizo Gorge Road. These components may create daytime glare that could be visible from roadways. As such, impacts would be **potentially significant** (**Impact AE-10**).

Switchyard

Switchyard motion-detected lighting would be mounted near the entry gate to safely illuminate the switchyard entry. All lighting at the switchyard would be shielded and directed downward to minimize the uplighting and light trespass onto surrounding properties. Lighting installed at the switchyard would be shielded and would be of the minimum intensity necessary to ensure a safe working environment during emergency activities. Therefore, impacts related to lighting and glare would be **less than significant**.

2.1.6 Mitigation Measures

M-AE-1 Inverter enclosures shall be a non-reflective color. If the enclosures are not manufactured as non-reflective, the enclosures shall be painted a non-reflective color.

M-AE-2 Energy storage containers shall be a non-reflective color. If the containers are not manufactured as non-reflective, the containers shall be painted a non-reflective color.

M-AE-3 All new transmission line conductors shall be non-reflective in design to reduce conductor visibility and visual contrast.

M-AE-4: A minimum set-back of 75 feet from residential property lines to solar panels shall be provided along the western Project boundary. This setback shall be provided where the western Project boundary parallels residential property lines in Jacumba Hot Springs. Setbacks shall be provided pursuant to Section 4800, Setback Regulations, of the County's Zoning Ordinance and shown on Project Plot Plans.

M-AE-5 Landscaping shall be installed to provide visual screening of the solar facility. The proposed rows of landscaping will be approximately 15 feet wide and will include drought tolerant trees (approximately 18 feet tall 10 years after planting) with native and/or drought tolerant shrubs and ground covers incorporated in between the fence line and the existing road and utility easements. As identified on the Project Conceptual Landscape Plan, landscaping shall be installed and shall run parallel to segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of the solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facility adjacent to the community of Jacumba Hot Springs. The applicant shall prepare the Landscape Plans using the Landscape Documentation Package and pay all applicable review fees. Prior to approval of any plan, issuance of any permit, and prior to use of the premises in reliance of this permit, the Landscape Documentation Package shall be prepared and approved. Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the landscaping shall be installed. The applicant shall submit to the [PDS LA, PCC], a Landscape Certificate of Completion from the project California licensed Landscape Architect, Architect, or Civil Engineer, that all landscaping has been installed as shown on the approved Landscape Documentation Package. The applicant shall prepare the Landscape Certificate of Completion using the Landscape Certificate of Completion Checklist. Landscaping shall be planted and maintained accordingly to ensure continued screening of proposed solar panels by the Applicant and/or Project operator over the operational life of the Project.

M-AE-6: As identified on the Project Plot Plans, tan-colored slats shall be installed along specific segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of solar facility; east side of Carrizo Gorge Road; and along the southwestern portion of the solar facilities adjacent to the community of Jacumba Hot Springs. Slats shall be maintained accordingly over the operational life of the Project. Slats shall be replaced as needed to ensure a unified and orderly appearance and to provide continued screening of Project components.

2.1.7 Conclusion

Threshold 1 - Existing Visual Character and/or Quality

The characteristics of the Proposed Project would conflict with the established character of the Jacumba Hot Springs community (**Impact AE-1**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. . Since feasible mitigation measures have not been identified that would further reduce anticipated theme, style, size, scale, massing, and color contrasts resulting from the Proposed Project, **Impact AE-1** would remain **significant and unavoidable**.

Threshold 2 - Valued Visual Character of Community

The introduction of visually prominent Proposed Project components, including approximately 300,000 solar panels, would substantially change the quality of existing views across the site. Further, the proposed solar facility development would conflict with the small-town character of Jacumba Hot Springs and the open, unencumbered characteristics of the Project site (**Impact AE-2**). With implementation of mitigation measures **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since feasible measures have not been identified to that would further reduce anticipated visual change and effects to existing visual character, **Impact AE-2** would remain **significant and unavoidable**.

Threshold 3 - Panoramic or Focal Vistas

Due to the wide distribution of solar panels within the 643-acre solar facility, the Proposed Project would substantially reduce the quality of existing views toward the solar facility from I-8 (**Impact AE-3**), Old Highway 80 (**Impact AE-4**), Jacumba Community Park (**Impact AE-5**), Anza-Borrego Desert State Park (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), and Table Mountain and the nearby mesa to the south (**Impact AE-9**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), **M-AE-4**

(residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since feasible mitigation measures have not been identified that would further reduce impacts to panoramic or focal vistas, **Impacts AE-2 thru AE-9** would remain **significant and unavoidable**.

Threshold 4 – Applicable Plans and Policies

The Proposed Project would have **less than significant impacts** related to compliance with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's zoning.

Threshold 5 - Light and Glare

Lighting and Project-generated glare to the airport would be **less than significant**.

Project components may create daytime glare that could be visible from roadways (**Impact AE-10**). As such, impacts are considered potentially significant. However, with implementation of mitigation measures **M-AE-1** (nonreflective inverters), **M-AE-2** (nonreflective energy storage containers), and **M-AE-3** (nonreflective transmission line), potential glare associated with inverters, battery energy storage system containers, and the overhead slack span transmission line would be reduced to a **less than significant** level.

Cumulative Impacts

The Proposed Project would result in **cumulatively considerable impact** (**Impact AE-CU-1**) on the valued visual character or image of neighborhoods, communities, or localized areas. With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-1** would remain **significant and unavoidable**.

Combined with the existing East County Substation, and Jacumba Solar projects, the Proposed Project **would contribute to a cumulatively considerable impact (Impact AE CU-2)** to the panoramic vista available from elevated vantage points in the Airport Mesa and Table Mountain RMZs. With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line) , impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-2** would remain **significant and unavoidable**.

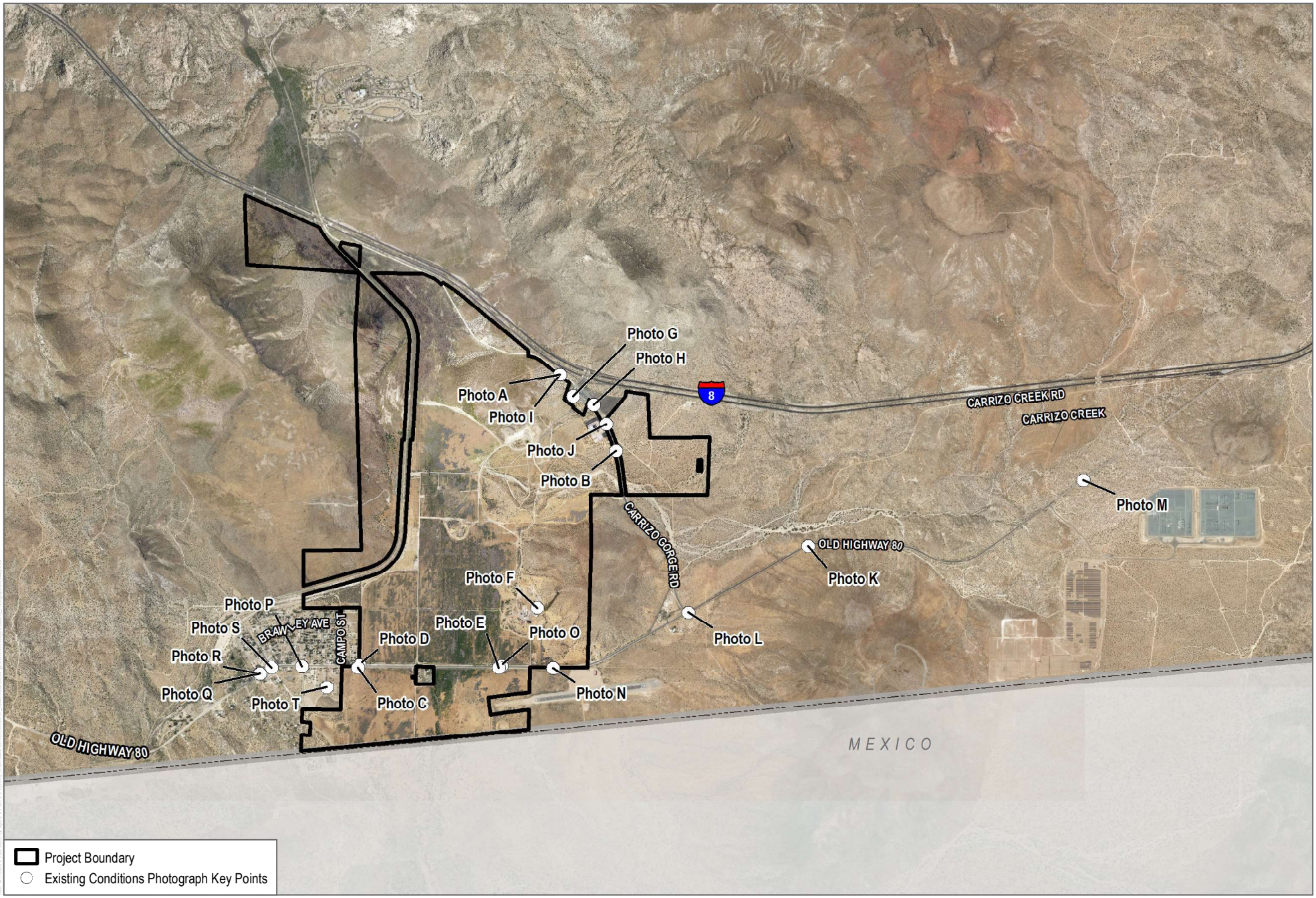
Cumulative impacts to applicable plans and policies, and light and glare would **not be cumulatively considerable**.

Table 2.1-1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
Land Use – General Goal (Policy and Recommendation 1) The landforms of the Subregion are an important environmental resource that should be respected in new development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.	**Consistent.** The solar facility (i.e., all components of the JVR Energy Park Project) would be consistent with this policy. The general topography within the development footprint consists of flat land and gently rolling hills. Grading will be necessary for the construction of access and service roads and the installation of solar arrays; trenching for the underground electrical DC and AC collection system, including the telecommunication lines; and construction of the Proposed Project substation. Major Grading Permits would be required and would be obtained once grading quantities are finalized. Grading is expected to be balanced on site, with approximately 75,000 cubic yards of cut redistributed across the site. Hillside grading would be minimized and designed to conform to the existing contours to the extent feasible.
Conservation – Environmental Resources (Policy and Recommendation 4) The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.	**Consistent.** The solar facility would be consistent with this policy and. would comply with the County's Light Pollution Code during construction and operations. More specifically, during construction, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code and would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. During operations, all lighting for the solar facility would be shielded, directed downward, and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 59.101 et seq. Lastly, the Proposed Project would comply with the San Diego County Zoning Ordinance, Performance Standards Sections 6320, 6322, and 6324, which guide performance standards for glare, and control excessive, or unnecessary outdoor light emissions.
Conservation – Environmental Resources (Policy and Recommendation 5) Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.	**Consistent.** As discussed in Section 2.3, Biological Resources, of the EIR, the solar facility would result in impacts to sensitive plant and wildlife species. However, through mitigation, potentially significant impacts would be reduced to less than significant. Although implementation of the Proposed Project was determined to result in significant and unmitigable impacts to focal or panoramic vistas from several locations including Interstate (I) 8 and Old Highway 80, the Proposed Project would not conflict with this policy. Neither the Project site nor the surrounding area has been designated by local, state or federal agencies or organizations as containing or being of "significant" scenic value. Still, the areas identified for solar development encompass flatter terrain and unique or particularly vivid terrain including ridgelines and slopes would not be disturbed by Proposed Project development. Within implementation of landscaping and slatted fencing, solar panels, and other equipment would be screened from public view of motorists on Old Highway 80, users of Jacumba Community Park, and residents in Jacumba Hot Springs to the extent practicable. From elevated vantage points, taller Proposed Project components associated with the collector substation, switchyard, and gen-tie line would be visible but would be added to a viewshed that currently includes tall steel lattice towers and tubular steel poles of the Southwest Powerlink and Sunrise Powerlink. Lastly, the Proposed Project is proposed in the Jacumba area landscape that has been previously altered by the existing transmission lines

Table 2.1-1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
	Since the Project site has not been designated or described by agencies as containing "significant" scenic value, and in consideration of the factors described above, the Proposed Project would not conflict with this policy.
Scenic Highways Goal. Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.	**Consistent.** Within the Mountain Empire Subregional Plan Area, I-8 from State Route 79 east to the Imperial County Line and Old Highway 80, from the Central Mountain Subregion to I-8 are designated scenic corridors. The solar facility would be visible from portions of I-8 and Old Highway 80. Despite their inclusion in the County's scenic highway system, there are no current local regulations governing development of lands along I-8 or Old Highway 80. For example, existing energy infrastructure including the East County Substation, Jacumba Solar Project, transmission lines, and the East County Substation 138-kilovolt (kV) line is currently visible from I-8 and Old Highway 80. Near the Project site, both I-8 and Old Highway 80 were identified as providing opportunities for long and/or broad scenic views. However, the duration of available views from I-8 to the Project site is brief (30 seconds or less) and the viewshed currently encompasses gas station development and electrical infrastructure in addition to natural terrain and native desert vegetation. The installation of landscaping and slatted fencing would partially screen solar panels and interior Proposed Project components from view of passing motorists, which would. substantially reduce the visibility of solar panels and ancillary facilities from Old Highway 80. Lastly, implementation and operation of the JVR Energy Park Project would not prevent the County from continuing to establish and designate scenic highways and would not inhibit the County from establishing regulations and/or development standards geared toward the protection and enhancement of scenic highways. Due to the inclusion of existing energy infrastructure in the I-8 and Old Highway 80 viewsheds, the brief duration of views to the Project site from I-8, screening of solar panels from view of Old Highway 80 motorists and because the Proposed Project does not inhibit the County from establishing regulations and/or development standards geared toward the protection and enhancement of scenic highways, the JVR Energy Park Project would not be inconsistent with the Scenic Highways Goal of the Mountain Empire Subregional Plan.



SOURCE: SANGIS 2017, 2019

DUDEK

0 1,500 3,000 Feet

FIGURE 2.1-1

Existing Conditions Photographs Key Map

JVR Energy Park Project EIR

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Photograph A
View south from Carrizo Gorge Road (dirt) across Project Site



Photograph B
View east from Carrizo Gorge Road to northeastern portion of Project Site



Photograph C
View southeast from Old Highway 80 across southern portion of Project Site



Photograph D
View northeast from Laguna Street to western boundary of Project Site

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SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-2

Existing Conditions: Project Site

JVR Energy Park Project EIR

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Photograph E
View north from Old Highway 80 towards ranch property and structures



Photograph F
View east from Project Site towards abandoned ranch structures and residences



Photograph G
View southwest from Jacumba Chevron towards fencing and transmission infrastructure on Project Site



Photograph H
View south from Carrizo Gorge Road to transmission line crossing near Project Site

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SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-3
Existing Conditions: Project Site
JVR Energy Park Project EIR

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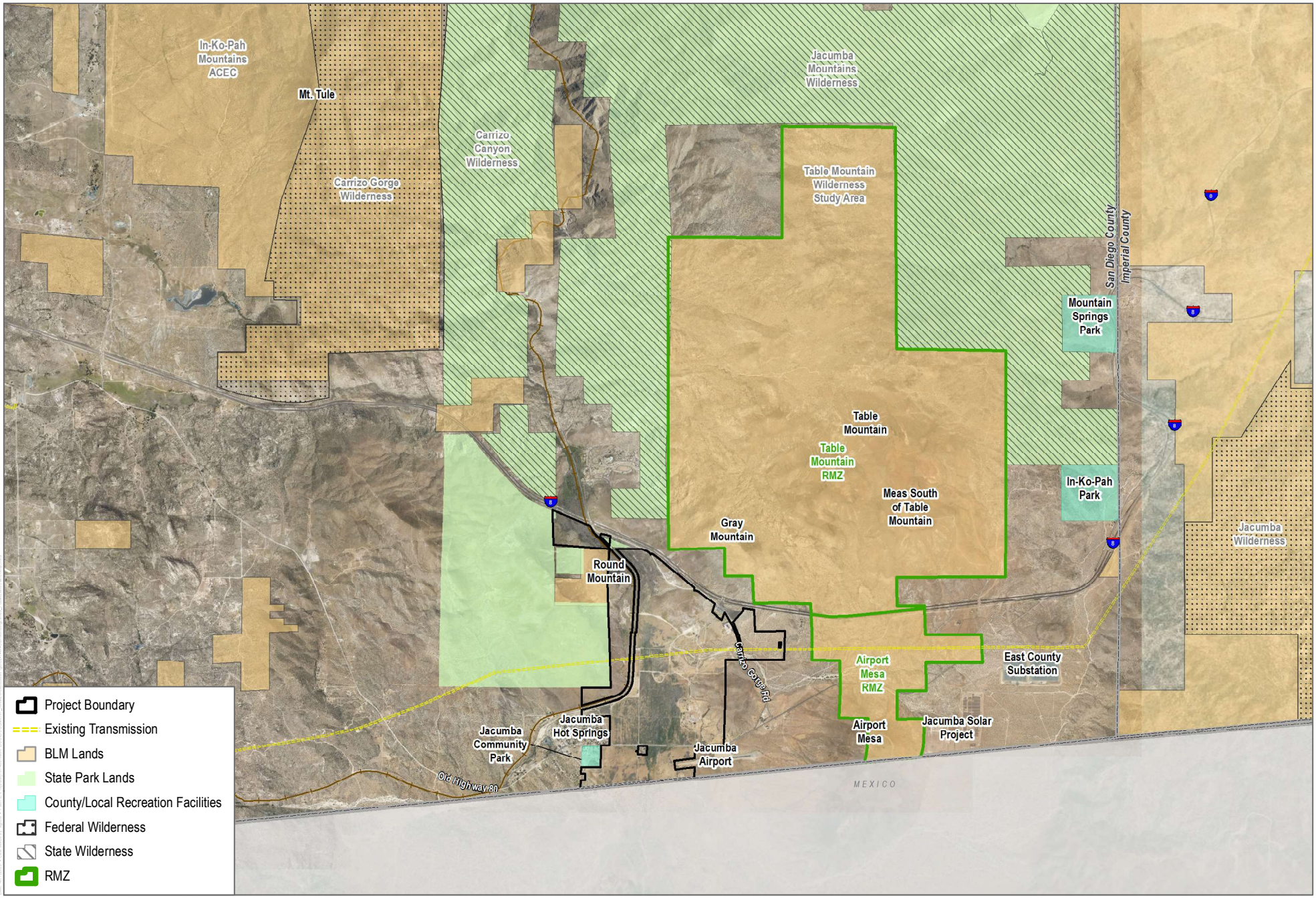

SOURCE: SANGIS 2017, 2020

DUDEK

0 1 2 Miles

FIGURE 2.1-4A

Surrounding Lands and Public Lands Ownership in Vicinity

JVR Energy Park Project EIR

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Photograph I
View east from Carrizo Gorge Road (dirt) towards gas station development



Photograph J
View north from Carrizo Gorge Road (paved) towards parking lot, I-8 and rocky mountain terrain



Photograph K
View northwest from Old Highway 80 towards Project Site (approx. 0.5 mile away)



Photograph L
View west from Old Highway 80 at Carrizo Gorge Road towards rural residential development

Date: 4/9/2018 - Last saved by: pfeffer - Path: Z:\Projects\109650\MAPDOCDOCUMENT_NAME\Visual Resources Study\Figure 1 Project Location.mxd

SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-4

Existing Conditions: Surrounding Area

JVR Energy Park Project EIR

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Photograph M
View southeast from Old Highway 80 towards Jacumba Airport, Airport Mesa, and international border fence



Photograph N
View southeast from Old Highway 80 towards East County Substation



Photograph O
View northwest from Old Highway 80 across Project Site and towards Round Mountain and mesa landform to the west



Photograph P
View east from Old Highway 80 towards residential development north of the highway

SOURCE: Dudek 2015, 2018, 2019

DUDEK

FIGURE 2.1-5
Existing Conditions: Surrounding Area
JVR Energy Park Project EIR

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Photograph Q
View south from Old Highway 80 at Jacumba Street towards residential development



Photograph R
View southeast from Old Highway 80 towards active commercial development



Photograph S
View northeast from Old Highway 80 towards vacant commercial structures



Photograph T
View of recreational facilities offered at Jacumba Community Park

SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-6
Existing Conditions: Surrounding Area
JVR Energy Park Project EIR

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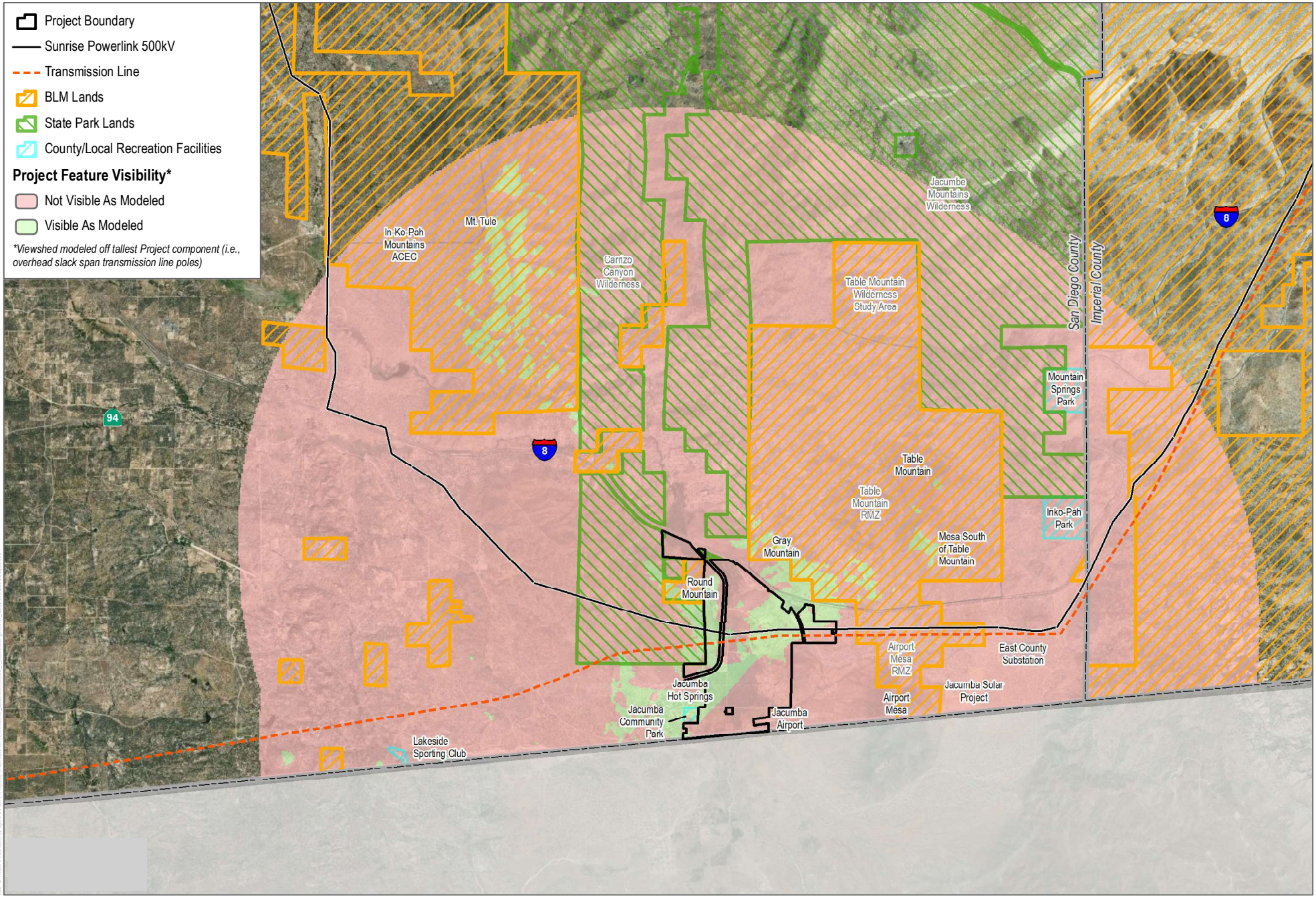

SOURCE: BLM 2019; SANGIS 2017, 2020

DUDEK

0 1 2 Miles

FIGURE 2.1-7

Topographic Viewshed of Proposed Project

JVR Energy Park Project EIR

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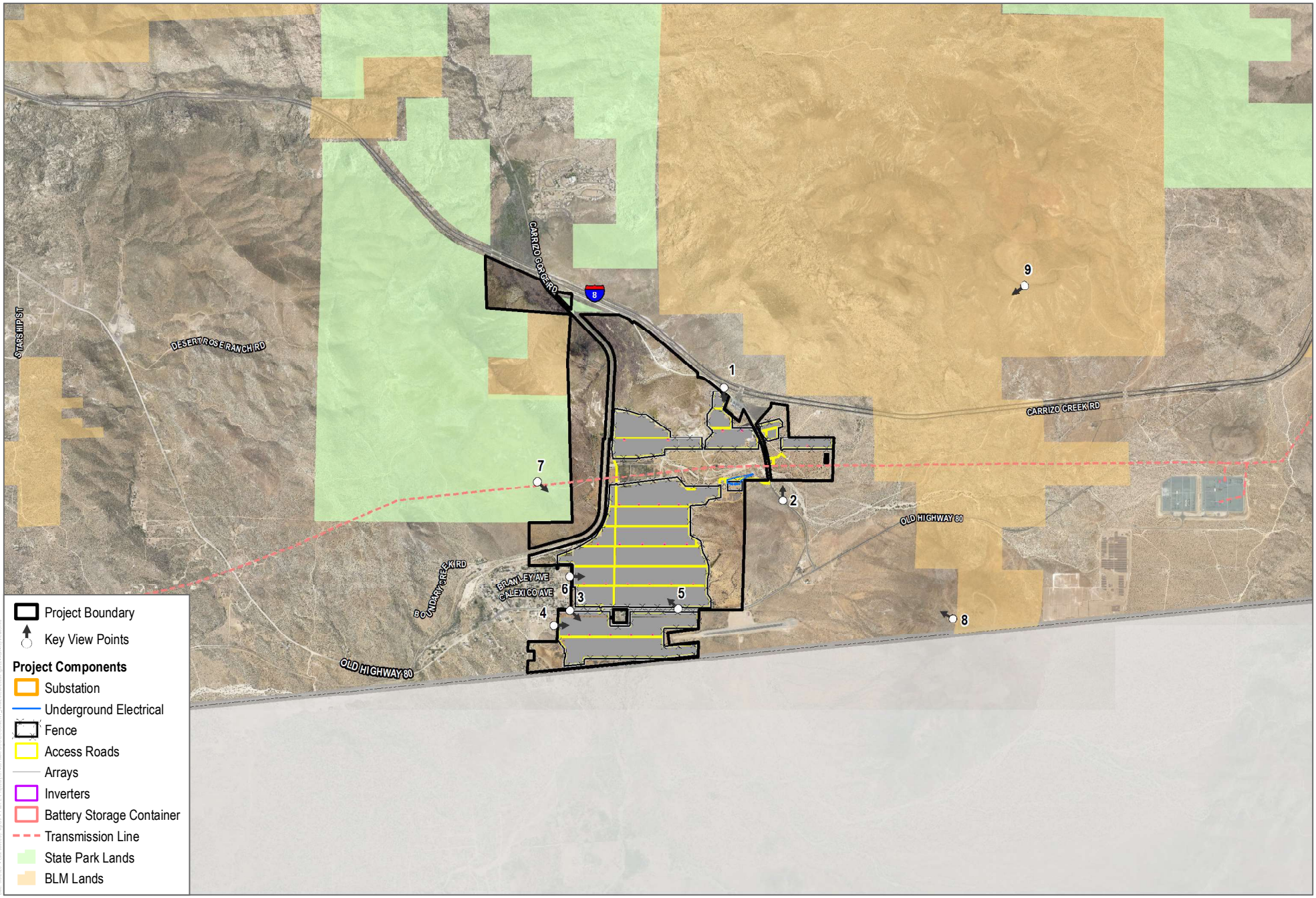

SOURCE: BLM 2019; SANGIS 2017, 2019

DUDEK

0 0.5 1 Miles

FIGURE 2.1-8A

Key Views

JVR Energy Park Project EIR

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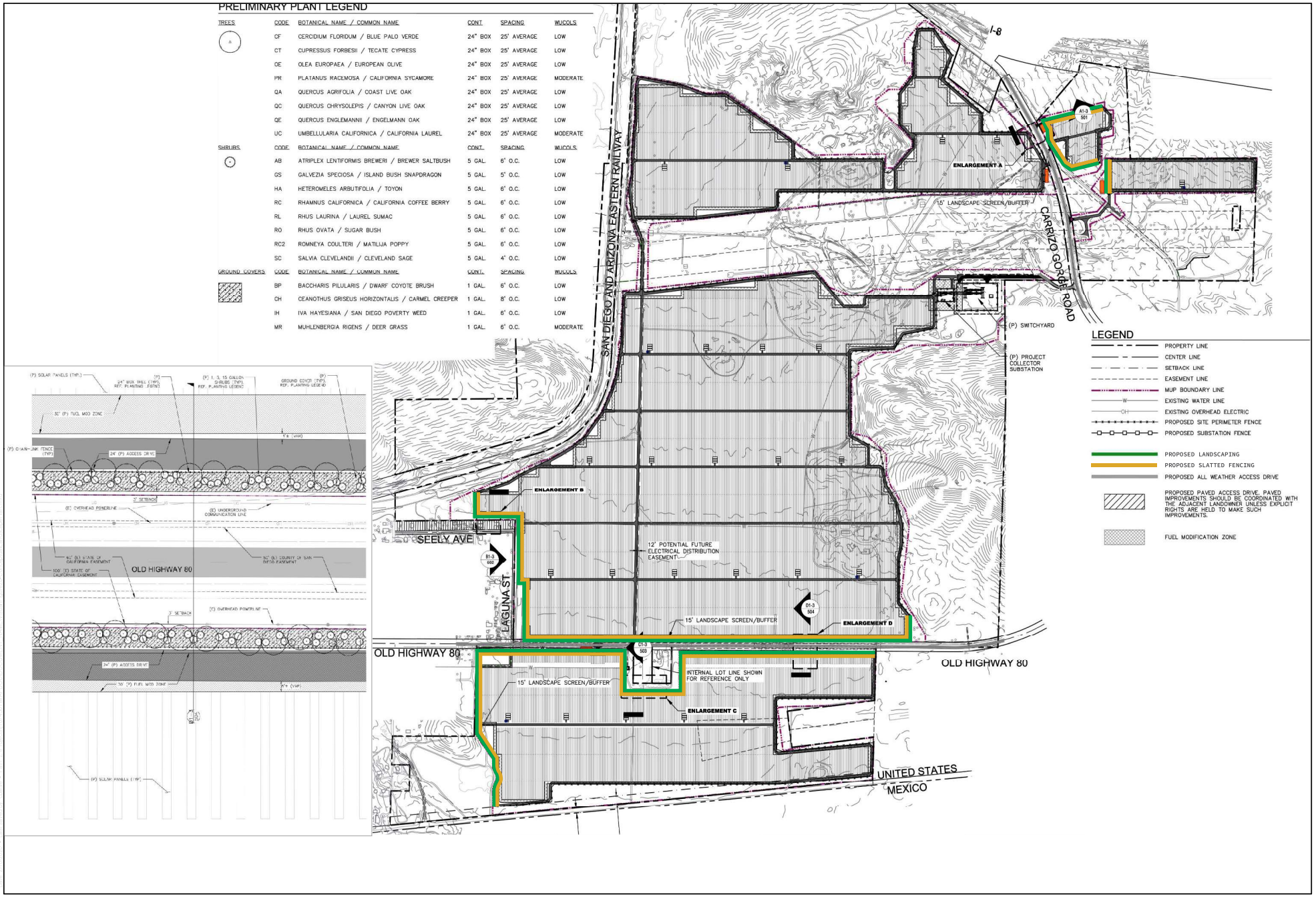

SOURCE: BayWa r.e. 2019

DUDEK

0 500 1,000 Feet

FIGURE 2.1-8B

Conceptual Landscape Plan

JVR Energy Park Project EIR

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Existing View South from Eastbound I-8 at Carrizo Gorge Road Offramp



Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-9

Key View 1 - Eastbound I-8

JVR Energy Park Project EIR

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Existing View North from Carrizo Gorge Road (approx. 0.5 mile North of Old Highway 80)



Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-10

Key View 2 - Northbound Carrizo Gorge Road

JVR Energy Park Project EIR

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Existing View Southeast from Old Highway 80 at Laguna Street



Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-11

Key View 3 - Eastbound Old Highway 80

JVR Energy Park Project EIR

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Existing View East from Jacumba Valley Park



Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-12

Key View 4 - Jacumba Community Park

JVR Energy Park Project EIR

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Existing View Northwest from Old Highway 80



Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-13

Key View 5 - Westbound Old Highway 80

JVR Energy Park Project EIR

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Existing View East from Undeveloped Brawley Avenue Property



Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-14

Key View 6 - Undeveloped Brawley Avenue Property

JVR Energy Park Project EIR

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Existing View Southeast from State Park Lands Adjacent to Project Site



Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-15

Key View 7 - State Park Lands

JVR Energy Park Project EIR

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Existing View West from Airport Mesa



Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-16

Key View 8 - Airport Mesa

JVR Energy Park Project EIR

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Existing View Southwest from mesa landform south of Table Mountain



Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-17

Key View 9 - Mesa South of Table Mountain

JVR Energy Park Project EIR

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2.2 Air Quality

This section discusses potential impacts to air quality resulting from the implementation of the proposed JVR Energy Park Project (Proposed Project). Information and analysis in this section have been compiled based on an understanding of the existing ambient air quality of the San Diego Air Basin (SDAB) and review of existing technical data, applicable laws, regulations, and guidelines, as well as the following technical reports prepared for the Proposed Project, consistent with the County of San Diego Air Quality Report Format and Content Requirements (County of San Diego 2007):

- Air Quality Technical Report, JVR Energy Park Project (Appendix C)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding greenhouse gas emissions form construction-related diesel equipment use, increased particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) as a result of soil disturbance during construction-related activities, and adverse effects to the community's health as a result of increased particulate matter and emissions. These concerns are addressed in this section of the Environmental Impact Report (EIR). A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.2.1 Existing Conditions

This section describes the existing setting in the Project area and identifies the resources that could be affected by the Proposed Project. The Project site is located within the SDAB and is subject to the San Diego Air Pollution Control District's (SDAPCD) guidelines and regulations. The SDAB is one of 15 air basins that geographically divide California. The SDAB lies in the southwest corner of California, covers approximately 4,260 square miles, and comprises the entire San Diego region.

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Meteorological and topographical conditions are also important because factors such as wind speed and direction, air temperature gradients, sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of criteria air pollutants. These factors are described in Section 2.2.1.1, Climate and Topography, and Section 2.2.1.2, Air Pollution Climatology. Criteria air pollutants and toxic air contaminants (TACs) are summarized in Section 2.2.1.4, Local Air Quality, and Section 2.2.1.5, Air Quality Monitoring Data, present the SDAB attainment designations of ambient air quality standards and ambient air quality monitored at nearby stations, respectively.

2.2.1.1 Climate and Topography

Regional Climate and Meteorological Conditions

The climate of the San Diego region, as in most of Southern California, is influenced by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The SDAB is characterized as a Mediterranean climate with dry, warm summers and mild, occasionally wet winters. Average temperature ranges (in degrees Fahrenheit [°F]) from the mid-40s to the high 90s, with an average of 201 days warmer than 70°F. The SDAB experiences 9 to 13 inches of rainfall annually, with most of the region's precipitation falling from November through March, with infrequent (approximately 10%) precipitation during the summer. El Niño and La Niña patterns have large effects on the annual rainfall received in San Diego, where San Diego receives less than normal rainfall during La Niña years.

The interaction of ocean, land, and the Pacific High maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). The winds tend to blow onshore in the day and offshore at night. Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

Topographical Conditions

Topography in the San Diego region varies greatly, from beaches in the west to mountains and desert in the east; much of the topography in between consists of mesa tops intersected by canyon areas. Along with local meteorology, topography influences the dispersal and movement of pollutants in the SDAB. Mountains to the east prohibit dispersal of pollutants in that direction and help trap pollutants in inversion layers.

The topography of the SDAB also drives pollutant levels, and the SDAB is classified as a "transport recipient," whereby pollutants are transported from the South Coast Air Basin to the north and, when the wind shifts direction, from Tijuana, Mexico, to the south.

Site-Specific Conditions

The local climate in southeastern San Diego County is characterized as semi-arid with consistently mild, warmer temperatures throughout the year. The average summertime high temperature in the region is approximately 81°F, with highs approaching 80°F in August on average, and record highs approaching 104°F in August. The average wintertime low temperature is approximately 43.7°F, although record lows have approached 32°F in January.

Average precipitation in the local area is approximately 14.8 inches per year, with the bulk of precipitation falling December through March (WRCC 2017).

The Project site is largely undeveloped. Structures associated with prior dairy and ranching operations are located within a portion of the site. A portion of Project site was also previously used for farming. Most of the development footprint is relatively level, with steeper slopes to the west which would not be disturbed. The on-site elevation ranges from approximately 2,745 feet above mean sea level in the lower, northern portion of the site to 3,365 feet above mean sea level at the top of Round Mountain in the northwestern portion of the Project site.

2.2.1.2 Air Pollution Climatology

The favorable climate of San Diego also works to create air pollution problems. Sinking or subsiding air from the Pacific High creates a temperature inversion known as a subsidence inversion, which acts as a "lid" to vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic emissions combined with strong sunshine leads to photochemical reactions that result in the creation of ozone (O_3) at this surface layer. In addition, light winds during the summer limit ventilation.

In the fall, the SDAB is often impacted by Santa Ana winds, which are the result of a high-pressure system over the Nevada and Utah regions that overtakes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. The Santa Ana winds are powerful and can blow the SDAB's pollutants out to sea. However, a weak Santa Ana can transport air pollution from the South Coast Air Basin and greatly increase O_3 concentrations in the San Diego area.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within San Diego County. The transport of air pollutants from Los Angeles to San Diego can also occur within the stable layer of the elevated subsidence inversion, where high levels of O_3 are transported.

2.2.1.3 Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern

include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. These pollutants are discussed below.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone (O_3). O_3 is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface (tropospheric ozone). The O_3 that the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects. Stratospheric O_3 occurs naturally in the upper atmosphere, where it beneficially reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere.

Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, older adults, and young children.

Nitrogen Dioxide (NO_2). NO_2 is present in all urban atmospheres, where the major mechanism for its formation is the oxidation of nitric oxide. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect terrestrial and aquatic ecosystems. Major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016a).

Carbon Monoxide (CO). CO is formed by the incomplete combustion of hydrocarbon, or fossil fuels. Therefore, CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of

[1] The descriptions of health effects herein are based on the U.S. Environmental Protection Agency's Six Common Air Pollutants (EPA 2017a) and California Air Resources Board's Glossary of Air Pollutant Terms (CARB 2017a).

vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November through February. The highest levels of CO typically occur during the colder months, when inversion conditions are more frequent.

When inhaled, CO replaces oxygen that is normally carried in red blood cells, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide (SO_2). SO_2 is primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary-source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can exacerbate lung tissue damage and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter, approximately 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances

such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides and ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces where they settle, and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and older adults may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

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

Volatile Organic Compounds (VOCs). Hydrocarbons, like VOCs, are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the main sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Non-Criteria Pollutants

Toxic Air Contaminants (TACs). A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. Examples of TACs include diesel particulate matter (DPM), certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources and laboratories; mobile sources, such as automobiles; and area sources, such as landfills.

Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter (DPM). DPM is part of a complex mixture that makes up diesel exhaust. More than 90% of DPM is less than 1 micrometer in diameter (approximately 1/70th the diameter of a human hair), and is a subset of $PM_{2.5}$ (CARB 2016a). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including more than 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016a). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) as a TAC in August 1998 (17 CCR 93000).

DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a Diesel Risk Reduction Plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016a). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and older adults who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and is quite subjective, since

people may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils.

Valley Fever is not considered highly endemic to San Diego. Per the San Diego County Health and Human Services Agency, the 10-year average (2008–2017) for Coccidioidomycosis cases in San Diego County is 4.5 cases per 100,000 people per year. The Project site is wholly contained within the 91934 zip code. For the 91934 zip code, there were no cases of Coccidioidomycosis between 2008 and 2017 (Nelson 2018). Statewide incidences in 2016 were 13.7 per 100,000 people (CDPH 2016).

Even if present at a site, earth-moving activities may not result in increased incidence of Valley Fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing Valley Fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

2.2.1.4 Local Air Quality

Pursuant to the federal Clean Air Act (discussed in Section 2.2.2, Regulatory Setting), EPA classifies air basins (or portions thereof) as in "attainment" or "nonattainment" for each criteria air pollutant based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the

standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS.

Table 2.2-1, San Diego Air Basin Attainment Classification, summarizes the SDAB's federal and state attainment designations for each of the criteria pollutants. In summary, the SDAB is designated as a nonattainment area for the 2008 8-hour O_3 NAAQS, and O_3, PM_{10}, and $PM_{2.5}$ CAAQS. The portion of the SDAB where the Proposed Project is located is designated as attainment or unclassifiable/unclassified for all other criteria pollutants under the NAAQS and CAAQS.

2.2.1.5 Air Quality Monitoring Data

The San Diego Air Pollution Control District (SDAPCD) operates a network of 11 ambient air monitoring stations throughout San Diego County that measures ambient concentrations of pollutants and determines whether the ambient air quality meets the CAAQS and NAAQS. Due to its proximity to the Project site, similar geographic and climactic characteristics, and available measured ambient concentrations of pollutants, the Otay Mesa–Donovan monitoring station is considered most representative of the Project site. Pollutant concentrations of CO, SO_2, and $PM_{2.5}$ are not measured at the Otay Mesa–Donovan station, so those measurements were taken from the nearest monitoring station that includes those pollutants—the El Cajon Floyd Smith Drive monitoring station. Ambient concentrations of pollutants from 2015 through 2017 are presented in Table 2.2-2, Local Ambient Air Quality Data. The number of days exceeding the NAAQS and CAAQS are also shown in Table 2.2-2.

2.2.2 Regulatory Setting

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. EPA is responsible for implementing most aspects of the Clean Air Act, including setting the NAAQS for major air pollutants, setting hazardous air pollutant standards, approving state attainment plans, setting motor vehicle emissions standards, setting stationary source emissions standards and approving permits, providing acid rain control measures, implementing stratospheric O_3 protection, and providing enforcement provisions.

NAAQS are established by the EPA for "criteria pollutants"—O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead—under the Clean Air Act. The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. The EPA sets the NAAQS based on a lengthy process that involves science policy workshops, a risk/exposure assessment that draws on the information and conclusions of the science policy workshops to development quantitative characterizations of exposures and associated risks to human health or the environment, and a policy assessment by EPA staff that bridges the gap between agency scientific assessments and the judgments required of the EPA Administrator, who then takes the proposed standards through the federal rulemaking process (EPA 2017b). States with areas that exceed the NAAQS must prepare a State Implementation Plan (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

Hazardous Air Pollutants

The federal Clean Air Act requires the EPA to identify national emissions standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard based on scientific studies of exposure to humans and other mammals. The EPA has identified approximately 187 substances and chemical families as hazardous air pollutants.

Safer Affordable Fuel-Efficient Vehicle Rule

In August 2019, the U.S. EPA and National Highway Traffic Safety Administration (NHTSA) jointly published a notice of proposed rulemaking for Part One of the Safer Affordable Fuel-Efficient Vehicle Rule (SAFE Rule). The SAFE Rule proposed new and amended CO_2, Corporate Average Fuel Economy, and greenhouse gas emissions standards for passenger cars and light trucks. Further, Part One of this rule proposed to withdraw the State of California's waiver, afforded under the Clean Air Act to set greenhouse gas and zero-emission vehicle standards separate from the federal government. Part One of the SAFE Rule became effective in November 2019. CARB has provided adjustment factors for pollutants, including NO_2, PM_{10}, and $PM_{2.5}$, and CO, from light-duty vehicle exhaust to account for Part One of the SAFE Rule.

In March 2020, EPA and the National Highway Traffic Safety Administration announced Part Two of the SAFE Rule, which would set amended fuel economy and CO_2 standards for passenger cars and light trucks for model years 2021–2026. Part Two would become effective 60 days after publication in the Federal Register. The Proposed Project's operational emissions associated with passenger cars and light duty trucks would be relatively minimal and the anticipated changes associated with the implementation of this rule would not result in significant changes to the estimated operational emissions for the Proposed Project.

Furthermore, although off-model adjustments are available from CARB, the vehicle miles traveled (VMT) split between vehicle fuels is not publicly available and thus adjustments to the CalEEMod EMFAC data are not possible at this time (Sardar, pers. comm. 2019). Based on the CARB adjustment factors, implementation of the SAFE Rule would slightly increase the anticipated emissions factors for passenger vehicles and light-duty trucks starting in 2021. The project's assumed operational year is 2022, at which time adjustments to account for SAFE Rule would be minimal (i.e., less than one percent increase).

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB established the CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that cannot be exceeded. All others are not to be equaled or exceeded.

Similar to the federal process, the standards for the CAAQS are adopted after review by CARB staff of the scientific literature produced by agencies such as the Office of Environmental Health Hazard Assessment; the Air Quality Advisory Committee, which is comprised of experts in health sciences, exposure assessment, monitoring methods, and atmospheric sciences appointed by the Office of the President of the University of California; and public review and comment (CARB 2009).

The NAAQS and CAAQS are presented in Table 2.2-3, Ambient Air Quality Standards.

Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. Federal laws use the term hazardous air pollutants to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily

through the Tanner Air Toxics Act (Assembly Bill 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Assembly Bill 2588).

Assembly Bill 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to Assembly Bill 2588, existing facilities that emit air pollutants above specified level are required to prepare a TAC Emissions Inventory Plan and Report; prepare a risk assessment if TAC emissions are significant; notify the public of significant risk levels; and, if health impacts are above specified levels, prepare and implement risk reduction measures. A full list of regulatory measures pertaining to the reduction of DPM and criteria pollutant emissions from off-road equipment and diesel-fueled vehicles are included in Appendix C.

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person cannot discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

San Diego Air Pollution Control District

CARB is responsible for the regulation of mobile emissions sources within the state, and local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. As discussed in Section 2.2.1, Existing Conditions, the Project site is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the Clean Air Plan for attainment and maintenance of the ambient air quality standards in the SDAB. The Regional Air Quality Strategy (RAQS) for the SDAB was initially adopted in 1991, and is updated on a triennial basis (most recently in 2016) (SDAPCD 2016a). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB's mobile source emissions projections and SANDAG's growth projections are based on population, vehicle trends, and land use plans developed by the County of San Diego (County) and the cities in the County as part of development of their general plans.

The Eight-Hour Ozone Attainment Plan for San Diego County indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O_3 standard by 2018 (SDAPCD 2016b). In this plan, the SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

SDAPCD's Measures to Reduce Particulate Matter in San Diego County report addresses implementation of Senate Bill 656 in San Diego County (Senate Bill 656 required additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$) (SDAPCD 2005). In this report, the SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities, including earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust.

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations would apply to construction and operation of the Proposed Project:

- ***SDAPCD Regulation II: Permits; Rule 20.2: New Source Review Non-Major Stationary Sources***. This rule requires new or modified stationary source units (that are not major stationary sources) with the potential to emit 10 pounds per day or more of VOC, NO_x, SO_x, or PM_{10} to be equipped with best available control technology. For those units with a potential to emit above air quality impact assessment trigger levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any national air quality standard (SDAPCD 2016c).

  The Proposed Project would not include specific stationary sources. If stationary sources were to be included as part of the Proposed Project, or at a later date, those sources would be subject to Rule 20.2 and would require appropriate operating permits from the SDAPCD. Because the SDAPCD has not adopted specific criteria air pollutant thresholds for analyses under CEQA, the thresholds identified in Rule 20.2 are used in this analysis as screening-level thresholds to evaluate project-level impacts, as discussed in Section 2.2.3, Analysis of Project Effects and Determination as to Significance.

- ***SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions***. This rule prohibits discharge into the atmosphere, from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

  Construction of the Proposed Project may result in visible emissions, primarily during earth-disturbing activities, which would be subject to SDAPCD Rule 50. Although visible emissions are less likely to occur during operation of the Proposed Project, compliance with SDAPCD Rule 50 would be required during both construction and operation.

- ***SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance*.** This rule prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1969).

  Any criteria air pollutant emissions, TAC emissions, or odors that would be generated during construction or operation of the Proposed Project would be subject to SDAPCD Rule 51. Violations can be reported to SDAPCD in the form of an air quality complaint by telephone, email, or online form. Complaints are investigated by SDAPCD as soon as possible.

- ***SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.*** *This* rule regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009).

  Construction of the Proposed Project, primarily during earth-disturbing activities, may result in fugitive dust emissions that would be subject to SDAPCD Rule 55.

- ***SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings.*** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015a).

  Construction and operation of the Proposed Project would include application of architectural coatings (e.g., paint and other finishes) that are subject to SDAPCD Rule 67.0.1. Architectural coatings used in the reapplication of coatings during operation of the Proposed Project would

be subject to the VOC content limits identified in SDAPCD Rule 67.0.1, which applies to coatings manufactured, sold, or distributed within San Diego County.[2]

- ***SDAPCD Regulation XII: Toxic Air Contaminants; Rule 1200: Toxic Air Contaminants – New Source Review***. This rule requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2017a).

  The Proposed Project's emergency generators would be subject to SDAPCD Rule 1200, and would be subject to New Source Review requirements.

- ***SDAPCD Regulation XII: Toxic Air Contaminants; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction***. This rule requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 (SDAPCD 2017b).

  The Proposed Project's emergency generators would be subject to SDAPCD Rule 1210, and would be subject to public notification and risk reduction requirements. The thresholds identified in Rule 1210 were used in this analysis as thresholds for the Health Risk Assessment, which is consistent with the SDAPCD Health Risk Assessment guidelines (SDAPCD 2015b).

San Diego Association of Governments

SANDAG is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for San Diego County. With respect to air quality planning and other regional issues, SANDAG prepared its San Diego Forward: The Regional Plan (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy, is built on an integrated set of public policies, strategies,

[2] Specific assumptions included in the California Emissions Estimator Model (CalEEMod) in compliance with Rule 67.0.1 are included in Table 2.2-7, below.

and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

The Regional Plan sets the policy context for how SANDAG participates in and responds to the SDAPCD's air quality plans, and builds off the SDAPCD's air quality plan processes that are designed to meet health-based criteria pollutant standards (SANDAG 2015). The Regional Plan complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Also, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, and other sources of air pollution (SANDAG 2015).

San Diego County

County Code Section 87.428, Dust Control Measures. As part of the San Diego County Grading, Clearing, and Watercourses Ordinance, County Code Section 87.428 requires all clearing and grading to be carried out with dust control measures that are adequate to prevent the creation of a nuisance to people and public or private property. Clearing, grading, and improvement plans require that measures be undertaken to achieve this result, including watering, applying surfactants,[3] shrouding, controlling vehicle speeds, paving access areas, and/or implementing other operational or technological measures to reduce dispersion of dust. These measures are to be incorporated into all earth-disturbing activities to minimize the amount of particulate matter emissions from construction (County of San Diego 2004).

County Zoning Ordinance Section 6318. Section 6318 of the San Diego County Zoning Ordinance requires that all commercial and industrial uses be operated so they do not emit matter causing unpleasant odors that are perceptible by the average person at or beyond any lot line of the lot containing said uses. Section 6318 goes on to provide specific dilution standards that must be met "at or beyond any lot line of the lot containing the uses" (County of San Diego 1979).

2.2.3 Analysis of Proposed Project Effects and Determination as to Significance

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1 of this EIR) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard. Direct, indirect, and

[3] Surfactants are compounds that lower surface tension between liquids or between a solid and a liquid, such as a detergent.

cumulative impacts pertaining to air quality are evaluated based on specified thresholds identified in the CEQA Guidelines, Appendix G, the County of San Diego's Guidelines for Determining Significance, and SDAPCD thresholds.

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

County Guidelines for Determining Significance

The following significance thresholds for air quality are based on criteria provided in the County's Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality (County of San Diego 2007). The County's Guidelines were adapted from Appendix G of the CEQA Guidelines. An affirmative response to or confirmation of any one of the following Guidelines will generally be considered a significant impact to air quality as a result of Proposed Project implementation, in the absence of scientific evidence to the contrary.

A significant impact, based on the County Guidelines, would result if any of the following would occur:

- **Conformance with the Regional Air Quality Strategy.**
  The project would conflict with or obstruct the implementation of the SDAPCD's RAQS and/or applicable portions of the SIP.
- **Conformance to Federal and State Ambient Air Quality Standards.**

  The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation:

  - The project would result in emissions that exceed 250 pounds per day of NO_x or 75 pounds per day of VOCs;
  - The project would result in emissions of CO that, when totaled with the ambient concentration, would exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm;

- The project would result in emissions of $PM_{2.5}$ that exceed 55 pounds per day;
- The project would result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentrations by 5 micrograms per cubic meter ($\mu g/m^3$) or greater at the maximum exposed individual.

- **Cumulatively Considerable Net Increase of Criteria Pollutants.**
  The project would result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is in nonattainment under an applicable federal or state Ambient Air Quality Standard.
  - The following guidelines for determining significance must be used for determining whether the net increase during the construction phase is cumulatively considerable:
    - A project that has a significant direct impact on air quality with regard to construction-related emissions of PM_{10}, $PM_{2.5}$, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase.
    - In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the construction-related emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines, including the SDAPCD's screening-level thresholds.
  - The following guidelines for determining significance must be used for determining whether the net increase during the operational phase is cumulatively considerable:
    - A project that does not conform to the SDPACD's RAQS and/or has a significant direct impact on air quality with regard to operational-related emissions of PM_{10}, $PM_{2.5}$, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase.
    - Projects that cause road intersections to operate at or below level of service (LOS) E (analysis required only when the addition of peak-hour trips from the proposed project and the surrounding projects exceeds 2,000) and create a CO hotspot create a cumulatively considerable net increase of CO.
    - In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the operational-related emissions of concern from a project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future

projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines, including the SDAPCD's screening-level thresholds.

- **Impacts to Sensitive Receptors.**
  To answer the question whether the project would expose sensitive receptors to substantial pollutant concentrations, the County Guidelines have developed two separate questions, including:

  Will the project place sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors; and

  Will project implementation result in exposure to TACs resulting in a:

  - Maximum incremental cancer risk equal to or greater than 1 in one million without application of toxics-best available control technology (T-BACT), or
  - Maximum incremental cancer risk equal to or greater than 10 in one million with application of T-BACT, or
  - Cancer burden equal to or greater than 1.0, or
  - Total acute non-cancer health hazard index equal to or greater than 1.0, or
  - Total chronic non-cancer health hazard index equal to or greater than 1.0.
- **Other Emissions.**
  The project, which is not an agricultural, commercial, or an industrial activity subject to SDAPCD standards, as a result of implementation, would either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which would affect a considerable number of persons or the public.

As noted previously, the 2018 update to the CEQA Guidelines resulted in the consolidation of Appendix G questions related to air quality analyses. For the purposes of this analysis, and consistent with these updated CEQA Guidelines, the "Conformance to Federal and State Ambient Air Quality Standards" and "Cumulatively Considerable Net Increase of Criteria Pollutants" questions provided above are addressed as a single air quality subject issue.

San Diego Air Pollution Control District

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of air quality impact assessments for permitted stationary sources. The SDAPCD sets forth quantitative emissions thresholds below which a stationary source would not have a significant impact on ambient air quality. Air quality impacts estimated in the environmental analysis for the Proposed Project would be considered significant if any of the applicable significance thresholds presented in Table 2.2-4, SDAPCD Air Quality Significance Thresholds, are exceeded.

For CEQA purposes, the thresholds listed in Table 2.2-4 represent screening-level thresholds that can be used to evaluate whether emissions related to the Proposed Project could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. The emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "O_3 significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly (see the discussion of O_3 and its sources in Section 2.2.1.3, Pollutants and Effects), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 2.2-4, the Proposed Project could have the potential to result in a cumulatively considerable net increase in these pollutants, and, thus, could have a significant impact on the ambient air quality.

With respect to odors, SDAPCD Rule 51, Public Nuisance, prohibits emissions of any material that causes nuisance to a considerable number of people or endangers the comfort, health, or safety of any person (SDAPCD 1969). A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

2.2.3.1 Conformance to the Regional Air Quality Strategy

Guidelines for the Determination of Significance

For the purpose of this section, Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and the County's Guidelines for Determining Significance: Air Quality (County of San Diego 2007), Conformance with Regional Air Quality Strategy, apply to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP.

Analysis

As previously discussed, the SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the SDAB, specifically the SIP and RAQS.[4] The federal O_3 attainment plan, which is part of the SIP, was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially adopted in 1991 and is typically updated on a triennial basis (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality

[4] For the purpose of this discussion, the relevant federal air quality plan is the Ozone Attainment Plan (SDAPCD 2016c). The RAQS is the applicable plan for purposes of State air quality planning. Both plans reflect growth projections in the SDAB.

standards for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB's mobile source emissions projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

As mentioned above, the SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the County as part of development of their general plans. As such, projects that involve development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS. However, if a project involves development that is greater than that anticipated in the local plan and/or SANDAG's growth projections, that project might be in conflict with the SIP and RAQS, and may contribute to a potentially significant cumulative impact on air quality.

The Proposed Project is located on a site that is zoned Specific Planning Area (S88) that has not adopted a Specific Plan. A Major User Permit is required from the County to develop a solar facility on the Project site. The Proposed Project would be consistent with the underlying zoning for the site parcels, which would mean that the Proposed Project was currently included within the SIP and RAQS. Furthermore, in order to demonstrate that the Proposed Project is a less-intensive use and would result in fewer emissions than the zoning for the Project site parcels, the zoning was modeled using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 and compared to the emissions generated by the most intensive allowable on-site use (CAPCOA 2017). As identified within the County's zoning regulations and General Plan, the most intensive use allowed on the Project site with respect to emissions of criteria pollutants would be residential. The allowed unit density for each parcel was evaluated against its respective zoning. The majority of the parcels were modeled as single-family residences. Two of the parcels were modeled as multifamily apartments as they were zoned to allow up to 14.5 dwelling units per acre. The total buildout of allowable residential uses on the Project site is 224 single-family residences and 2,475 multi-family residential units. See Table 2.2-5, Zoning for Proposed Project Parcels, for a breakdown of the zoning for the Proposed Project's parcels. The largest contributor to emissions of criteria pollutants for both the allowable use and the Proposed Project is mobile sources (i.e., emissions from vehicles driven by residents or workers). For the purposes of comparison between the two uses, the daily trips and annual vehicle miles traveled (VMT) were used as a surrogate in the absence of comparable land use types. Detailed modeling files are included in Appendix C. The existing zoning would result in an average daily trip rate of 18,443 and result in 68,255,312 VMT annually. In comparison, the Proposed Project would result in a maximum daily trip rate of 12 and result in 315,360 VMT annually. As such, the Proposed Project would result in a less emissions-intensive development compared to the buildout of the Project site's zoning, which is

included within the RAQS and SIP (CARB 2017b). Therefore, the emissions from the Proposed Project would be considered consistent with the underlying land use assumptions included within the RAQS and SIP.

Moreover, the Proposed Project does not propose residential, commercial, or growth-inducing development. During operation, staff would visit various on-site Proposed Project components periodically for maintenance. Maintenance trucks would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance. Operation of the Proposed Project would result in a negligible increase in local employment and associated trips.

Since the Proposed Project would not contribute to local population growth or substantial employment growth and the growth-related emissions during operations, the Proposed Project is considered accounted for in the SIP and RAQS, and the Proposed Project would not conflict with or obstruct the implementation with local air quality plans. Impacts would be **less than significant**.

Switchyard

Construction of the switchyard and associated connection in and out legs would not result in residential, commercial, or growth-inducing development that would result in a substation increase in growth-related emissions. During operation, it is assumed that an occasional maintenance truck would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance of the facility on an as-needed basis. Operation of the switchyard would result in a negligible increase in associated operational trips. As shown in Table 2.2-5, the switchyard would comprise 5.14 acres of parcel 661-010-30. As such, based on the existing zoning of S88 and density of 0.25 units per acre, the maximum buildout would be 1.3 single-family residential units. Assuming 1 single-family unit was built would result in an average daily trip rate of 10 and 34,961 VMT annually. In comparison, routine maintenance was assumed to generate up to 4 worker vehicle trips and 4 vendor truck trips per month, or 6,912 VMT annually.

Since the switchyard would not contribute to local population growth or employment growth, the switchyard is considered accounted for in the SIP and RAQS, and would not conflict with or obstruct implementation of local air quality plans; therefore, impacts would be **less than significant**.

2.2.3.2 Impacts to Sensitive Receptors

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Reduced visibility, eye irritation, and adverse health impacts upon sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive

to changes in air quality than others, depending on the population groups and the activities involved. Air quality regulators typically define sensitive receptors as schools (preschool–12th grade), hospitals, resident care facilities, daycare centers, and other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purposes of CEQA analysis in the County, the definition of a sensitive receptor also includes residents.

The two primary emissions of concern regarding health effects for land development projects are DPM during construction and CO hotspots related to traffic congestion, as discussed below.

Construction and Decommissioning Impacts

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance: Air Quality (County of San Diego 2007) apply to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors.
- Project implementation would result in exposure to TACs resulting in a maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 would be deemed as having a potentially significant impact.

Carbon Monoxide Hotspots

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. Projects that cause road intersections to operate at or below LOS E and the addition of peak-hour trips from the project and the surrounding projects that exceeds 3,000 have the potential to create CO concentrations exceeding the CAAQS. The Proposed Project's Local Mobility Analysis (Appendix Q) evaluated the effects from construction traffic on the local area. The Local Mobility Analysis showed that all studied intersections would operate at an acceptable level of service (LOS D or better) during construction. Further, Proposed Project construction would not significantly contribute to peak hour trips.

Trip generation and distribution for workers and delivery trucks would vary; however, based on daily construction worker, vendor trip, and haul truck estimates, maximum daily trips resulting from construction activities would be approximately 500 vehicles, which would be well below the

screening threshold of a peak-hour volume of 3,000 vehicles (see County Guidelines, at p. 18). Construction trips would occur throughout the day and would not all occur during the peak hour. Due to the phased and short-term nature of construction activities for the Proposed Project, the fact that construction trips would not all occur during the peak hour, and considering cumulative projects listed in Table 1-4 of Chapter 1, it is reasonable to assume that no intersections in the vicinity of the Project site would exceed a peak-hour volume of 3,000 vehicles as a result of the Proposed Project's construction trips. Similarly, decommissioning of the Proposed Project would have less vehicle traffic than construction and would not exceed the County's screening threshold. Accordingly, the Proposed Project would not place sensitive receptors near CO hotspots or create CO hotspots near sensitive receptors because no CO hotspots would occur in the vicinity of the Proposed Project. Impacts would be **less than significant**.

Switchyard

Due to the limited construction activity, equipment required for construction of the switchyard, and associated construction trips associated with the facility's construction, minimal emissions would be generated during construction of the facility. The switchyard is estimated to require up to 46 vehicles during peak construction (Appendix Q). As such, construction of the switchyard would not substantially contribute to a CO hotspot impact. Impacts associated with the construction of the switchyard would be **less than significant**.

Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have noncarcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM, emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB Airborne Toxic Control Measures to reduce DPM emissions. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the Proposed Project (OEHHA 2015). Therefore, for the Proposed Project, the exposure period was 13 months, consistent with the duration of construction activities.

During Proposed Project construction, DPM emissions would be emitted from heavy-duty construction equipment and heavy-duty trucks as well as TAC emissions within the fugitive dust generated by vehicle traffic. Heavy-duty construction equipment and diesel trucks are subject to CARB

Airborne Toxic Control Measures (described in Section 2.2.2, Regulatory Setting) to reduce DPM emissions. According to the Office of Environmental Health Hazard Assessment, health risk assessments (HRAs), which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the Proposed Project. Because the Proposed Project would involve construction activities in several areas across the site, the Proposed Project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs.

An HRA was performed to evaluate the cancer and non-cancer risk from TAC emissions on existing sensitive receptors from construction activities. The HRA methodology is further described in Section 3.5, Health Risk Assessment, of Appendix C. The results of the HRA for Proposed Project construction are summarized in Table 2.2-6, Construction Activity Health Risk Assessment Results – Unmitigated.

The results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in (1) cancer risk on site above the 1 in 1 million threshold without application of T-BACT; (2) chronic and acute non-cancer health hazard indexes of less than 1; and (3) lead exposure less than 0.12 micrograms per cubic meter ($\mu g/m^3$). Therefore, TAC emissions from construction of the Proposed Project may expose sensitive receptors to substantial pollutant concentrations due to cancer risk on site above the 1 in 1 million threshold without application of T-BACT. Impacts would be **potentially significant (Impact AQ-1)**.

For decommissioning, the DPM emissions would comprise only 4% of those emitted during the construction period. As such, the risk to sensitive receptors from decommissioning of the Proposed Project would be less than the County's significance threshold. Impacts associated with the decommissioning of the Proposed Project would be **less than significant**.

Switchyard

Construction of the switchyard would result in a minimal, temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application, and internal haul trucks) and off-site sources (e.g., vendor trucks and worker vehicle trips). Due to the limited construction activity, equipment required for construction of the switchyard, and associated construction trips associated with the facility's construction, minimal emissions would be generated during construction of the facility. Criteria air pollutant emissions would be well below established thresholds. The construction of the switchyard would represent approximately 24% of the total DPM emissions during construction. As such, the risk to sensitive receptors from construction of the switchyard would be

less than the County's significance threshold. Impacts associated with the construction of the switchyard would be **less than significant**.

Valley Fever Exposure

As discussed in Section 2.2.1.3, Pollutants and Effects, Valley Fever is not highly endemic to San Diego County, and within San Diego County, the incidence rate in the Project area is below the County average and the statewide average. Construction and decommissioning of the Proposed Project would comply with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction. Strategies the Proposed Project would implement to comply with SDAPCD Rule 55 and control dust include watering three times per day, using magnesium chloride for dust suppression on unpaved roads, and limiting speed on unpaved roads to 15 miles per hour. The nearest sensitive-receptor land use (existing residence) is located off Old Highway 80 that bifurcates the Project site.

Workers on site during construction and operation would be protected by several regulations pertaining to Valley Fever which are included in Title 8 of the California Code of Regulations. For example, Section 342 requires employers to immediately report to the nearest District Office of the Division of Occupational Safety and Health any serious injury or illness, or death, of an employee occurring in a place of employment or in connection with any employment (8 CCR 342). Furthermore, Section 3203 requires that every employer establish, implement and maintain an effective Injury and Illness Prevention Program (8 CCR 3203[a]). The Injury and Illness Prevention Program must include procedures for identifying and evaluating workplace hazards including scheduled periodic inspections to identify unsafe conditions and work practices (8 CCR 3203[a][4]). Section 5141 requires that harmful exposures be prevented by engineering and/or administrative controls whenever feasible (8 CCR 5144[a][1]). When effective controls are not feasible, Section 5144 requires that respirators shall be used and provided by the employer when such equipment is necessary to protect the health of the employee (8 CCR 5144[a][2]). The primary purpose of Section 5144 is to prevent atmospheric contamination and control occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. When such measures are necessary to protect the health of an employee, the employer shall be responsible for the establishment and maintenance of a respiratory protection program (8 CCR 5144[a][2]). The requirements of the respiratory protection program are outlined on California Code of Regulation Title 8, Section 5144(c).

Based on the low incidence rate of Coccidioidomycosis in the Proposed Project region and in greater San Diego County, and the Proposed Project's implementation of dust control strategies, it is not anticipated that earth-moving activities during Proposed Project construction and decommissioning would result in exposure of nearby sensitive receptors to Valley Fever.

Therefore, the Proposed Project would have a **less than significant** impact with respect to Valley Fever exposure for sensitive receptors.

Switchyard

Similar to the Proposed Project, construction of the switchyard would comply with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction. Strategies the Proposed Project would implement to comply with SDAPCD Rule 55 and control dust include watering three times per day, using magnesium chloride for dust suppression on unpaved roads, and limiting speed on unpaved roads to 15 miles per hour.

Based on the low incidence rate of Coccidioidomycosis in the region and in greater San Diego County, and implementation of dust control strategies, it is not anticipated that earth-moving activities during switchyard construction would result in exposure of nearby sensitive receptors to Valley Fever. Therefore, the switchyard would have a **less-than-significant** impact with respect to Valley Fever exposure for sensitive receptors.

Health Impacts of Criteria Air Pollutants

Operation of the Proposed Project would not result in emissions that exceed the County's emission thresholds for any criteria air pollutants. Regarding VOCs, some VOCs would be associated with motor vehicles, while others are associated with architectural coatings, the emissions of which would not result in the exceedances of the County's thresholds. Generally, the VOCs in architectural coatings are of relatively low toxicity.

In addition, VOCs and NO_x are precursors to O_3, which the SDAB is designated as nonattainment for with respect to the NAAQS (2008 8-hour) and CAAQS (the SDAB is designated by EPA as an attainment area for the 1-hour O_3 NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with O_3 are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 ambient air quality standards tend to occur between April and October when solar radiation is highest.

The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO_x emissions associated with Proposed Project construction and operation could minimally contribute to regional O_3 concentrations and the associated health impacts. Due to the minimal contribution during construction and operation (the Proposed Project would not exceed County thresholds with

mitigation during construction and without mitigation during operation), the Proposed Project would not result in significant health impacts.

Similar to O_3, construction (after mitigation) and operation of the Proposed Project would not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter (SDAB is a state nonattainment area for PM_{10} and $PM_{2.5}$). The Proposed Project would also not result in substantial DPM emissions during operation and, therefore, would not result in significant health effects related to DPM exposure (health risks from DPM during construction are analyzed in the Toxic Air Contaminants discussion, in Section 2.2.3.2, Impacts to Sensitive Receptors). Due to the minimal contribution of particulate matter during operation, the Proposed Project would not result in significant health impacts. PM_{10} and $PM_{2.5}$ would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter, obstruct the SDAB from coming into attainment for these pollutants, or contribute to significant health effects associated with particulates.

Regarding NO_2, according to the operation emissions analysis, the Proposed Project would not contribute to exceedances of the NAAQS and CAAQS for NO_2 (for analysis purposes, NO_x emissions were assumed to be NO_2 emissions). NO_2 and NO_x health impacts are associated with respiratory irritation. However, these NO_x emissions during construction (after mitigation) and operation would be minimal and infrequent. Therefore, the Proposed Project would not result in significant health impacts.

The VOC and NO_x emissions, as described previously, would minimally contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, with mitigation, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 2.2-3, the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected the Proposed Project's mitigated construction or unmitigated operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. As discussed previously, the Proposed Project would not create any CO hotspots, and CO impacts would be less than significant. Thus, the Proposed Project's CO emissions would not contribute to significant health effects associated with this pollutant. In sum, the Proposed Project's unmitigated operational emissions of criteria air pollutants would not contribute to potential exceedances of the NAAQS and CAAQS, obstruct the SDAB from coming into attainment for the pollutants for which it is out of attainment (O_3 and particulate matter), or contribute to significant health effects associated with particulates.

Operational Impacts

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance: Air Quality (County of San Diego 2007) apply to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors.
- Project implementation would result in exposure to TACs resulting in a maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 would be deemed as having a potentially significant impact.

Carbon Monoxide Hotspots

To verify that the Proposed Project would not cause or contribute to a violation of the CO standards, a screening evaluation of the potential for CO hotspots was conducted using the California Department of Transportation and the U.C. Davis Institute of Transportation Studies Transportation Project-Level Carbon Monoxide Protocol (Caltrans 2010). The County recommends that a local CO hotspot analysis be conducted if the intersection is at LOS E or worse and where a project operates at peak-hour trips exceeding 3,000 trips, or the intersection operates at LOS E or worse and under cumulative conditions exceeds 2,000 peak trips per hour. If the screening criteria are exceeded, additional site-specific analyses are performed to determine whether a project would result in a significant impact.

A Local Mobility Analysis (Appendix Q) was prepared for the Proposed Project and evaluated whether there would be a decrease in the LOS (e.g., congestion) at the intersections affected by the Proposed Project. The Proposed Project's analysis evaluated two intersections and four street segments based on existing traffic volumes and current street geometry. With the addition of Proposed Project traffic, the study intersections are calculated to continue to operate acceptably at LOS C or better during AM and PM peak hours. Therefore, the Proposed Project would not exceed the County's screening threshold and would not result in a CO hotspot. Accordingly, the Proposed Project would not place sensitive receptors near CO hotspots or create CO hotspots near sensitive receptors because no CO hotspots would occur in the vicinity of the Proposed Project. Impacts would be **less than significant**.

Switchyard

During operation, it is assumed that an occasional maintenance truck would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance of the facility on an as-needed basis. As such, operation of the switchyard would result in a negligible increase in operational trips and associated emissions. Therefore, operation of the switchyard would not substantially contribute to a CO hotspot impact. Impacts would be **less than significant**.

Toxic Air Contaminants

The Proposed Project would include one standby emergency diesel generator at the substation. The generator would be operated very infrequently for maintenance and testing and would only operate for 30 minutes at a time and 52 hours per year. Further, the generator at the substation is approximately 3,484 feet from the closest sensitive receptor. The Proposed Project would include monthly maintenance visits of diesel vendor trucks. No other sources of TAC emissions would be present during operation of the Proposed Project. As such, the Proposed Project would not result in substantial TAC emissions that may affect nearby receptors, nor would the Proposed Project be exposed to nearby sources of TAC emissions.

The VOC and NO_x emissions, as described in Section 2.2.1.3, would minimally contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 2.2-3, the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Thus, the Proposed Project's operational NO_x emissions are not expected to result in exceedances of the NO_2 standards or contribute to the associated health effects.

CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less than significant impact. Thus, the Proposed Project's CO emissions would not contribute to significant health effects associated with this pollutant. PM_{10} and $PM_{2.5}$ would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter, obstruct the SDAB from coming into attainment for these pollutants, or contribute to significant health effects associated with particulates. Therefore, the Proposed Project would have a less than significant impact with respect to criteria air pollutant exposure for sensitive receptors. Impacts would be less than significant.

Switchyard

During operation, it is assumed that an occasional maintenance truck would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance of the facility on an as-needed basis. As such,

operation of the switchyard would result in a negligible increase in operational trips and associated emissions. Therefore, operation of the switchyard would not result in substantial DPM or TAC emissions that may significantly affect nearby receptors. Impacts would be **less than significant**.

Criteria pollutant emission impacts associated with the switchyard would be **less than significant**.

2.2.3.3 Other Emissions

Odors are a form of air pollution that is most obvious to the general public. Odors can present significant problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern.

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance – Air Quality (County of San Diego 2007) apply to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project, which is not an agricultural, commercial, or an industrial activity subject to SDAPCD standards, as a result of implementation, would either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which would affect a considerable number of persons.

The State of California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 and SDAPCD Rule 51, commonly referred to as public nuisance law, prohibits emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. It is generally accepted that the "considerable number of persons" requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. The potential for an operation to result in odor complaints from a "considerable" number of persons in the area would be considered to be a significant, adverse odor impact.

Projects required to obtain permits from SDAPCD are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

Section 6318 of the San Diego County Zoning Ordinance requires that all commercial and industrial uses be operated so as not to emit matter causing unpleasant odors that are perceptible by the average person at or beyond any lot line of the lot containing said uses. Section 6318 goes on to further provide specific dilution standards that must be met "at or beyond any lot line of the lot containing the uses" (County of San Diego 1979). SDAPCD Rule 51 (Public Nuisance) also

prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person (SDAPCD 1969). A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and due to the fact that their measurements are difficult to quantify. As a result, this guideline is qualitative, and will focus on the existing and potential surrounding uses and location of sensitive receptors.

Analysis

Construction and Decommissioning Impacts

Section 6318 of the San Diego County Zoning Ordinance requires that all commercial and industrial uses be operated so as not to emit matter causing unpleasant odors that are perceptible by the average person at or beyond any lot line of the lot containing said uses. Section 6318 goes on to further provide specific dilution standards that must be met "at or beyond any lot line of the lot containing the uses" (County of San Diego 1979). SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material that causes nuisance to a considerable number of people or endangers the comfort, health, or safety of any person (SDAPCD 1969). A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

The nearest sensitive-receptor land use (existing residence) is located off Old Highway 80 that bifurcates the Project site.

Construction of Proposed Project components would result in the emission of diesel fumes and other odors typically associated with construction activities. These compounds would be emitted in varying amounts on the Project site depending on where construction activities are occurring. Sensitive receptors located within and in the vicinity of the construction site may be affected; however, odors are highest near the source and would quickly dissipate. Any odors associated with construction activities would be temporary and would cease upon Proposed Project completion. Similar to construction, emissions odors would be generated during decommissioning of the Proposed Project. Odors are expected to be less than construction as overall activity is less and the construction fleet would have less odor-generating potential 35 years later. Impacts would be **less than significant**.

Switchyard

Any odors associated with construction of the switchyard would be minimal, temporary, would dissipate before reaching off-site sensitive receptors, and would cease upon completion of construction activities. Impacts related to odors would be **less than significant**.

Operational Impacts

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project would not include land uses that would generate objectionable odors, and Proposed Project land uses would not attract people to an area where there would be a potential for exposure to objectionable odors.

Although odor impacts are unlikely, the Proposed Project would be required to comply with the County odor policies enforced by SDAPCD, including SDAPCD Rule 51 and County Zoning Code Section 6318, in the event a nuisance complaint occurs, which prohibit nuisance odors and identify enforcement measures to reduce odor impacts to nearby receptors. As such, the Proposed Project would not generate objectionable odors. Impacts would be **less than significant**.

Switchyard

During operation, it is assumed that an occasional maintenance truck would be used to perform routine maintenance activities on the switchyard, which would not be considered a substantial source of odor. Impacts related to odors would be **less than significant**.

2.2.4 Cumulative Impact Analysis

In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the state and federal ambient air quality standards. The project would have a cumulatively considerable impact if project-generated emissions would exceed thresholds for PM_{10}, $PM_{2.5}$, NO_x, and/or VOCs. If a project does not exceed thresholds and is determined to have less than significant project-specific impacts, it may still have a cumulatively considerable impact on air quality if the emissions from that project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. Air quality analysis is inherently cumulative as it considers the air quality in the context of the entire SDAB and SDAPCD air quality plans.

Background ambient air quality, as measured at the monitoring stations maintained and operated by SDAPCD, measures the concentrations of pollutants from existing sources; therefore, past and present project impacts are included in the background ambient air quality data.

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to air quality includes the southeastern corner of the SDAB (San Diego County), bounded by the United States/Mexico

border on the south and Interstate 8 to the north, with Jacumba Hot Springs to the West. The primary air quality impacts of the Proposed Project would occur during construction and decommissioning, since the operational impacts would result from limited vehicle trips for operations, maintenance, washing, and inspection, and would be substantially less than construction impacts. Due to the nonattainment status of the SDAB, the primary air pollutants of concern would be NO_x and VOCs, which are ozone precursors, and PM_{10} and $PM_{2.5}$. NO_x and VOCs are primarily emitted from motor vehicles and construction equipment, while PM_{10} and $PM_{2.5}$ are emitted primarily as fugitive dust during construction and decommissioning. Because of the nature of ozone as a regional air pollutant, emissions from the entire geographic area for this cumulative impact analysis would tend to be important, although maximum ozone impacts generally occur downwind of the area in which the ozone precursors are released. PM_{10} and $PM_{2.5}$ impacts, on the other hand, would tend to occur locally; thus, projects occurring in the same general area and in the same time period would tend to create cumulative air quality impacts.

Existing Cumulative Conditions

Air quality management in the geographic area for the cumulative impact assessment is the responsibility of the SDAPCD. Existing levels of development in San Diego County have led to the nonattainment status for ozone with respect to the CAAQS and NAAQS, and for PM_{10} and $PM_{2.5}$ with respect to the CAAQS. The nonattainment status is based on ambient air quality monitoring generally conducted in the urban portions of the County. No monitoring stations exist in the geographic area for the cumulative impact assessment, but air quality would generally be better than that in the urban areas in the western portion of the County due to the lack of major air pollutant sources. The air quality plans prepared by the SDAPCD reflect future growth under local development plans but are intended to reduce emissions countywide to levels that would comply with the NAAQS and CAAQS through implementation of new regulations at the local, state, and federal levels.

The separate guidelines of significance discussed below have been developed to respond to the following question from the CEQA Guidelines, Appendix G:

- Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is nonattainment under an applicable federal or state ambient air quality standard?

2.2.4.1 Cumulatively Considerable Net Increase of Criteria Pollutants (Construction and Decommissioning)

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance – Air Quality (County of San Diego 2007) applies to the cumulative impact analysis. Cumulatively considerable net increases during the construction and decommissioning phases would typically occur if two or more projects near each other are simultaneously under construction. A significant impact would result if:

- A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_x and/or VOCs, would also have a significant cumulatively considerable net increase.
- In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Table 2.2-4, SDAPCD Air Quality Significance Thresholds.

Analysis

In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions do not exceed thresholds and are determined to have less than significant project-specific impacts, that project may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds.

Construction of the Proposed Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, and internal haul trucks) and off-site sources (e.g., vendor trucks and worker vehicle trips). Specifically, entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Internal combustion engines used by construction equipment, internal haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The Proposed Project would require the import of water for dust control. Approximately, 112 acre-feet of water would be used during construction. Water would be transported to the site using 4,000 gallon water trucks, which are categorized as heavy-duty vendor trucks in CalEEMod. Water imported during construction activities would come from the Jacumba Community Services District, located approximately 0.8 miles from the Project site. Back-up water supply would be provided by on-site water wells. This is conservative as most of the water is anticipated to be supplied by the wells. The soil would be balanced on site; however, 242,500 cubic yards of cut would be redistributed around the site. A trip length of 0.25 miles was conservatively assumed for these haul trips, which represents half the driving distance across the Project site from south to north.

Section 3.2 of Appendix C, Construction Emissions Methodology, presents the methodology and assumptions used to estimate emissions from Proposed Project construction. Appendix C presents construction scenario details, including phasing and phase duration, off-road-equipment use (equipment type, quantity, horsepower, load factor, and hours of operation), and vehicle trips (internal haul trucks, vendor truck, and workers vehicle trips).

For purposes of estimating the Proposed Project emissions, and based on information provided by the applicant, it is assumed that construction of the Proposed Project would commence in December 2020[5] and would last approximately 13 months. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate). The majority of the phases listed below would occur concurrently and would not occur sequentially in isolation. Detailed construction equipment modeling assumptions are provided in Appendix A, CalEEMod Outputs, of Appendix C.

- Site Mobilization: 2 weeks
- Demolition of dairy and ranch structures: 1 month
- Site Prep, Grading, and Stormwater Protections: 3 months
- Fence Installation: 3 months
- Landscaping Installation: 4 months
- Pile Driving: 2 months
- Tracker and Module Installation: 6 months
- DC Electrical: 6 months

[5] The analysis assumes a construction start date of December 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

- Underground Medium AC Voltage Electrical: 5 months
- Inverter Installation: 2 months
- Battery Energy Storage System Installation: 2 months
- Commissioning: 1 month

Emissions from the construction phase of the Proposed Project were estimated using CalEEMod. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant, CalEEMod defaults, and best engineering judgement.

Default values for equipment mix, horsepower, and load factor provided in CalEEMod were used for all construction equipment. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week. For the purposes of estimating emissions, it was assumed that worker trips and truck trips would be made to the site independently; however, it is likely that workers would drive trucks to and from the site for deliveries rather than driving in a separate vehicle.

Table 2.2-7, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated, shows the estimated maximum daily construction emissions associated with the construction phase of the Proposed Project.

As shown in Table 2.2-7, maximum daily construction emissions would not exceed the thresholds for VOC, CO, and SO_x. Emissions of NO_x, PM_{10}, and $PM_{2.5}$would exceed the daily emissions threshold of significance.

Construction of cumulative projects simultaneously with the Proposed Project would result in a temporary addition of pollutants to the local airshed caused by off-road construction equipment, soil disturbance, architectural coating and asphalt pavement VOC off-gassing, on-road haul trucks, vendor trucks, and worker vehicle trips. Maximum unmitigated daily construction emissions of PM_{10} and $PM_{2.5}$ generated by the Proposed Project would exceed significance thresholds. The Proposed Project would be required to comply with SDAPCD Rule 55, which regulates construction activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as trackout and carryout onto paved roads beyond the Project site. Additionally, construction would be short term and temporary, lasting approximately 13 months. Once construction is completed, construction-related emissions would cease. However, it is possible that other land development and infrastructure projects could be constructed in the general vicinity and during the same time frame as the Proposed Project.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Table 1-4 in Chapter 1 provides a list of 18 reasonably

foreseeable, approved, and pending projects within 18 miles of the Project site. Of those projects, seven have been completed, three are approved but not constructed, and six are under review. The three approved projects would have relatively minimal air quality impacts as they would include an expansion of an existing alcohol and drug treatment facility, the creation of a new well, and 12 antennas. As it is unknown whether the projects under review will be approved or not, and if approved when actual construction would begin, it would be purely speculative to estimate any potential overlap of the Proposed Project. Construction schedules for potential future projects near the Project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be speculative.[6] However, future projects would be subject to CEQA and would require an air quality analysis and, where necessary, mitigation if the project would exceed SDAPCD's significance thresholds. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by SDAPCD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SDAPCD Rule 55 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SDAPCD.

Decommissioning

Section 3.2 of Appendix C, presents the methodology and assumptions used to estimate emissions from decommissioning of the Proposed Project. Appendix C presents construction scenario details, including phasing and phase duration, off-road-equipment use (equipment type, quantity, horsepower, load factor, and hours of operation), and vehicle trips (internal haul trucks, vendor truck, and workers vehicle trips).

For purposes of estimating the Proposed Project decommissioning emissions, and based on information provided by the applicant, it is assumed that decommissioning of the Proposed Project would commence in January 2057[7] and would last approximately 10 months. However, because CalEEMod relies on the CARB EMFAC 2014 it is only able to estimate mobile source emissions through 2050. Therefore, the emissions for decommissioning were estimated in year 2050. This is conservative as the emissions are likely less in 2057 as vehicles and construction equipment become more efficient. The analysis contained herein is based on the following subset area

[6] The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided in an effort to show good-faith analysis and to comply with CEQA's information disclosure requirements.

[7] The analysis assumes a construction start date of January 2057, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

schedule assumptions (duration of phases is approximate). Detailed construction equipment modeling assumptions are provided in Appendix B, CalEEMod Outputs, of Appendix C.

- Perimeter Fence Removal: 1.5 months
- System Disassembly and Removal: 5 months
- Energy Storage System: 2 months
- Site Cleanup and Restoration: 1 month

Emissions from the decommissioning phase of the Proposed Project were estimated using CalEEMod. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant, CalEEMod defaults, and best engineering judgement.

Default values for equipment mix, horsepower, and load factor provided in CalEEMod were used for all construction equipment. For the analysis, it was generally assumed that heavy-duty equipment would be operating at the site 5 days per week. For the purposes of estimating emissions, it was assumed that worker trips and truck trips would be made to the site independently; however, it is likely that workers would drive trucks to and from the site for deliveries rather than driving in a separate vehicle.

Table 2.2-8, Estimated Maximum Daily Decommissioning Criteria Air Pollutant Emissions – Unmitigated, shows the estimated maximum daily decommissioning emissions associated with the construction phase of the Proposed Project.

As shown in Table 2.2-8, maximum daily decommissioning emissions would not exceed the thresholds for VOC, NO_x, CO, SO_x, and $PM_{2.5}$. Emissions of PM_{10} would exceed the daily emissions threshold of significance.

The Proposed Project would result in the generation of emission during construction that would exceed the County's SLTs for NO_X, PM_{10}, and $PM_{2.5}$. The exceedance of these SLTs would result in a **potentially significant** impact (**Impact AQ-2**), and a **potentially cumulatively considerable** impact for particulate matter, for which the County is in nonattainment (**Impact AQ-CUM-1**). Mitigation would be required for these impacts.

Switchyard

Construction of the switchyard and associated in and out connection in and out legs would result in minimal construction-related emissions. General construction equipment modeling assumptions for construction of the switchyard are provided in Table 7 in Appendix C. Construction of the switchyard would result in a minimal, temporary addition of pollutants to the local airshed caused

by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application, and internal haul trucks) and off-site sources (e.g., vendor trucks and worker vehicle trips).

For purposes of estimating switchyard emissions, and based on information provided by the applicant, it is assumed that construction of the switchyard would commence in March 2021[8] and would last approximately 9 months. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate). The majority of the phases listed below would occur concurrently and would not occur sequentially in isolation. Detailed construction equipment modeling assumptions are provided in Appendix A, CalEEMod Outputs, of Appendix C.

- Site Preparation 1 – Switchyard: 1 month
- Conductor Installation 1: 1 month
- Site Preparation 2 – Switchyard: 1 month
- Trenching – Switchyard: 1 month
- Paving – Switchyard: 2 weeks
- Site Preparation – Transmission Line: 2 weeks
- Operate Air Tools: 4 months
- Structure Installation: 1.5 months
- Conductor Installation 2: 1 month
- Erect Structures: 1 month

Emissions from the construction phase of the switchyard were estimated using CalEEMod. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant, CalEEMod defaults, and best engineering judgement.

Default values for equipment mix, horsepower, and load factor provided in CalEEMod were used for all construction equipment. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week. For the purposes of estimating emissions, it was assumed that worker trips and truck trips would be made to the site independently; however, it is likely that workers would drive trucks to and from the site for deliveries rather than driving in a separate vehicle.

[8] The analysis assumes a construction start date of March 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Estimated emissions associated with construction of the switchyard are provided in Table 2.2-9, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions Switchyard – Unmitigated. As shown in Table 2.2-9, construction criteria pollutant emission impacts associated with the switchyard would not exceed the County's significance thresholds. Impacts would be **less than significant**.

2.2.4.2 Cumulatively Considerable Net Increase of Criteria Pollutants (Operation)

Guidelines for the Determination of Significance

The guidelines for the consideration of operational cumulatively considerable net increases are treated differently due to the mobile nature of the emissions. The SDAB's RAQS, based on growth projections derived from the allowed general plan densities, are updated every 3 years by SDAPCD and lay out the programs for attaining the CAAQS and NAAQS for O_3 precursors. It is assumed that a project that conforms to the County General Plan, and does not have emissions exceeding the screening-level thresholds, will not create a cumulatively considerable net increase to O_3 since the emissions were accounted for in the RAQS.

The following guidelines for determining significance must be used for determining the cumulatively considerable net increases during the operational phase:

- A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM_{10}, $PM_{2.5}$, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase.
- Projects that cause road intersections to operate at or below a level of service E (analysis only required when the addition of peak-hour trips from the project and the surrounding projects exceeds 2,000) and create a CO hotspot create a cumulatively considerable net increase of CO.

Analysis

With regard to cumulative impacts associated with O_3 precursors, in general, if a project is consistent with community and general plans, it has been accounted for in the O_3 attainment demonstration contained within the RAQS. As such, it would not cause a cumulatively significant impact on the ambient air quality for O_3.

The Proposed Project would be consistent with the underlying zoning for the site parcels, which would mean that the Proposed Project was currently included within the SIP and RAQS; therefore, operational cumulative emissions would be accounted for in the RAQS, and the impact would be less than cumulative considerable.

Operation of the Proposed Project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from workers and stationary sources, including one emergency generator. As discussed in Section 3.3 of Appendix C, Operational Emissions Methodology, criteria air pollutant emissions associated with long-term operations were quantified using CalEEMod.

CalEEMod Version 2016.3.2 uses vehicle emission factors from EMFAC2014, which take into account various statewide and federal mobile source strategies and regulations. No mobile source regulatory measures were quantitatively assumed in addition to regulations included in EMFAC2014 as incorporated into CalEEMod.

Emissions from the operational phase of the Proposed Project were estimated using CalEEMod Version 2016.3.2. Operational year 2022 was assumed as the first full year upon construction completion.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for greenhouse gases in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. There would be no natural gas service to the site. Therefore, no energy-related criteria air pollutant emissions were quantified for the Proposed Project.

Mobile Sources

Mobile sources for the Proposed Project would primarily be motor vehicles (automobiles and light-duty trucks) traveling to and from the Project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Based on applicant provided data and the Local Mobility Analysis for the Proposed Project (Appendix Q), the Proposed Project is anticipated to generate 8 one-way trips per day by worker vehicles and 4 one-way trips per day by vendor trucks traveling to and from San Diego. This is unlikely as the worker and vendor trips would occur only when maintenance is needed and not on a regular basis. The emissions included within this source category are conservative. CalEEMod default data, including trip characteristics, variable start information, and emissions factors were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources.

Proposed-Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. CalEEMod default emissions factors and vehicle fleet mix were conservatively used for the model inputs to estimate daily emissions from proposed vehicular

sources.[9] Emission factors representing the vehicle mix and emissions for 2022 were used to estimate emissions associated with full build-out of the Proposed Project.

Stationary Sources

The Proposed Project would include a 1.5 MW diesel emergency generator at the substation. The generator was assumed to operate for testing and maintenance approximately 30 minutes each month for a total of up to 52 hours per year, in accordance with SDAPCD Rule 69.4.1. The CalEEMod default emission factors for emergency generators were used to estimate emissions from this source. See Appendix A of Appendix C for additional information.

Table 2.2-10, Estimated Maximum Daily Operational Emissions – Proposed Project, presents the maximum daily emissions associated with operation of the Proposed Project after all phases of construction have been completed in 2022.

As shown, daily operational emissions generated by the Proposed Project would not exceed the County's threshold for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$. As discussed in Section 2.2.3.1, Analysis of Proposed Project Effects and Determination as to Significance, the Proposed Project would conform to the RAQS as the Proposed Project would generate fewer emissions than the current residential zoning. Furthermore, in the Proposed Project would not generate traffic that would exceed the screening criteria of LOS E or 2,000 trips per day (Appendix Q). Impacts would be **less than significant**.

Switchyard

Operation of the switchyard would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from workers. As discussed in Section 3.3, Operational Emissions Methodology, of Appendix C, criteria air pollutant emissions associated with long-term operations were quantified using CalEEMod.

CalEEMod was used to estimate potential switchyard -generated operational greenhouse gas emissions from mobile sources and off-road equipment. Emissions from each category are discussed in the following text. Operational year 2022 was assumed as the first full year of operation upon construction completion.

[9] Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. The default vehicle mix (vehicle class distribution including automobiles, trucks, buses, motorcycles) provided in CalEEMod 2016.3.2, which is based on CARB's Mobile Source Emissions Inventory model, EMFAC Version 2014, was applied.

Energy Sources

There would be no natural gas service to the site. Therefore, no energy-related criteria air pollutant emissions were quantified for the switchyard.

Mobile Sources

Based on applicant provided data, the switchyard would not have regular vehicle trips but would require vehicle trips during scheduled and un-scheduled maintenance. CalEEMod default emissions factors and vehicle fleet mix were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources. Emission factors representing the vehicle mix and emissions for 2022 were used to estimate emissions associated with full build-out of the switchyard.

Off-Road Equipment

The use of various pieces of off-road equipment is necessary for the different maintenance activities occurring for the switchyard, transmission line tie-in, right-of-way repair, pole brushing, and repair or replacement of equipment. The different types of equipment and daily use estimates were provided by the applicant. The CalEEMod defaults were assumed for the off-road equipment horsepower, emission factors, and load factors.

Table 2.2-11, Estimated Maximum Daily Operational Emissions – Switchyard, presents the maximum daily emissions associated with operation of the Proposed Project after all phases of construction have been completed in 2022. As shown, daily operational emissions generated by the switchyard would not exceed the County's threshold for VOCs, NOx, CO, SOx, PM_{10}, or $PM_{2.5}$. The switchyard would conform to the RAQS as the Proposed Project would generate fewer emissions than the current residential zoning. Furthermore, in the switchyard would not generate traffic that would exceed the screening criteria of LOS E or 2,000 trips per day (Appendix Q). Impacts would be **less than significant**.

2.2.5 Significance of Impacts Prior to Mitigation

Based on the analyses above, the Proposed Project would have the following potentially significant impacts prior to mitigation:

Impact AQ-1 The cancer risk during construction would exceed the County's significance threshold without T-BACT.

Impact AQ-2 A significant direct impact on air quality with regard to construction-related emissions of NO_x, PM_{10}, and $PM_{2.5}$, and, therefore, also a significant cumulatively considerable net increase in those emissions.

Impact AQ-CUM-1 A significant cumulative impact on air quality with regard to construction-related emissions of PM_{10} and $PM_{2.5}$, for which the County is in nonattainment.

2.2.6 Mitigation Measures

M-AQ-1 Prior to the County of San Diego's (County's) approval of any construction or decommissioning-related permits, the Proposed Project applicant or its designee shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions:

a. Heavy-duty diesel-powered construction equipment shall be equipped with Tier 4 Final or better diesel engines for engines 75 horsepower or greater. The County shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.

b. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions.

c. All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

d. When construction equipment units that are less than 50 horsepower is employed, that equipment shall be electrical or natural gas-powered, where available.

With implementation of M-AQ-1, the Proposed Project would require the use of Tier 4 Final construction equipment. Use of Tier 4 Final construction equipment would be considered T-BACT and the County's significance threshold would be 10 in 1 million, instead of the 1.0 in 1 million without implementation of T-BACT, as discussed in Section 2.2.3.

M-AQ-2 Prior to the County of San Diego's (County's) approval of any grading permits and during Proposed Project construction, a Fugitive Dust Control Plan shall be prepared demonstrating compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 and County Code Section 87.428 (Grading Ordinance), to the satisfaction of the County. The Project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM_{10} emissions as part of the Fugitive Dust Control Plan. All measures shall be designated on Grading and Improvement Plans.

a. Prior to construction activities, the Project applicant shall employ a construction relations officer who shall address community concerns regarding on-site construction activity. The Project applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who shall document complaints and concerns regarding on-site

construction activity. The sign shall be placed in easily accessible locations and noted on Grading and Improvement Plans.

b. Grading areas shall be watered, or another SDAPCD-approved dust control non-toxic agent shall be used, at least three times daily, to minimize fugitive dust only where chemical stabilizers are not used.

c. All permanent roads and the paved access roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. Foundations shall be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earth-moving operations.

d. Grading areas shall be stabilized as quickly as possible to minimize fugitive dust.

e. Wheel washers, grates, rock, or road washers shall be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads.

f. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.

g. Haul trucks shall be covered or at least 2 feet of freeboard shall be maintained to reduce blow-off during hauling.

h. A 15-mile-per-hour speed limit on unpaved surfaces shall be enforced.

i. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.

2.2.7 Conclusion

The following discussion provides a synopsis of the conclusions reached in each of the above impact analyses, and the level of impact that would occur after mitigation measures are implemented, where applicable.

Conformance with the Regional Air Quality Strategy

The emissions from the buildout of the currently zoned uses on the Project site were shown to be greater than that of the Proposed Project based on the daily trips and annual VMT. Therefore, the potential criteria emissions from the site would not be in exceedance of those assumed in the SIP and RAQS. Therefore, the Proposed Project would not result in a cumulatively considerable

contribution to regional O_3 concentrations or other criteria pollutant emissions. Impacts would be **less than significant**.

Impacts to Sensitive Receptors

Carbon Monoxide Hotspots

Construction traffic in 2021, which represents the highest level of construction-related traffic, would not result in traffic volumes that would cause a CO hotspot; therefore, impacts related to CO near sensitive receptors during construction would be **less than significant**. Decommissioning would result in less traffic than construction and would not exceed the County's screening thresholds. Similarly, operation of the Proposed Project would not expose sensitive receptors to localized high concentrations of CO or contribute traffic volumes to intersections that would cause a CO hotspot. The traffic volumes and levels of service during operation would not exceed County thresholds; therefore, potential operational CO hotspot impacts would be **less than significant**.

Toxic Air Contaminants

Impacts related to exposure to TACs would be above the County's thresholds for cancer risk during construction activities; therefore, impacts would be potentially significant (**Impact AQ-1**). The acute and chronic non-cancer health hazard indices and lead exposure were below the County's thresholds. With implementation of **M-AQ-1** (as shown in Table 2.2-12), impacts related to cancer risk would be below the County's thresholds during construction activities; therefore, impacts would be **less than significant**.

The Proposed Project does not propose any major operational sources of TAC emissions. As such, the Proposed Project would not result in substantial TAC emissions that may affect nearby receptors, nor would the Proposed Project be exposed to nearby sources of TACs. Impacts would be **less than significant**.

Other Emissions

The Proposed Project's construction and operational activities are not anticipated to expose a substantial number of people to objectionable odors. Potential odor impacts would be **less than significant.**

Cumulatively Considerable Impacts

Construction and decommissioning of the Proposed Project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the daily construction emissions would exceed the County's daily significance thresholds for NO_x, PM_{10}, and $PM_{2.5}$. Daily construction emissions

would not exceed the County's daily thresholds for VOCs, CO, or SO_X. Air quality impacts resulting from construction, therefore, would be **potentially significant** (**Impact AQ- -2**) and **potentially cumulatively significant** (**Impact AQ-CUM-1**). Decommissioning of the Proposed Project would exceed the County's daily significance thresholds for PM_{10} emissions. Cumulative construction and operational emissions were found to be less than significant when considering the Proposed Project in combination with other existing and foreseeable future projects in the Proposed Project vicinity. Following implementation of **M-AQ-1** and **M-AQ-2**, cumulative construction and decommissioning emissions would be **less than significant** and **less than cumulatively considerable** (as shown in Tables 2.2-13 and 2.2-14).

Maximum daily operational emissions of VOC, NO_x, CO, SO_X, PM_{10}, and $PM_{2.5}$ generated by the Proposed Project would not exceed significance thresholds. Thus, impacts would be **less than significant**.

Table 2.2-1
San Diego Air Basin Attainment Classification

Pollutant	Federal Designation	State Designation
O_3 (1-hour)	Attainment[a]	**Nonattainment**
O_3 (8-hour – 1997) (8-hour – 2008)	Attainment (Maintenance) **Nonattainment (Moderate)**	**Nonattainment**
NO_2	Unclassifiable/Attainment	Attainment
CO	Attainment (Maintenance)	Attainment
SO_2	Unclassifiable/Attainment	Attainment
PM_{10}	Unclassifiable/Attainment	**Nonattainment**
$PM_{2.5}$	Unclassifiable/Attainment	**Nonattainment**
Lead	Unclassifiable/Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility-Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	No Designation

Sources: EPA 2016b (federal); CARB 2016b (state).
Notes:
O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Attainment = meets the standards; Attainment (Maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.
[a] The federal 1-hour standard of 0.12 parts per million was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

Table 2.2-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	*2018*	*2016*	*2017*	*2018*
Ozone (O_3)										
Otay Mesa-Donovan	ppm	Maximum 1-hour concentration	State	0.09	0.092	0.097	0.092	0	1	0
	ppm	Maximum 8-hour concentration	State	0.070	0.075	0.082	0.079	4	6	1
			Federal	0.070	0.075	0.082	0.078	4	6	1
Nitrogen Dioxide (NO_2)										
Otay Mesa-Donovan	ppm	Maximum 1-hour concentration	State	0.18	0.067	0.074	0.054	0	0	0
			Federal	0.100	0.067	0.074	0.054	0	0	0
	ppm	Annual concentration	State	0.030	0.008	0.008	0.006	0	0	0
			Federal	0.053	0.008	0.008	0.006	0	0	0

Table 2.2-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	*2018*	*2016*	*2017*	*2018*
Carbon Monoxide (CO)										
El Cajon-Floyd Smith Drive	ppm	Maximum 1-hour concentration	State	20	1.6	1.5	1.4	0	0	0
			Federal	35	1.6	1.5	1.4	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	1.3	1.4	1.1	0	0	0
			Federal	9	1.3	1.4	1.1	0	0	0
Sulfur Dioxide (SO_2)										
El Cajon-Floyd Smith Drive	ppm	Maximum 1-hour concentration	Federal	0.075	0.0006	0.001	0.004	0	0	0
	ppm	Maximum 24-hour concentration	Federal	0.140	0.0002	0.0004	0.0004	0	0	0
	ppm	Annual concentration	Federal	0.030	0.0001	0.0011	0.0001	0	0	0
Coarse Particulate Matter (PM_{10})[a]										
Otay Mesa-Donovan	µg/m³	Maximum 24-hour concentration	State	50	79	69	55	54.1 (9)	24.4 (4)	18.3 (3)
			Federal	150	79	68	55	0	0	0
	µg/m³	Annual concentration	State	20	31.3	26.9	26.3	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
El Cajon-Floyd Smith Drive	µg/m³	Maximum 24-hour concentration	Federal	35	23.9	42.7	41.9	0.0 (0)	— (1)	2.7 (1)
	µg/m³	Annual concentration	State	12	8.7	—	10.0	—	—	—
			Federal	12.0	8.7	—	10.0	—	—	—

Sources: CARB 2016c; EPA 2016c.

Notes: — = not available or applicable; µg/m³ = micrograms per cubic meter; ppm = parts per million

Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.

Exceedances of federal and state standards are only shown for O_3. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.

El Cajon-Floyd Smith Drive monitoring station is located at 10537 Floyd Smith Drive, El Cajon, California.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

Table 2.2-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day Average	1.5 μg/m³	—	—
	Calendar Quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016b.

Notes: μg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site

in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

i On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Table 2.2-4
SDAPCD Air Quality Significance Thresholds

Construction Emissions			
Pollutant	*Total Emissions (Pounds per Day)*		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_x)	250		
Oxides of Sulfur (SO_x)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOC)	75[a]		
Operational Emissions			
Pollutant	*Total Emissions*		
	Pounds per Hour	*Pounds per Day*	*Tons per Year*
Respirable Particulate Matter (PM_{10})	—	100	15
Fine Particulate Matter ($PM_{2.5}$)	—	55	10
Oxides of Nitrogen (NO_x)	25	250	40
Sulfur Oxides (SO_x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	—	3.2	0.6
Volatile Organic Compounds (VOC)	—	75[a]	13.7

Sources: SDAPCD Rules 1501 (SDAPCD 1995) and 20.2(d)(2) (SDAPCD 2016c).

a VOC threshold based on the threshold of significance for VOC from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance (County of San Diego 2007).

Table 2.2-5
Zoning for Proposed Project Parcels

Assessor's Parcel Number	Acres	Existing Zoning	Zoning Description	Density (units/ acre)	Units Built	CalEEMod Land Use
614-100-20	90.22	S88	MULTIPLE RURAL USE 1 DU/4,8,20 ACRES	0.25	23	Single Family Residential
614-100-21	27.27	S88	MULTIPLE RURAL USE 1 DU/4,8,20 ACRES	0.25	7	Single Family Residential
614-110-04	2.74	S88	SPECIFIC PLAN AREA	0.05	0	Single Family Residential
660-020-05	267.56	S88	SPECIFIC PLAN AREA	0.05	13	Single Family Residential
660-020-06	39.93	S88	SPECIFIC PLAN AREA	0.05	2	Single Family Residential
660-150-04	34.96	S80	RESIDENTIAL 1 DU/1,2,4 ACRES	1	35	Single Family Residential
660-150-07	19.19	S80	SPECIFIC PLAN AREA	0.05	1	Single Family Residential
660-150-08	23.2	S80	SPECIFIC PLAN AREA	0.05	1	Single Family Residential
660-150-10	25.71	S80	SPECIFIC PLAN AREA	0.05	1	Single Family Residential
660-150-14	0.92	S88	RESIDENTIAL 14.5 DU/ACRE	14.5	13	Residential Mid-Rise Apartments
660-150-17	15.18	S88	RESIDENTIAL 1 DU/1,2,4 ACRES	1	15	Single Family Residential
660-150-18	169.74	S88	RESIDENTIAL 14.5 DU/ACRE	14.5	2,461	Residential Mid-Rise Apartments
660-170-09	0.06	RR	RESIDENTIAL 1 DU/1,2,4 ACRES	1	0	Single Family Residential
661-010-02	9.11	S92	MULTIPLE RURAL USE 1 DU/4,8,20 ACRES	0.25	2	Single Family Residential
661-010-15	61.13	S88	SPECIFIC PLAN AREA	0.05	3	Single Family Residential
661-010-26	80.58	S88	SPECIFIC PLAN AREA	0.05	4	Single Family Residential
661-010-27	180.7	S88	SPECIFIC PLAN AREA	0.05	9	Single Family Residential
661-010-30	166.38	S88	MULTIPLE RURAL USE 1 DU/4,8,20 ACRES	0.25	42	Single Family Residential
661-060-12	36.27	S88	MULTIPLE RURAL USE 1 DU/4,8,20 ACRES	0.25	9	Single Family Residential
661-060-22	37.88	S80	SPECIFIC PLAN AREA	0.05	2	Single Family Residential
660-140-06	1.79	S88	SPECIFIC PLAN AREA	0.05	0	Single Family Residential
660-140-08	16.91	S88	RESIDENTIAL 1 DU/1,2,4 ACRES	1	17	Single Family Residential
660-150-21	37.5	S88	RESIDENTIAL 1 DU/1,2,4 ACRES	1	38	Single Family Residential
660-150-16	0.92	S88	SPECIFIC PLAN AREA	0.05	0	Single Family Residential
Single Family Residential					224	
Residential Mid-Rise Apartments					2475	

Table 2.2-6
Construction Activity Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Proposed Project Impact	CEQA Threshold	Level of Significance
Cancer risk	Per Million	2.93	1.0	**Potentially Significant**
Chronic non-cancer health hazard index	Not Applicable	0.14	1.0	Less than Significant
Acute non-cancer health hazard index	Not Applicable	0.03	1.0	Less than Significant
Lead exposure	µg/m^3	0.0005	0.12	Less than Significant

Source: Appendix C
CEQA = California Environmental Quality Act; µg/m^3 = microgram per cubic meter.

Table 2.2-7
Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2020	11.26	179.60	80.93	0.40	1,001.28	104.61
2021	28.42	252.29	199.61	0.88	368.68	49.81
Maximum	*28.42*	*252.29*	*199.61*	*0.88*	*1,001.28*	*104.61*
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**

Source: See Appendix C.
Notes:
VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Emissions represent maximum daily construction activities from sequential construction phases at any one point for a given year.
Estimated emissions include compliance with all regulations and SDAPCD Rule 55.

Table 2.2-8
Estimated Maximum Daily Decommissioning Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2057	7.63	32.29	87.54	0.41	200.74	26.24
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**Yes**	**No**

Source: See Appendix C.
Notes:
VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter.
Emissions represent maximum daily construction activities from sequential construction phases at any one point for a given year.
Estimated emissions include compliance with all regulations and SDAPCD Rule 55.

Table 2.2-9
Estimated Maximum Daily Construction
Criteria Air Pollutant Emissions Switchyard – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2020	8.42	89.06	45.93	0.13	42.63	10.84
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix C for complete results.
Notes:
VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter.
Emissions represent maximum daily activities.

Table 2.2-10
Estimated Maximum Daily Operational Emissions – Proposed Project

Emission Source	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Mobile	12.30	26.66	18.80	2.82	6.69	1.56
Stationary	1.65	7.38	4.21	0.01	0.24	0.24
Offroad	0.56	4.57	4.45	0.01	0.16	0.14
Total Maximum Daily Emissions	**14.51**	**38.61**	**27.46**	**2.84**	**7.09**	**1.94**
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes:
VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Emissions reflect operational year 2022.
See Appendix C for complete results.

Table 2.2-11
Estimated Maximum Daily Operational Emissions – Switchyard

Emission Source	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Mobile	12.10	24.83	17.10	2.81	4.42	1.20
Offroad	0.56	4.57	4.45	0.01	0.16	0.14
Total	**12.66**	**29.40**	**21.55**	**2.82**	**4.58**	**1.34**
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes:
VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Emissions reflect operational year 2022.
See Appendix C for complete results.

Table 2.2-12
Construction Activity Health Risk Assessment Results – Mitigated

Impact Parameter	Units	Proposed Project Impact	CEQA Threshold	Level of Significance
Cancer Risk	Per Million	0.2	10.0	Less than Significant
Chronic non-cancer health hazard index	Not Applicable	0.009	1.0	Less than Significant
Acute non-cancer health hazard index	Not Applicable	0.002	1.0	Less than Significant
Lead Exposure	µg/m^3	0.0002	0.12	Less than Significant

Sources: Appendix C
Notes: CEQA = California Environmental Quality Act; µg/m^3 = microgram per cubic meter.

Table 2.2-13
Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2020	6.33	113.51	82.60	0.40	64.60	8.93
2021	19.85	118.23	206.29	0.88	72.46	19.51
Maximum	*19.85*	*118.23*	*206.29*	*0.88*	*72.46*	*19.51*
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix C.
Notes:
VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Emissions represent maximum daily construction activities from sequential construction phases at any one point for a given year.
Estimated emissions include compliance with all regulations, M-AQ-1, and M-AQ-2.

Table 2.2-14
Estimated Maximum Daily Decommissioning Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2057	5.71	22.63	92.44	0.41	62.07	12.35
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix C.
Notes:
VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Emissions represent maximum daily construction activities from sequential construction phases at any one point for a given year.
Estimated emissions include compliance with all regulations and SDAPCD Rule 55.

2.3 Biological Resources

This section of the draft Environmental Impact Report (EIR) evaluates impacts to biological resources of the Project site and vicinity that could result from future development of the proposed JVR Energy Park Project (Proposed Project). The analysis focuses on possible resultant impacts to special status plant and wildlife species, riparian habitats and other sensitive natural communities, jurisdictional wetlands and waters, habitat connectivity and wildlife movement corridors, and consistency with applicable plans.

Information contained in this section is based on review of technical documentation, including the following:

- Biological Resources Technical Report for the JVR Energy Park Project (Appendix D)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the following: impacts to special status wildlife and plant species and their habitat; migratory birds; impacts to wetlands and riparian ecosystems; wildlife corridors/movement areas; and indirect impacts to biological resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated reserve lands. The NOP comments also requested that the EIR provide the following: jurisdictional delineation of creeks and their associated riparian habitats; a complete assessment of the flora and fauna within and adjacent to the Project site; a current inventory of biological resources associated with each habitat type on the Project site; and an inventory of rare, threatened, and other sensitive species on site. The NOP comments also state that the EIR should address the Planning Agreement for the North and East County Multiple Species Conservation Program (MSCP). These concerns and topics are addressed in the Biological Resources Report (Appendix D) and this section of the EIR. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.3.1 Existing Conditions

This section summarizes the existing biological resources within the Project site and identifies the resources that could be affected by the Proposed Project. Biological resources include living organisms and the physical environment where they occur. Biological resources are categorized in this section into habitat types/vegetation communities, flora and fauna, special status plant and wildlife species, jurisdictional wetlands and waters, and wildlife corridors within the Project site. This section considers information obtained through a review of pertinent literature and through field reconnaissance.

The Project site is generally an arid desert environment that supports a limited range of habitats and biological communities. These habitats and communities include mesquite bosque, desert scrub, and fallow agriculture. Additionally, these habitats and communities may vary depending

on the ecoregion, soils and substrate, and topography. The general topography of the site is relatively level to gently rolling, with steeper terrain within the western portion of the Project site. The entire Project site is within the draft East County MSCP planning area (see Figure 2.3-1, Regional Context).

Literature Review

A literature review was conducted to evaluate the environmental setting of the biological study area and identify potential special-status biological resources that may be found on the Project site. The review included the following:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2019a) including U.S. Geological Survey (USGS) 7.5-minute Jacumba, Carrizo Mountain; Sweeney Pass; Sombrero Peak, In-Ko-Pah Gorge, Live Oak Springs, and Tierra del Sol quadrangles
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019) for the Cucamonga Peak and surrounding 7.5-minute USGS quadrangles
- U.S. Fish and Wildlife Service (USFWS) database (USFWS 2018a) including USGS 7.5-minute Jacumba, Carrizo Mountain; Sweeney Pass; Sombrero Peak, In-Ko-Pah Gorge, Live Oak Springs, and Tierra del Sol quadrangles
- SanBIOS Database (SanGIS 2019) including USGS 7.5-minute Jacumba and In-Ko-Pah Gorge quadrangles
- U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey (USDA 2018) for the potential to support rare vegetation communities, plants, and/or wildlife
- County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010)
- Google Earth (2018)
- USFWS National Wetlands Inventory (USFWS 2018b)
- San Diego County Bird Atlas (Unit 2004)
- San Diego Mammal Atlas (Tremor 2017)

Field Reconnaissance

Biological field surveys for the Proposed Project were conducted by Dudek biologists in 2018 and 2019. Surveys consisted of vegetation mapping, a formal jurisdictional delineation, habitat assessment and focused surveys for burrowing owl (*Athene cunicularia*; CDFW Species of Special

Concern [SSC]), Quino checkerspot butterfly (*Euphydryas editha quino*), rare plants, and early and late spring focused surveys for nesting raptors.

All field surveys were completed according to County of San Diego (County) requirements and included directed searches and habitat assessments for the County list of potential special-status faunal and floral species. The entire Project site was surveyed by personnel qualified to perform biological surveys. Special-status biological resources were mapped and analyzed together with Proposed Project plans.

2.3.1.1 Regional Overview

The 1,356-acre Project site is located in the unincorporated community of Jacumba in southeast San Diego County within private lands. The Project site is bordered by Interstate (I) 8 to the north and the U.S./Mexico border to the south. The community of Jacumba Hot Springs is located adjacent to the southwestern portion of the Project site. Currently undeveloped land in the Proposed Project vicinity includes State Park lands (Anza-Borrego Desert State Park), federal Bureau of Land Management lands, and private lands. The Proposed Project development footprint is located within the boundary of the 643-acre Major Use Permit (MUP) area.

2.3.1.2 Habitat Types/Vegetation Communities

Eleven vegetation communities and/or land covers occur within the Project site, including nine sensitive communities (County of San Diego 2010). A description of the vegetation communities and land covers in the study area is provided below. The acreages are listed in Table 2.3-1, Vegetation Communities and Land Covers, and their distribution on the Project site are shown on the biological resources map (Figure 2.3-2, Biological Resources).

Disturbed Habitat (11300)

Disturbed habitat is characterized by predominantly non-native species introduced and established through human action (Oberbauer et al. 2008). Oberbauer further describes disturbed habitat as "areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal" (Oberbauer et al. 2008). A total of 55 acres of areas such as dirt roads and other areas lacking vegetation due to previous disturbance are mapped as disturbed habitat within the Project site.

Fallow Agriculture (No code)

Within the Project site, 508.46 acres are mapped as "fallow agriculture." This acreage includes the previous agriculture field that has been fallow for over eight years and has since revegetated in varying degrees of cover with non-native (ruderal) forbs and grasses. Some portions of these areas are nearly entirely dominated by Russian thistle (*Salsola tragus*), while others are more sparsely dominated by a variety of non-native mustards (*Brassica tournefortii*, *Hirschfeldia incana,* and *Sysimbrium* spp.), redstem stork's bill (*Erodium cicutarium*), mallows (*Malva* spp.), and punctureveine (*Tribulus terrestris*). The fallow agriculture areas also support a variety of non-native grasses (Bromus spp., smooth barley [*Hordeum murinum* ssp. *glaucum*], and common Mediterranean grass [*Schismus barbatus*]); however, they do not represent a dominant cover within these areas. Vegetation sampling done at representative locations throughout the fallow agriculture documented less than 1% cover of brome and smooth barley within these areas. The common Mediterranean grass occurs in various patches ranging from 0% cover in some areas to 25% cover in smaller areas where it was found with a variety of non-native mustards and other forbs described above. Common Mediterranean grass is a low-growing grass, typically 2 to 16 centimeters in height (Jepson Flora Project 2020) and by itself is not characteristic of non-native grassland, which is characterized by grasses 0.2 to 1 meter high in height (Oberbauer et al. 2008). Further, the County characterizes non-native grassland in its Report Format and Content Requirements: Biological Resources (County of San Diego 2010) with grasses typically comprising at least 30% of the vegetation with characteristic species consisting of "foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), wild oats (*Avena* spp.), fescues (*Vulpia* spp.), red-stem filaree (*Erodium cicutarium*), mustards (*Brassica* spp.), lupines (*Lupinus* spp.), and goldfields (*Lasthenia* spp.), among others." While some of these species co-occur, the Project site still lacks the bromes (as a dominant or co-dominant), wild oats, and fescues that are characteristic of non-native grassland.

Additionally, because these areas are not comprised of active agriculture, they do not meet the definition of "agriculture" described by Oberbauer et al. (2008). Because the fallow agriculture field does not fit neatly into the agriculture, non-native grassland, or disturbed habitat categories, upon considering the species present within these areas (primarily mustards and Russian thistle) and the lack of overall function as a grassland community, these areas were classified as fallow agriculture, which is not specifically defined in Oberbauer et al. (2008) or Holland (1986).

Urban/Developed (12000)

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of

debris or other materials (Oberbauer et al. 2008). A total of 26 acres of urban/developed land currently exists within the Project site.

Sonoran Mixed Woody Scrub (33210)

Sonoran mixed woody scrub is characterized as being predominantly woody shrubs, 1.6 to 9.8 feet tall, and includes a mixture of three or more woody species (Oberbauer et al. 2008). Characteristic species include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and brittle bush (*Encelia farinosa*). In San Diego County, this vegetation community commonly occurs on lower alluvial fans, above the desert floor, and below the coarse mountain substrates (Oberbauer et al. 2008). A total of 139.34 acres of Sonoran mixed woody scrub occurs within the Project site.

Sonoran Mixed Woody and Succulent Scrub (33220)

Sonoran mixed woody and succulent scrub occurs in the Colorado Desert and is dominated by 1.6 to 9.8 feet shrubs and cacti and other stem succulents (Oberbauer et al. 2008). Common characteristic species include desert agave (*Agave deserti*), brittle bush, and Mojave yucca (*Yucca schidigera*). In San Diego County, this vegetation community is dominated by more than 50% cover of succulent species (Oberbauer et al. 2008). A total of 390.34 acres of Sonoran mixed woody scrub and succulent scrub occurs within the Project site.

Big Sagebrush Scrub (35210)

Big sagebrush scrub is characterized by mostly soft-woody shrubs approximately 1.6 to 6.5 feet tall. This vegetation community occurs on a variety of soils and terrain, including well-drained slopes to fine-textured valley soils. In San Diego County, big sagebrush scrub occurs in alluvial washes along dry margins of high desert and montane valleys (Oberbauer et al. 2008). Characteristic species include big sagebrush (*Artemisia tridentata*), fourwing saltbush (*Atriplex canescens*), black brush (*Coleogyne ramosissima*), and ashy ryegrass (*Elymus cinereus*). A total of 0.26 acres of big sagebrush scrub occurs within the Project site.

Desert Saltbush Scrub (36110)

Desert saltbush scrub is characterized by spaced low, microphyllous 1- to 3.2-foot-tall shrubs typically dominated by allscale (*Atriplex polycarpa*) and alkali goldenbush (*Isocoma acradenia* var. *eremophila*) (Oberbauer et al. 2008). This vegetation community commonly occurs on fine-textured, poorly drained soils with high alkalinity in drier areas. Characteristic species include quailbush (*Atriplex lentiformis*), fourwing saltbush (*Atriplex canescens*), and spiny hop sage (*Grayia spinosa*). A total of 77.39 acres of desert saltbrush scrub occurs within the Project site.

Desert Sink Scrub (36120)

Desert sink scrub is characterized by widely spaced low, microphyllous 1- to 3.2-foot-tall shrubs (Oberbauer et al. 2008). Desert sink scrub is dominated by succulent chenopods and occurs on fine-textured, poorly drained soils with high alkalinity or salt content. Characteristic species include iodine bush (*Allenrolfea occidentalis*), fourwing saltbush (*Atriplex canescens*), and salt heliotrope (*Heliotropium curassavicum*). A total of 12.43 acres of desert sink scrub occurs within the Project site.

Disturbed Freshwater Marsh (52400)

Freshwater marsh is a wetland habitat that develops at permanently flooded sites by freshwater lacking a significant current (Oberbauer et al. 2008). Because it often is permanently flooded by fresh water, there is an accumulation of deep, peaty soils. It typically is dominated by species such as cattails (*Typha* spp.), sedge (*Carex* spp.), yellow nutsedge (*Cyperus esculentus*), and bulrushes (*Scirpus* spp.). The freshwater marsh was classified as a "disturbed" form of the community based on the presence of tamarisk and other non-native species comprising approximately 50% of the relative cover of shrubs and herbs. A total of 0.08 acres of disturbed freshwater marsh occurs within the Project site.

Tamarisk Scrub (63810)

Tamarisk scrub is a weedy monoculture of any of the several Tamarix species (Oberbauer et al. 2008). This vegetation community occurs on sandy or gravelly braided washes or intermittent streams, and occurs in areas following major disturbance. A total of 2.11 acres of tamarisk scrub occurs within the Project site.

Mesquite Bosque (61820)

Mesquite Bosque is characterized by an open to fairly dense, drought-deciduous streamside thorn forest with open annual and perennial grass understory (Oberbauer et al. 2008). This vegetation community is dominated by mesquite (*Prosopis glandulosa*) and additional characteristic species include alkali goldenbush, white bursage, quailbush, and fourwing saltbush. Salt grass (*Distichlis spicata*) and mustards (*Sisymbrium* spp.) are present in some of the understory, but much is bareground. Iodine bush (*Allenrolfea occidentalis*) occurs sporadically within some of the mesquite, but is not present at a high percent absolute cover to be considered co-dominant. Mesquite Bosque occurs on higher alluvial terraces and near washes, streambanks, alkali sinks, or outwash plains with substantial groundwater. A total of 133.61 acres of mesquite bosque occurs within the Project site.

Unvegetated Streambed

Several ephemeral drainages area mapped as unvegetated streambed. These do not conform to classifications in Oberbauer et al. 2008. A total of 10.56 acres of non-vegetated floodplain or channel occurs within the Project site.

2.3.1.3 Flora

A total of 255 vascular plant species, consisting of 187 native species (83%), and 38 non-native species (17%), were recorded within the Project site during initial surveys (Appendix B of Appendix D, List of Plant Species Observed). The majority of the plants observed within the disturbed habitat areas are non-native, disturbance related species, such as Russian thistle, shortpod mustard, Asian mustard, rocketsalad (*Eruca vesicaria* ssp. *sativa*), mustards (e.g., *Sisymbrium* spp., *Brassica tournefortii*, *Descurainia* spp., *Hirschfeldia incana*), burclover, bromes (*Bromus* spp.), and stork's bills (*Erodium* spp.). Commonly observed plants in the native scrub vegetation types include creosote, California buckwheat, California joint fir, common Mediterranean grass, desert woollystar, common deerweed, and cholla (*Cylindropuntia* spp.). Western honey mesquite is the dominant species in the mesquite bosque vegetation type.

2.3.1.4 Fauna

The Project site supports habitat for common upland and riparian wash species. Desert and Sonoran scrubs, as well as mesquite bosque and fallow agriculture within the Project site provide foraging and nesting habitat for migratory and resident birds, and serve as habitat for other wildlife species, including reptiles, invertebrates, and mammals.

There were 153 wildlife species observed in the Project site during the 2018 and 2019 surveys. Species observed were recorded during focused surveys, habitat assessments, vegetation mapping, and special-status plant surveys. A cumulative list of wildlife species observed during these surveys is provided in Appendix C of the Biological Technical Resources Report (Appendix D to this EIR), List of Wildlife Species Observed. Species richness within the Project site is moderate due to the property size, amount of undeveloped land, and the number of native upland habitats. Species richness is generally increased with the presence of more habitat types and ecotones. The Project site is dominated by three habitat types: scrub communities comprise approximately 46%, riparian communities comprise 9%, fallow agriculture comprises approximately 37.5%, and disturbed and developed areas comprise approximately 6% of the Project site. The number of species and the wildlife population levels recorded (i.e., number of individuals) are typical for undeveloped areas in this region, particularly those areas that support multiple upland habitat types. The Project site supports special-status wildlife species.

Reptiles and Amphibians

Seven species of reptile were observed within the Project site during the various surveys conducted. Some of the species observed include gophersnake (*Pituophis catenifer*), desert spiny lizard (*Sceloporus magister*), and coachwhip (*Coluber* sp.).

One special-status reptile, San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), was observed during surveys conducted in 2019.

Birds

A total of 90 species of birds were observed within the Project site during the surveys conducted in 2018 and 2019. Some of the species observed include Pacific-slope flycatcher (*Empidonax difficilis*), California quail (*Callipepla californica*), California scrub-jay (*Aphelocoma californica*), Say's phoebe (*Sayornis saya*), California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), red-tailed hawk (*Buteo jamaicensis*), and northern mockingbird (*Mimus polyglottos*).

Sixteen special-status or County Group list birds were observed: Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), tricolored blackbird (*Agelaius tricolor*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), Costa's hummingbird (*Calypte costae*), turkey vulture (*Cathartes aura*), Vaux's swift (*Chaetura vauxi*), northern harrier (*Circus cyaneus*), California horned lark (*Eremophila alpestris actia*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*) black-tailed gnatcatcher (*Polioptila melanura*), Lawrence's goldfinch (*Spinus lawrencei*), Brewer's sparrow (*Spizella breweri*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Mammals

A total of 15 species of mammals were detected within the Project site by direct observation or sign. Mammals observed within the Project site include coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus (Otospermophilus) beecheyi*). Mule deer (*Odocoileus hemionus*), and coyote are the only larger mammals known to use the site.

Two special-status or County Group list mammal was observed: San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and San Diego desert woodrat (*Neotoma lepida intermedia*). Dudek recorded a potential American badger (*Taxidea taxus*) den on site as well.

Invertebrates

A total of 41 species of invertebrates, 39 of which were butterflies, were identified within the Project site by direct observation. Commonly observed species within the Project site include

western pygmy-blue (*Brephidium exile*), funereal duskywing (*Erynnis funeralis*), and desert pearly marble (*Euchloe hyantis lotta*).

One special-status butterfly was observed: Quino checkerspot butterfly.

2.3.1.5 Special-Status Plant Species

Endangered, rare, or threatened plant species, as defined in the California Environmental Quality Act (CEQA) Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this report and include (1) endangered or threatened plant species recognized in the context of California Endangered Species Act (CESA) and the federal Endangered Species Act (FESA) (CDFW 2019b), (2) plant species with a California Rare Plant Rank (CRPR) 1 through 4 (CNPS 2019), and (3) plant species considered "sensitive" by the County of San Diego (Table 2 in County of San Diego 2010).

In considering rarity, the CNPS inventory of rare and endangered vascular plants of California was the primary reference (CNPS 2019). Use of the CNPS inventory is helpful because it clearly defines levels of endangerment and rarity for all of the species addressed in the CNPS inventory. The CNPS inventory divides its subject taxa into four ranks: CRPR 1 (which is further divided into 1A and 1B), CRPR 2 (which is further divided into 2A and 2B), CRPR 3, and CRPR 4. Plants with a CRPR of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years. Plants with a CRPR of 1B are rare throughout their range, with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. Plants with a CRPR of 2A are presumed extirpated because they have not been observed or documented in California for many years. Except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. Plants with a CRPR of 3 have not had sufficient information collected to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. All of the plants constituting CRPR 1A, 1B, 2A, 2B, and 3 meet the definitions of CESA of the California Fish and Game Code and are eligible for state listing. Plants with a CRPR of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, they are transferred to a more appropriate rank.

CRPR 4 may be considered significant locally, and it is strongly recommended that CRPR 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA based on CEQA Guidelines Section 15125(c) and/or 15380. This may be particularly appropriate for the following:

- The type locality of a CRPR 4 plant
- Populations at the periphery of a species' range

- Areas where the taxon is especially uncommon
- Areas where the taxon has sustained heavy losses
- Populations exhibiting unusual morphology or occurring on unusual substrates

In addition to CRPR 1–4 species, plant species listed on County Lists A through D (County of San Diego 2010) also were included in the consideration of sensitive plant species for this analysis.

Focused special-status plant surveys were conducted in 2019 within the rare plant survey area (Figure 2.3-3, Survey Areas) to determine the presence or absence of special-status plant species that are considered endangered, rare, or threatened under CEQA Guidelines Section 15380 (14 CCR 15000 et seq.) and by the County. Special-status plant species directly observed during focused surveys or known to occur in the surrounding region are described in Appendix D1 of the Biological Resources Technical Report (Appendix D to the EIR), Special-Status Plant Species Detected Within the Project Area. Plants that are not expected to occur are included in Appendix D2 of Appendix D, Special-Status Plant Species Not Expected to Occur Within the Project Area. Appendices D1 and D2 include all County Lists A–D species (County of San Diego 2010), as well as species recorded in the Jacumba quadrangle and the surrounding six quadrangles (CDFW 2019a; CNPS 2019; SDNHM 2018; USFWS 2018a). The potential-to-occur determination is based on elevation, habitat, and soils present within the Project site, and Dudek biologists' knowledge of biological resources in the area and regional distribution of each species.

Five sensitive plant species were observed during focused rare plant surveys conducted in 2019: pygmy lotus (*Acmispon haydonii*; County List A), Higgins' barberry (*Berberis higginsiae*), Colorado Desert larkspur (*Delphinium parishii* ssp. *subglobosum*; County List D), sticky geraea (*Geraea viscida*; County List B) and Palmer's grapplinghook (*Harpagonella palmeri*; County List D).

County List A and B Species

Plants categorized as County List A species are plants that are rare, threatened, or endangered in California and elsewhere. Plants categorized as County List B are rare, threatened, or endangered in California, but more common elsewhere (County of San Diego 2010). County List A and B species that have high or moderate potential to occur are described in more detail in Appendix D1 of the Biological Resources Technical Report (Appendix D to this EIR).

Pygmy Lotus (*Acmispon haydonii*; List A)

Pygmy lotus is a CRPR List 1B.3 (CNPS 2019) and County List A species (County of San Diego 2010). This perennial herb in the pea or bean family (Fabaceae) blooms between January and June. It occurs in creosote bush scrub and pinyon-juniper woodland habitats at elevations of 1,705 to 3,935 feet above mean sea level (amsl). It has been recorded in San Diego County and Baja California, Mexico (CNPS 2019).

This species was observed in the Project site.

Sticky Geraea (*Geraea viscida*; List B)

Sticky geraea is a CRPR 2B.2 (CNPS 2019) and a County List B species (County of San Diego 2010). A member of the sunflower (Asteraceae) family, this species blooms May through June in chaparral. Sticky geraea is a perennial herb that occurs at elevations of 1,475 to 5,575 feet amsl. It has been recorded in San Diego County and Baja California, Mexico (CNPS 2019).

This species was observed within the Project site.

County List C and D Species

Plants categorized as County List C species are plants that may be rare but more information is needed to determine their true rarity status. Plants categorized as County List D are of limited distribution and are uncommon, but are not presently rare or endangered (County of San Diego 2010). County List C and County List D species that have high potential to occur in the Project site are described below and included in Appendix D1 of Appendix D.

Colorado Desert Larkspur (*Delphinium parishii* ssp. *subglobosum*; List D)

Colorado Desert larkspur is a CRPR List 4.3 (CNPS 2019) and a County List D species (County of San Diego 2010). This perennial herb in the buttercup (Ranunculaceae) family blooms between March and June. It occurs in creosote bush scrub, chaparral, and pinyon-juniper woodland habitat at elevations of 1,965 to 5,905 feet amsl. It has been recorded in San Diego County and Baja California, Mexico (CNPS 2019).

This species was observed in the Project site.

Palmer's Grapplinghook (*Harpagonella palmeri*; List D)

Palmer's grapplinghook is a CRPR 4.2 (CNPS 2019) and a County List D species (County of San Diego 2010). A member of the borage (Boraginaceae) family, this species blooms between March and May in chaparral, coastal scrub, and valley and foothill grasslands. This annual herb occurs at elevations of 65 to 3,135 feet amsl. It has been recorded in San Diego County and Baja California, Mexico (CNPS 2019).

This species was observed in the Project site.

Other Special-Status Plant Species

Plants that are not included on a County list, but have CRPRs and were observed or have the potential to occur within the Project site are described below.

Higgins' Barberry (*Berberis higginsiae*)

Higgin's barberry is a CRPR 3.2 (CNPS 2019). A member of the barberry (Berberidacese) family, this species blooms between March and April. It occurs in chaparral and Sonoran desert scrub in rocky soils. This perennial shrub occurs at elevations of 2,620 to 3,495 feet amsl. It has been recorded in San Diego County (CNPS 2019).

This species was observed in the Project site.

Abram's Spurge (*Euphorbia abramsiana*)

Abram's spurge is a CRPR 2B.2 (CNPS 2019). A member of the spurge (Euphorbiaceae) family, this species blooms between August and November. It occurs in Mojavean desert scrub and Sonoran desert scrub in sandy soils. This annual herb occurs at elevations of -15 to 4,300 feet amsl. It has been recorded in San Diego County and in Baja California, Mexico (CNPS 2019).

This species has moderate potential to occur in the Project site.

2.3.1.6 Special-Status Animal Species

The County of San Diego divides sensitive wildlife species into County Group 1 and County Group 2 based on the species' rarity and known threats (County of San Diego 2010). County Group 1 species include those that have a high level of sensitivity, are listed as threatened or endangered, or have a natural history requirement that increases their sensitivity. County Group 2 species include those that are becoming less common, although not so rare that extinction is imminent without immediate action. CDFW assigns SSC status to species whose population levels are declining, have limited ranges, and/or are vulnerable to extinction due to continuing threats (CDFW 2019c). In addition, fully protected (FP) species are protected by CDFW, and Watch List (WL) species are candidates for higher sensitive status. USFWS provides the Birds of Conservation Concern (BCC) status to migratory and non-migratory bird species that adhere to the 1988 amendment to the Fish and Wildlife Conservation Act that mandates USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973" (USFWS 2008). County Group 1 and/or SSC species, as well as County Group 2 species that have been observed in the Project site, or those that have a high potential to occur, are discussed in this section and included in Appendix E1 of Biological Resources Technical Report

(Appendix D to the EIR), Special-Status Wildlife Species Detected or Potentially Occurring. Additional species that have moderate potential to occur are also described in more detail in Appendix E1 of Appendix D. Species that have low potential or are not expected to occur are described in Appendix E2 of Appendix D, Special-Status Wildlife Species With Low Potential or Not Expected to Occir, and not discussed further in this section of the EIR or the Appendix D to the EIR.

The following special-status animal species were observed within the Project site: San Diegan tiger whiptail (County Group 2, SSC), Cooper's hawk (County Group 1, WL), sharp-shinned hawk (County Group 1), tricolored blackbird (Group 1, SCE [state candidate for listing endangered], BCC, SSC), golden eagle (Group 1, BCC, FP, WL), burrowing owl (County Group 1, BCC, FP, WL), Costa's hummingbird (BCC), turkey vulture (County Group 1, BCC, SSC), Vaux's swift (SSC), northern harrier (County Group 1, SSC), California horned lark (County Group 2, WL), merlin (County Group 2, WL), loggerhead shrike (County Group 1, BCC, SSC), black-tailed gnatcatcher (WL), Brewer's sparrow (BCC), Lawrence's goldfinch (BCC), yellow-headed blackbird (SSC), San Diego black-tailed jackrabbit (County Group 2, SSC), San Diego desert woodrat (County Group 2, SSC), mule deer (sign only) (County Group 2), American badger (potential burrow) (*Taxidea taxus*; Group 2, SSC), and Quino checkerspot butterfly (County Group 1; FE [federally endangered]) (Figure 2.3-2).

The following are special-status animal species and County of San Diego Group List species with high potential to occur in the Project site: California glossy snake (*Arizona elegans occidentalis;* SSC), San Diego banded gecko (*Coleonyx variegatus abbotti*; County Group 1, SSC), red diamond rattlesnake (*Crotalus ruber*; County Group 2, SSC), rosy boa (*Lichanura trivirgata*; County Group 2), Blainville's horned lizard (*Phrynosoma blainvillii*; County Group 2, SSC), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; County Group 1, WL), pallid bat (*Antrozous pallidus*; County Group 2, SSC), northwestern San Diego pocket mouse (*Chaetodipus fallax*; County Group 2, SSC), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*; County Group 2, SSC), western small-footed myotis (*Myotis ciliolabrum*; County Group 2), Yuma myotis (*Myotis yumanensis*; County Group 2), and Jacumba pocket mouse (*Perognathus longimembris internationalis*; County Group 2, SSC).

County Group 1 Species and/or SSC Species

County Group 1 and/or SSC species that have been observed in the Project site or have a high potential to occur are described below. Species that were detected or have a high or moderate potential to occur are included in Appendix E1 of the Biological Resources Technical Report (Appendix D to the EIR). Additional species that have a low potential to occur or are not expected to occur are described in detail in Appendix E2 of Appendix D.

Reptiles

California Glossy Snake (*Arizona elegans occidentalis*; SSC)

California glossy snake is an SSC species. This species is found throughout Southern California in desert regions (Zeiner et al. 1988–1990). California glossy snake occurs in chaparral, sagebrush, valley–foothill hardwood, pinyon–juniper, and annual grass at an elevation below 6,000 feet amsl. This species is primarily nocturnal and spends periods of inactivity during the day and during winter in mammal burrows and rock outcrops. California glossy snakes are most common in arid regions.

This species has high potential to occur in the Project site.

San Diegan Tiger Whiptail (*Aspidoscelis tigris stejnegeri*; SSC/County Group 2)

San Diegan tiger whiptail is an SSC and County Group 2 species. It is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, north into Ventura County, and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003).

Tiger whiptail (*A. tigris*) is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. According to Stebbins (2003), the species ranges from deserts to montane pine forests, where it prefers warmer and drier areas. The species is also found in woodland and streamside growth, and it avoids dense grassland and thick shrub growth.

This species was observed in the Project site in 2019.

San Diego Banded Gecko (*Coleonyx variegatus abbotti*; SSC/County Group 1)

San Diego banded gecko is an SSC and County Group 1 species. San Diego banded gecko is only recorded in Riverside, San Diego, and San Bernardino Counties in California (CDFW 2019a). San Diego banded gecko is active at night and hides in burrows during daylight (Nafis 2016). The typical breeding season for San Diego banded gecko occurs during April and May, and hibernation is generally November through February (Nafis 2016). General habitat for this species includes coastal scrub and chaparral, and this species is typically found in granite or rocky outcrops.

This species has high potential to occur in the Project site.

Red Diamond Rattlesnake (*Crotalus ruber*; SSC/County Group 2)

Red diamond rattlesnake is an SSC and County Group 2 species. It is found in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet amsl). It commonly occurs in rocky areas within coastal sage scrub, chaparral, juniper woodlands, and desert habitats, but can also be found in areas devoid of rocks (Lemm 2006).

This species has high potential to occur in the Project site.

Blainville's Horned Lizard (*Phrynosoma blainvillii*; SSC/County Group 2)

Blainville's horned lizard (previously coast horned lizard) is an SSC and County Group 2 species. It is found from the Sierra Nevada foothills and central California to coastal Southern California. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground with well-drained loose or sandy soil, but it can also be found in annual grasslands, chaparral, oak woodland, riparian woodland, and coniferous forest between 30 and 7,030 feet amsl (Jennings and Hayes 1994). This reptile typically avoids dense vegetation, preferring 20% to 40% bare ground in its habitat. Blainville's horned lizard can be locally abundant in areas where it occurs, with densities of near 20 adults per acre. Adults are active from late March through late August, and young are active from August through November or December.

This species has high potential to occur in the Project site.

Birds

Cooper's Hawk (*Accipiter cooperii*; WL/County Group 1)

Cooper's hawk is a WL and County Group 1 species. It is found throughout California in wooded areas. This species inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawk uses patchy woodlands and edges with snags for perching while it hunts for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990a).

A Cooper's hawk was observed foraging within the Project site during the early spring nesting raptor surveys in February 2019. There is moderate potential for Cooper's hawk to nest in the denser mesquite bosque habitat in the northern portion of the Project site.

Sharp-Shinned Hawk (*Accipiter striatus*; WL/County Group 1)

Sharp-shinned hawk is a WL and County Group 1 species. This species is a common migrant and winter resident throughout California, although an uncommon permanent resident and breeder in mid-elevation habitats (Zeiner et al. 1988–1990). Sharp-shinned hawk breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats on north facing slopes with perches. This species prefers riparian habitats, and roost in intermediate to high-canopy forest often to forage in opening at edges of woodlands. Nests are found in dense, even-aged, single-layered forest canopy. The sharp-shinned hawk is the least common breeding *Accipiter* species in California (Zeiner et al. 1988–1990).

Sharp-shinned hawk was observed flying over the Project site during the April 4 and April 5, 2018, burrowing owl habitat assessment surveys. The sharp-shinned hawk does not nest in San Diego county (Unitt 2004) but may use the Project site for foraging.

Tricolored Blackbird (*Agelaius tricolor*; SSC/Group 1)

The tricolor blackbird is a SSC, and County Group 1 species. It occurs throughout Central Valley and in coastal districts from Sonoma County south (Zeiner et al. 1990a). This species breeds near freshwater, and in emergent wetland with tall, dense *Arundo* sp. and riparian thickets. Tricolor blackbird feeds in grassland, cropland, and alkali scrub habitats where aquatic insects are hatching (Beedy et al. 2018; Shuford and Gardali 2008). This species breeds in northeastern California and winters more widespread along the central coast and San Francisco Bay area (Garrett and Dunn 1981; Grinnell and Miller 1944; McCaskie et al. 1979).

Tricolored blackbird was observed in 2019 during focused Quino checkerspot butterfly surveys perched in trees adjacent to the U.S./Mexico border. There are no suitable freshwater bodies of water for nesting within the Project site. The disturbed freshwater marsh mapped in the southwest corner of the Project site is very small (0.08 acres) and composed of patchy cattails and Mexican juncus. It lacks the vegetative protection (e.g., nettles, thistles), size and structure needed for nesting (Beedy and Hamilton 1999). Tricolored blackbirds were observed nesting in the large pond west of Jacumba Street in 2019 (Amoaku 2019) and based on 2019 observations, they use the southwestern portion of the Project site for foraging.

Golden Eagle (*Aquila chrysaetos*; BCC/FP, WL/County Group 1)

Golden eagle is a BCC, WL, FP, and County Group 1 species. In addition, golden eagle is protected under the federal Bald and Golden Eagle Protection Act. As a state fully protected species, take may only occur pursuant to scientific research or in connection with an authorized NCCP.

Golden eagle is a year-round, diurnally active species that is a permanent resident and migrant throughout California. Golden eagle is more common in northeast California and the Coast Ranges than in Southern California and the deserts. In Southern California, the species tends to occupy mountain, foothill, and desert habitats. Foraging habitat for this species includes open habitats with scrub, grasslands, desert communities, and agricultural areas. This species nests on cliffs within canyons and escarpments and in large trees (generally occurring in open habitats), and occurs primarily in rugged, topographically complex landscapes (Garrett and Dunn 1981; Johnsgard 1990). Most nests are located on cliffs or trees near forest edges, in trees within woodland savannas, or in small stands near open habitats (Kochert et al. 2002). Nest locations tend to be more closely associated with topographic heterogeneity than with a particular vegetation type (Call 1978).

Nest building can occur almost any time during the year. This species nests on cliffs, rock outcrops, large trees, and artificial structures such as electrical transmission towers, generally near open habitats used for foraging (Garrett and Dunn 1981; Johnsgard 1990; Kochert et al. 2002; Scott 1985). Golden eagle commonly builds, maintains, and variably uses multiple alternative nest sites in its breeding territory, routinely refurbishing and reusing individual nests over many years. Generally, the nests are large platforms composed of sticks, twigs, and greenery that are often 10 feet across and 3 feet high (Zeiner et al. 1990a). Pairs may build more than one nest and tend multiple nests prior to laying eggs (Kochert et al. 2002). Each pair can have up to a dozen nests, especially in cliff-nesting habitat where nests persist for longer than they do in trees, but generally only two to three nests are used in rotation from one year to the next. Some pairs use the same nest each year, but others use alternative nests more regularly. Succeeding generations of eagles may even use the same nest (Terres 1980, as cited in CPUC and BLM 2011).

In California, golden eagle breeds January through August, with peak breeding activity occurring February through July. Breeding typically begins in January with courtship and nest building, and egg laying typically occurs in February and March (Brown 1976; CPUC and BLM 2011; WRI 2010). Golden eagles typically lay one to three eggs, which they incubate for 43 to 45 days (Beebe 1974). Hatching and then feeding of nestlings takes place March through June. After their young fledge, the adult eagles may continue to feed the young birds for several months (CPUC and BLM 2011; WRI 2010). In the prey-rich oak woodland and savanna habitats of the California Coast Ranges, established golden eagle breeding pairs typically nest in most years (Hunt et al. 1999; Hunt and Hunt 2006); however, the long breeding cycle may contribute to some pairs breeding only every other year, even when food is abundant (CPUC and BLM 2011; WRI 2010). In other situations, where overall ecosystem productivity is lower or more variable from year to year, pairs need to range farther in search of food and may not nest every year because of the energetic demands of securing dispersed prey (Kochert et al. 2002).

Lagomorphs (rabbits and hares) and ground squirrels are of primary importance in the diet of most golden eagles, including in San Diego County, but their diet may include a wide variety of other mammals, reptiles, and birds, and frequently includes carrion, especially during winter (Johnsgard 1990; Kochert et al. 2002; Olendorff 1976).

One juvenile golden eagle was observed flying over the Project site on March 24, 2019, and a golden eagle was observed kettling with a group of turkey vultures, ravens, and red-tailed hawks on April 14, 2019. There is a golden eagle nest recorded on Round Mountain (northwest of the Project site); however, the last information recorded by USFWS on the nest location was from 2012 documenting common ravens (*Corvus corax*) using the nest. The nest site was surveyed in April 2018 and February 2019, and no golden eagles or golden eagle nesting activity was observed at this location or elsewhere near the Project site. Although there is no formal definition of what constitutes an “inactive” or “abandoned” golden eagle nest/territory, seven or more years with no

nesting is a strong indicator that this territory has been abandoned. Based on only two observations over several months of surveys both in 2018 and 2019, golden eagles do not appear to use the Project site regularly.

Burrowing Owl (*Athene cunicularia*; BCC/SSC/County Group 1)

The burrowing owl is a BCC, SSC, and County Group 1 species. It occurs throughout North and Central America west of the eastern edge of the Great Plains south to Panama (County of Riverside 2008). The winter range is much the same as the nesting range, except that most burrowing owls apparently vacate the northern areas of the Great Plains and the Great Basin (County of Riverside 2008) in winter. The majority of burrowing owls that breed in Canada and the northern United States are believed to migrate south during September and October and north during March and April, and into the first week of May. These individuals winter within the nesting habitat of more southern populations. Thus, winter observations may include both the migratory individuals as well as the resident population (County of Riverside 2008). The burrowing owls in Northern California are believed to migrate (Coulombe 1971).

In California, burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations (Bates 2006). They can inhabit annual and perennial grasslands and scrublands characterized by low-growing vegetation. They may be found in areas that include trees and shrubs if the cover is less than 30% (Bates 2006); however, they prefer treeless grasslands. Although burrowing owls prefer large, contiguous areas of treeless grasslands, they have also been known to occupy fallow agriculture fields, golf courses, cemeteries, road allowances, airports, vacant lots in residential areas and university campuses, and fairgrounds when nest burrows are present (Bates 2006; County of Riverside 2008). They typically require burrows made by fossorial mammals, such as California ground squirrels. This species also prefers sandy soils with higher bulk density and less silt, clay, and gravel (Lenihan 2007).

Focused surveys for burrowing owl were conducted within the Project site in 2018 following Staff Report on Burrowing Owl Mitigation (CDFG 2012) guidelines. On April 11, 2018, a possible burrowing owl burrow was observed based on pellets, white wash, as well as claw marks at the entrance and immediate surrounding area. During surveys the following day on April 12, 2018, a partial burrowing owl carcass was observed approximately 900 feet away from the potential burrow. It was likely that an owl used the burrow as a wintering burrow but was predated before it had the chance to begin the breeding season. Biologists did not detect any other fresh burrowing owl sign or activity at/near the burrow or around the site during subsequent surveys. A burrowing owl was observed on March 16, 2019 during Quino checkerspot butterfly surveys. The individual flew away from the slope of a berm constructed along the southern portion of the Project site and a burrowing owl burrow was observed in the same area on April 1, 2019, with signs of pellets and whitewash (Figure 2.3-2). The 2018 and 2019 observations are all in the southeast corner of the Project

site. These locations were revisited during the January 2, 2020 habitat assessment within the Jacumba Airport's runway and no burrowing owls or new sign were observed. There have been no further observations of burrowing owl within the Project site. Based on communication with Colleen Wisinski, Conservation Program Specialist with the San Diego Zoo Institute for Conservation Research (Wisinski pers comm. 2019), a delayed onset of breeding further into the spring of 2019 was observed compared to previous years. Given this information combined with the infrequent observations in 2018 and 2019, the burrowing owls may only be using the Project site during the winter. Additionally, there are no records of burrowing owls within, or near, the Project site in CNDDB (CDFW 2019a), the San Diego Bird Atlas (Unitt 2004), or eBird (The Cornell Lab of Ornithology 2019).

Regardless, the County's guidelines state that habitat is considered occupied if there are observations of a burrowing owl burrow. Occupied habitat is delineated around the 2019 burrow, which showed signs of recent activity. There are approximately 14.2 acres of occupied burrowing owl habitat within the southeastern portion of the Project site, which was delineated based on the observation locations (Figure 2.3-2). Based on the lack of burrowing owl observations or burrows with sign anywhere else in the Project site, it appears this southeast portion of the Project site is at the outer edge of the suitable habitat in the area, and burrowing owl(s) are most likely using more suitable habitat to the east and south of the Project site. For example, there is non-native grassland and flat topographic areas east of the Project site around the Jacumba Airport airstrip, as well as flat open land just south of the Project site in Mexico. Both areas have better quality habitat compared to the burrowing owl observations in the Project site, which is primarily dominated by Russian thistle and other weeds. To provide additional information on these surrounding areas, Dudek conducted a habitat assessment along the southern boundary of the Jacumba Airport, which is included in Appendix F of the Biological Resources Technical Report (Appendix D to this EIR). This off-site study area consists of relatively flat land with occasional mounds and small hills, which generally constitutes suitable topography for burrowing owls to be able to perch and forage. Friable soils and rodent or lagomorph (hare or rabbit) burrows are present, although none of the burrows observed met the size criteria for a suitable or surrogate burrowing owl burrow (11 centimeters [4.3 inches] or greater in diameter and 150 centimeters [59 inches] in depth). One burrow mapped within the desert saltbush scrub habitat in the western portion of the off-site study area had an opening that met the diameter criteria, but did not quite meet the depth criteria for a suitable burrow. The depth of the burrow was approximately 107 centimeters (42 inches). The majority of this off-site area consists of suitable habitat with the potential to support burrowing owls.

Turkey Vulture (*Cathartes aura*; County Group 1)

Turkey vulture is not considered special status by any state or federal agencies; however, it is considered a County Group 1 species. In California, it is common during the nesting season and is a year-round resident west of the Sierra Nevada, especially in coastal areas. Summer and year-

round ranges also include the southeastern United States; portions of Texas, Mexico, Central America, and South America; and some islands in the Caribbean (Kirk and Mossman 1998).

Turkey vultures use a variety of habitats while foraging on wild and domestic carrion. They prefer open stages of most habitats. In the western United States, they tend to occur regularly in areas of hilly pastured rangeland, non-intensive agriculture, and areas with rock outcrops suitable for nesting, although they are not generally found in high-elevation mountain areas (Kirk and Mossman 1998; Zeiner et al. 1990a). Nest locations tend to be difficult to find and are usually located in a crevice among granite boulders (Unitt 2004). This species prefers hilly areas that provide deflective updrafts for flight, and generally avoids extensive areas of row-crop farmland (Kirk and Mossman 1998).

Turkey vulture was observed regularly foraging over the Project site; no nests were observed during the raptor surveys.

Vaux's Swift (*Chaetura vauxi*; SSC)

Vaux's swift is a SSC species. This species is a summer resident of northern California, breeds commonly in Coast Ranges, Sierra Nevada, and Cascade Range, is a common migrant throughout California in spring and summer, and winters irregularly in southern coastal lowlands (Garrett and Dunn 1981; Grinnell and Miller 1944; McCaskie et al. 1979). Vaux's swift nests in redwood and Douglas-fir habitats in large hollow trees and snags, and feeds over most terrains and habitats at lower levels of forest openings and above rivers (Grinnell and Miller 1944).

This species does not nest in San Diego County (Baltosser and Scott 1996; Unitt 2004), but migrates through in spring and fall, and winters in western and eastern parts of the County, with winter observations near the Project site (Unitt 2004). During migration, this species is much less common in the desert than along the coast (Unitt 2004) but could still use open portions of the Project site for foraging. Wintering and roosting on the site would be rare but possible in the several abandoned buildings and structures that exist within and adjacent to the Project site that could serve as potential roost sites.

One Vaux's swift was observed flying over the Project site during the Quino checkerspot butterfly surveys in 2019.

Northern Harrier (*Circus cyaneus*; SSC/County Group 1)

Northern harrier is an SSC and County Group 1 species. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes. This species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures,

grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation.

Northern harrier was observed foraging along the southern portion of the Project site during the early spring nesting raptor surveys in February 2019 and once during the Quino checkerpot butterfly surveys in March 2019. The open habitat within the Project site is marginal from past disturbance (agriculture) and a predominance of non-native species, particularly Russian thistle. While this species did not nest on site during the 2018 and 2019 surveys, nesting potential is considered moderate.

Loggerhead Shrike (*Lanius ludovicianus*; BCC/SSC/County Group 1)

Loggerhead shrike is a BCC, SSC, and County Group 1 species. It is found in lowlands and foothills throughout California, and it remains in the southern portion of the state year-round. Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or built structures (such as the top of chain-link fences or barbed wire) that provide means to skewer prey items. The species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas; and they can sometimes be found in mowed roadsides, cemeteries, and golf courses, although they occur rarely in heavily urbanized areas (Zeiner et al. 1990a). Loggerhead shrikes build nests in stable shrubs or trees requiring dense foliage for well-concealed nests and likely nests in the Project site.

Loggerhead shrike was observed throughout most of the summer in 2018 during focused burrowing owl surveys and likely nests within the Project site.

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*; WL/ County Group 1)

Southern California rufous-crowned sparrow is a WL, and County Group 1 species. The current distribution of Southern California rufous-crowned sparrow is restricted to a narrow belt of semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California (Bent 1968; Collins 1999; Grinnell 1926; Grinnell and Miller 1944; Todd 1922; Unitt 1984; Zeiner et al. 1990a). The subspecies has also been found on San Martin Island. Southern California rufous-crowned sparrow is considered a resident throughout its range. No true migratory movements have been recorded, although limited movements to lower elevations in some areas have been reported during especially severe winters (Collins 1999).

This species has high potential to occur within the Project site.

Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*; SSC)

Yellow-headed blackbird is a SSC species. This species breeds commonly east of Cascade Range and Sierra Nevada, in Imperial and Colorado River valleys, in the Central Valley, and selected locations in the coast ranges west of the Central Valley (Zeiner et al. 1990a). It occurs as a migrant and local breeder in deserts and along Orange County coast. Yellow-headed blackbird nests in fresh emergent wetland with dense vegetation and deep water, and forages in emergent wetland and moist, open areas, including cropland and shores of lacustrine habitat. This species nest and roost over water, and forage over water, near water, and moist ground.

One yellow-headed blackbird was observed within the Project site during focused Quino checkerspot butterfly surveys in 2019.

Mammals

Pallid bat (Antrozous pallidus; County Group 2, SSC)

Pallid bat is an SSC and County Group 2 species. It occurs throughout California (Zeiner et al. 1990b). Records from counties in Southern California include San Diego, San Bernardino, Los Angeles, Riverside, Imperial, and Orange Counties (CDFW 2019a). It roosts in rocky outcrops, human-built structures, and trees. Pallid bat is known to occur in a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests (Zeiner et al. 1990b). It is commonly found in open, dry habitats with rocky areas for roosting (Zeiner et al. 1990b).

This species is fairly common and widespread in San Diego County and has potential to roost, including maternity roost, in the abandoned buildings on site and in the rocky outcrops on Round Mountain. The closest known CNDDB occurrence overlaps the eastern boundary of the Project site (CDFW 2019a). There are records of pallid bats roosting in a bridge in Jacumba in 2014 (Tremor 2017).

This species has high potential to occur within the Project site.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*; SSC/County Group 2)

Northwestern San Diego pocket mouse is an SSC and County Group 2 species. Northwestern San Diego pocket mouse is a subspecies and inhabits sandy herbaceous areas in association with rocks and course gravel (Grinnell 1933; Miller and Stebbins 1964). This subspecies occurs in arid coastal and desert border areas in southwestern California (Zeiner et al. 1990a). Typical habitats for the northwestern San Diego pocket mouse include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.

This species has high potential to occur within the Project site.

Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*; SSC/County Group 2)

Pallid San Diego pocket mouse is an SSC and County Group 2 species. This subspecies is found in southwestern California at an elevation below 6,000 feet amsl (Zeiner et al. 1988–1990). This subspecies prefers coastal scrub, chamise–redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland habitats in rocky or gravelly areas (Miller and Stebbins 1964). In San Diego County, pallid San Diego pocket mouse occurs in arid coastal and desert border areas (Zeiner et al. 1988–1990).

This subspecies has high potential to occur within the Project site.

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*; SSC/County Group 2)

San Diego black-tailed jackrabbit is an SSC and County Group 2 species. It is confined to coastal Southern California, with marginal eastern records in Mount Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981). It is found in many diverse habitats, but primarily in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move quickly, and the openness of open scrub habitat likely is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle, and they are well adapted to using low-intensity agricultural habitats (Hall 1981). Although black-tailed jackrabbit was previously widespread throughout San Diego County, particularly in north county coastal areas from Del Mar to Oceanside, the species now persists in small, scattered habitat patches (Tremor 2017).

San Diego black-tailed jackrabbit was detected within the Project site during a focus survey. A specific location was not recorded.

San Diego Desert Woodrat (*Neotoma lepida intermedia*; SSC/County Group 2)

San Diego desert woodrat is an SSC and County Group 2 species. This species is found in coastal Southern California into Baja California, Mexico (Reid 2006). Marginal eastern records for San Diego desert woodrat in the United States include San Luis Obispo, San Fernando in Los Angeles County, the San Bernardino Mountains and Redlands in San Bernardino County, and Julian in San Diego County (Hall 1981). Desert woodrats are found in a variety of shrub and desert habitats, and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.

This species has high potential to occur within the Project site. A woodrat midden was observed within the Project site, along the western boundary .

Jacumba Pocket Mouse (*Perognathus longimembris internationalis*; SSC/County Group 2)

Jacumba pocket mouse is an SSC and County Group 2 species. It is found in desert, grassland, herbaceous, shrubland, and chaparral habitats in Riverside and San Diego Counties (NatureServe 2019). This species prefers desert wash with sandy or gravelly alluvial substrate and disturbed grassland. Associated plant species include grasses, Catclaw acacia thorn (*Senegalia greggii*), mesquite (*Prosopis glandulosa*), and *Opuntia* sp.

This species has high potential to occur within the Project site.

American Badger (*Taxidea taxus*; SSC/County Group 2)

American badger is an SSC, and County Group 2 species. In California they are found throughout the state except in coastal Northern California (Zeiner et al. 1990b). American badger typically occurs in open, sparsely vegetated habitats, but also uses modified habitats such as agriculture. It is found in dry, open areas with friable soils, and can occur throughout the Project site. Its distribution in a landscape coincides with the availability of prey, burrowing sites, and mates, with distribution of males ranging wider than distribution of females during the breeding season and summer months (Minta 1993). In general, badger activity within a home range tends to concentrate in areas with suitable soils for burrowing or with colonies of ground squirrels.

This species has high potential to occur within the Project site. One potential badger den was observed within the Project site during focused Quino checkerspot butterfly protocol surveys.

Invertebrates

Quino Checkerspot Butterfly (*Euphydryas editha quino*; FE/County Group 1)

Quino checkerspot butterfly is a federally endangered and County Group 1 species. This species is found only in western Riverside County, southern San Diego County, and northern Baja California, Mexico (USFWS 2003). This species is found on sparsely vegetated hilltops, ridgelines, and occasionally on rocky outcrops in open chaparral and coastal sage scrub habitat (typically at less than 3,000 feet amsl). This species requires host plants within these vegetation communities for feeding and reproduction. The primary larval host plant is dotseed plantain; however, several other species have been documented as important larval host plants, including desert plantain, sometimes called woolly plantain (*Plantago patagonica*); thread-leaved bird's beak (*Cordylanthus rigidus*); white snapdragon (*Antirrhinum coulterianum*); owl's clover; and Chinese houses (*Collinsia* spp.) (USFWS 2003).

One Quino checkerspot butterfly was observed during the 2019 rare plant surveys in the southwestern portion of the Project site on a small hilltop nectaring on goldfields (*Lasthenia* spp.)

and redstem stork's bill (*Erodium cicutarium*). No Quino checkerspot butterflies were observed during the focused protocol Quino surveys. This individual was likely using the southwestern portion of the Project site for nectar while traveling between locations.

County Group 2 Species and Other Special-Status Species

County Group 2 species, CDFW WL species, or USFWS BCC species that have been observed or have high potential to occur in the Project site are described below and included in the Appendix E1 of the Biological Resources Technical Report (Appendix D to the EIR). Additional species that have moderate potential to occur are described in more detail in Appendix E1 of Appendix D.

Reptiles

Rosy Boa (*Lichanura trivirgata*; County Group 2)

Rosy boa is not considered special status by any state or federal agencies; however, it is a County Group 2 species. Rosy boa in California ranges from Los Angeles, eastern Kern, and southern Inyo Counties south through San Bernardino, Riverside, Orange, and San Diego Counties (Spiteri 1988; Stebbins 2003; Zeiner et al. 1990c). It occurs at elevations from sea level to 5,000 feet amsl in the Peninsular and Transverse Ranges. Within its range in Southern California, rosy boa is absent only from the southeastern corner of California around the Salton Sea and the western and southern portions of Imperial County (Zeiner et al. 1990c). Rosy boa inhabits rocky shrubland and desert habitats and is attracted to oases and streams, but does not require permanent water (Stebbins 2003).

This species has high potential to occur within the Project site.

Birds

Costa's hummingbird (*Calypte costae*; BCC)

Costa's hummingbird is a BCC species. Costa's hummingbird is common and widespread in southern California. This species is restricted to winter on the southern coast and southern deserts (Garrett and Dunn 1981). Costa's hummingbird moves upslope after breeding and during fall migration (Garrett and Dunn 1981). This species occurs in arid habitat, including desert wash, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oasis. Costa's hummingbird nests in trees, shrubs, woody forbs, and sometimes vines (Bent 1940).

This species was observed multiple times within the Project site in 2018 and 2019.

California Horned Lark (*Eremophila alpestris actia*; WL/County Group 2)

California horned lark is a WL and County Group 2 species. California horned lark is a permanent resident found throughout much of the southern half of California. This species breeds and resides in the coastal region of California from Sonoma County southeast to the U.S./Mexico border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Beason 1995; Grinnell and Miller 1944). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. This species prefers open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields, and it nests on the ground in a hollow scrape.

California horned lark was observed foraging within the Project site in April and May 2018. Based on territorial and nesting behavior observed, this species is likely nesting within the fallow agricultural fields and possibly within the lower hillsides on the north side of the railroad tracks.

Merlin (*Falco columbarius*; WL/County Group 2)

Merlin is a WL and County Group 2 species. Merlin inhabits annual grassland, savannahs, woodlands, lakes, wetlands, and pine and conifer habitats (Zeiner et al. 1990a). This species is a winter migrant from September to May throughout the western California below 3,900 feet in elevation. Merlin does not breed in California, however this species does winter and forage in dense tree stands near bodies of water.

Merlin was observed within the Project site during focused Quino checkerspot butterfly surveys in 2019. Merlins only occur in California during the nonbreeding season (Warkentin et al. 2005).

Black-Tailed Gnatcatcher (*Polioptila melanura*; WL)

Black-tailed gnatcatcher is a WL species. Black-tailed gnatcatcher inhabits desert wash from Palm Springs and Joshua Tree National Monument to eastern Mojave Desert and along the Colorado River at elevations below 1,000 feet amsl (Zeiner et al. 1988–1990). This species primarily nests in wooded desert wash habitat, and sparingly in desert scrub habitat in winter (Garrett and Dunn 1981; Grinnell and Miller 1944). Black-tailed gnatcatcher population has declined in numbers and may be victimized by cowbird parasitism (Friedmann 1963).

Black-tailed gnatcatcher was observed occasionally within the Project site in April 2019. This species could nest in the mesquite bosque within the Project site.

Lawrence's goldfinch (*Spinus lawrencei*; BCC)

Lawrence's goldfinch is a BCC species. Lawrence's goldfinch is common along the western edge of southern deserts and is fairly common but erratic in Santa Clara County (Kaiser 1976 as cited in Zeiner et al. 1988-1990), on coastal slope from Monterey County south, and in foothills surrounding Central Valley (Zeiner et al. 1988–1990). This species is present mostly from April through September; most individuals that breed in California will winter in other southwestern states and in northern Mexico. Lawrence's goldfinch winters erratically in southern coastal lowlands and Colorado River Valley and occurs in small numbers in northern California (Garrett and Dunn 1981; Grinnell and Miller 1944; McCaskie et al. 1979). This species occurs in valley foothill hardwood, valley foothill hardwood-conifer, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Lawrence's goldfinch nests in dense foliage of a tree or shrub, and prefers oak, cypress, cedar, or riparian thicket (Grinnell and Miller 1944).

Lawrence's goldfinch was observed in 2019 during focused Quino checkerspot butterfly surveys and was likely migrating through the Project site or using it as a non-breeding location since it does not nest in the region (Baltosser and Scott 1996). The Project site may provide foraging habitat for this species as it migrates through the area.

Brewer's Sparrow (*Spizella breweri*; BCC)

Brewer's sparrow is a BSS species. Brewer's sparrow inhabits desert scrub, croplands, and treeless shrub habitats with moderate canopy and sagebrush (Zeiner et al. 1990a). This species breeds east of Cascade-Sierra Nevada crest, Mojave and Colorado deserts, and San Joaquin Valley. In recent years, the Brewer's sparrow rarely breeds in southwestern California (Garrett and Dunn 1981) and is considered a wintering or migrating species in San Diego County (Unitt 2004). This species finds cover in sagebrush and nests in the center of sagebrush or other shrub up to 3.9 feet above the ground.

Brewer's sparrow was observed within the Project site several times in April 2018 and was likely migrating through the site. The Project site may provide foraging habitat for this species as it migrates through the area.

Mammals

Western Small-Footed Myotis (*Myotis ciliolabrum*; County Group 2)

Western small-footed myotis is not considered special status by any state or federal agencies; however, it is a County Group 2 species. Western small-footed myotis inhabits arid wooded and brushy uplands near water in coastal and desert California (Zeiner et al. 1990b). This species occurs in elevation below 8,900 feet. This species seeks cover in caves and built structures, including buildings, mines, and bridges.

This species has high potential to occur within the Project site. This species has potential to roost, including maternity roost, in the abandoned buildings on the Project site.

Yuma Myotis (*Myotis yumanensis*; County Group 2)

Yuma myotis is not considered special status by any state or federal agencies; however, it is a County Group 2 species. It occurs throughout California except for the most arid areas of the Mojave and Colorado Deserts (Zeiner et al. 1990b). Records from counties in Southern California include San Diego, San Bernardino, Los Angeles, Riverside, Imperial, and Orange Counties (CDFW 2019a). Although Yuma myotis occurs in a wide variety of life zones, at elevations ranging from sea level to 10,820 feet amsl, its actual distribution is closely associated with access to water (Zeiner et al. 1990b). Forests and woodlands are primary habitats, and foraging usually occurs in open, uncluttered habitats and low over-water sources such as ponds, streams, and stock ponds (Brigham et al. 1992; Zeiner et al. 1990b).

This species has high potential to occur within the Project site. This species is fairly common and widespread in San Diego County and has potential to roost, including maternity roost, in the abandoned buildings on the Project site and in the rocky outcrops on Round Mountain, the eastern half of which is within the Project site.

Mule Deer (*Odocoileus hemionus*; County Group 2)

Mule deer is a County Group 2 species. It is a common species with a widespread distribution throughout the western United States and Canada, and south into mainland and Baja California, Mexico (Hall 1981). It occurs throughout most of California, except in deserts and intensively farmed areas without cover (Zeiner et al. 1990b). Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2019). It uses forested cover for protection from the elements and open areas for feeding (Wilson and Ruff 1999). Mule deer fawn in a variety of habitats that have available water and abundant forage, including moderately dense shrubs and forests, dense herbaceous stands, and higher-elevation riparian and mountain shrub vegetation.

Mule deer tracks were observed during biological surveys within the Project site. Mule deer favor habitats such as riparian and oak woodland, and early growth chaparral (Tremor 2017). Given the open landscape within the Project site and general absence of mule deer on the desert floor, it is likely that mule deer only occasionally occur on site and travel from the mountains north of the Project site. They are not expected to utilize the flat open areas due to the lack of vegetative cover.

2.3.1.7 Wetlands/Jurisdictional Waters

Potential jurisdictional aquatic resources within the Project site total 153.51 acres and include 22.48 acres of potential U.S. Army Corps of Engineers (ACOE)/Regional Water Quality Control Board (RWQCB)/CDFW-jurisdictional non-wetland waters, 130.95 acres of potential ACOE/RWQCB-jurisdictional non-wetland waters and CDFW-jurisdictional riparian habitat, and 0.08 acres of potential ACOE/RWQCB/CDFW-jurisdictional wetlands/riparian habitat and County RPO wetlands.

There are also two borrow pits on the Project site with scattered, sparse tamarisk shrubs. These borrow pits were wholly constructed in upland areas. The northern borrow pit is approximately 100 feet by 80 feet; the southern borrow pit is larger (approximately 1.5 acres), but lacks hydrophytic vegetation based on the sampling pit. Per the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, the northern borrow pit would be considered an artificial wetland that resulted from human activity, including excavation of the pit and discharging of water into the pit from agricultural activities (SWRCB 2019). Water is no longer being discharged to the borrow pit, and there is very minimal tamarisk in the pit. As such, the pit would not be considered a relatively permanent part of the natural landscape which is a requirement of the State procedures for an artificial wetland to be considered waters of the state. There is also an erosional feature formed solely from a culvert directing surface and road runoff beneath Carrizo Gorge Road which has eroded the landscape until the runoff dissipates into a dirt road approximately 1,000 feet from Carrizo Gorge Road. This feature does not support any wetland vegetation. The northern borrow pit and the erosional features formed from a culvert directing surface and road runoff were constructed or formed in uplands and have no current or historical connection to waters of the United States or State. Therefore, they are not considered features regulated by federal or state agencies.

Acreages for potential jurisdictional resources are summarized in Table 2.3-2, Jurisdictional Aquatic Resources within the Project site, and represented in Figure 2.3-2. The Aquatic Resources Delineation Report is included as Appendix G to the Biological Resources Technical Report (Appendix D to the EIR).

ACOE/RWQCB/CDFW Determination

There are 11 potential aquatic features within the Project site that are non-wetland waters. Features 1, 2, 5, 6, and 9–11 generally flow in a northerly direction into Carrizo Creek (Figure 2.3-2). Carrizo Creek flows through Carrizo Gorge and Carrizo Canyon where it turns into Carrizo Wash just north of the Coyote Mountains. Carrizo Wash outlets into San Felipe Creek near the Lower Borrego Valley and eventually drains into the Salton Sea to form a significant nexus to a traditional navigable water. Features 3 and 4 originate in Gray Mountain just northeast of the Project site;

however, this drainage terminates in the middle of the site. Features 7 and 8 also flow south from Gray Mountain and terminate at Carrizo Gorge Road. These waters do not connect to a traditional navigable water or tributary to a traditional navigable water, and will be evaluated during an approved preliminary jurisdictional determination which is currently being processed by the ACOE.

There is one wetland waters (Feature 12) mapped in the southwestern corner of the Project site that is likely fed from the higher water table in the area. This feature does not connect via the surface to a traditional navigable water or tributary to a traditional navigable water and will be evaluated during a preliminary jurisdictional determination which is currently being processed by the ACOE.

RPO Wetland Determination

The County's RPO identifies wetlands as "at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places)," "substratum is predominantly undrained soil," or "an ephemeral or perennial stream is present whose substratum is predominately non-soil and such lands contribute substantially to biological functions or values of wetlands in the drainage system" (County of San Diego 2012). One feature supports RPO wetlands within the Project site: the small disturbed freshwater marsh is fed from subsurface water seasonally and lacks consistent water sources. Based on the County's guidelines (County of San Diego 2010), a 50-foot buffer would be appropriate for this feature (Figure 2.3-2).

Based on the lack of hydrophytes, hydric soils, or substratum that is predominantly non-soil in the ephemeral channels and the presence of well-drained soils, the ephemeral channels do not have the biological functions of a wetland nor do they have populations of wetland dependent species, and therefore are not considered an RPO wetland.

The mesquite bosque located within the floodplain along the western boundary is dominated by facultative species that occur equally in wetland and non-wetland areas. Other common species within the mesquite bosque include facultative, facultative upland, or upland species, such as tamarisk, white bursage, fourwing saltbush, quailbush, saltgrass, and mustards (*Sisymbrium* spp.). The dominant and co-dominant plant species would not be categorized as hydrophytes because they are not facultative wetland (usually occur in wetlands but occasionally found in non-wetlands) or obligate (occur almost always under natural conditions in wetlands) species that are consistent with the RPO's definition of a hydrophyte (County of San Diego 2012; Lichvar et al. 2012). Although iodine bush is present in some portions of the mesquite bosque at low percent cover, it is not dominant enough in the shrub cover to be considered a "predominance of hydrophytes" per the RPO definition. Areas mapped as mesquite bosque are located within a wide floodplain area with no evidence of surface flow. The soils are not hydric, the floodplain lacks a defined channel and a predominance of hydrophytes; and the slopes are less than 25%. Therefore, areas mapped as mesquite bosque would not be considered RPO wetlands.

Tamarisk often occupies jurisdictional wetlands but is also commonly associated with disturbed areas or toe of slopes that have higher groundwater tables in upland areas. On the Project site the tamarisk scrub is not associated with any jurisdictional features and is located along road sides or in soil piles and pits. Similar to mesquite bosque, tamarisk is a facultative species which occur equally in wetland and non-wetland areas and does not meet the County's definition of a hydrophyte (County of San Diego 2012; Lichvar et al. 2012). Data stations taken within the northern borrow pit showed signs of hydrology in the form of mudcracks, had sparse tamarisk, and assumed hydric soils (see Appendix F of Appendix D). The southern borrow pit had very minimal mudcracks, even sparser tamarisk, and no hydric soils. Due to its artificial nature, the presence of invasive species, the lack of hydrophytes, and the lack of observed hydric soils, these borrow pits created in upland areas would not be considered RPO wetlands.

2.3.1.8 Habitat Connectivity and Wildlife Corridors

Wildlife species generally inhabit suitable habitat patches distributed across a landscape. These habitat blocks, which may make up the species' home range or breeding territory, support most, if not all, of the species' life history needs (e.g., food resource, mates, refuge). Critical to the survival of most wide-ranging species is the ability to access or move between various habitat blocks to allow for juvenile dispersal, to access food and/or shelter during the winter months, to escape catastrophic events (e.g., flood, fire), and to ward against genetic in-breeding (Rosenberg et al. 1997). In undisturbed or unfragmented landscapes, such movements by some species may occur throughout the landscape without a defined movement route (e.g., between mosaics of suitable habitat patches). However, where landscapes have movement constraints related to either natural conditions, such as vegetation types or topography (e.g., steep slopes), or constructed obstacles (e.g., urban areas, roads), wildlife may have to move along defined landscape linkages or "wildlife corridors." The phrase "wildlife corridors," as used in the report, are generally linear landscape features that permit species to disperse between favorable habitats.

Habitat linkages are relatively large open space patches of natural habitat that function to join two larger adjacent open space patches of habitat (Bennett 2003). They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. The linkage represents a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping stones" for dispersal. The Project site would be considered an east/west linkage for wildlife movement south of the I-8 and north of the U.S./Mexico border fence.

The Project site is included within a Core Wildlife Area as defined by the County based on its size and the surrounding undeveloped land (County of San Diego 1997). The Project site is currently undeveloped, except for dairy and ranch structures north of Old Highway 80, but the International

border fence limits the ability of the Project site to function as a linear north–south wildlife corridor for large mammals. The Proposed Project vicinity is generally surrounded by undeveloped landscapes to the north (of I-8), east, and northwest. Old Highway 80, a two-lane highway, traverses the Project site in an east/west direction within the southern portion of the Project site. Carrizo Gorge Road traverses the Project site in a generally north/south direction along the eastern portion of the Project site. There are no wildlife crossings along the Old Highway 80, but wildlife are generally able to make at-grade crossings over the highway. Based on observations from biological surveys, wildlife currently are able to traverse the Project site and surrounding undeveloped areas in an unencumbered manner until they arrive at the U.S./Mexico border fence along the southern boundary of the Project site. However, since openings in the border fence are located off site, approximately 1.2 miles to the east and 2 miles to the west, north/south wildlife movement is anticipated to be higher in these areas. These breaks are in steeper terrain, but provide for continued wildlife movement, as the topography does not pose difficulties for most wildlife use. Coyote, mountain lion, bobcat, and other species are readily able to scale steep slopes. The border fence openings occur along very steep portions of the fence and provide reduced movement options for most large wildlife. Additionally, the consistent presence of Border Patrol agents further reduces the attractiveness of the openings. Further, the Project site is situated adjacent to, or near, State Park and federal Bureau of Land Management (BLM) lands, which allows for unhindered movement. Figure 2.3-4, Habitat Connectivity and Wildlife Movement, shows the border fence openings, conserved lands, and adjacent land ownership, and Figure 2.3-5 shows the Habitat Evaluation Model.

The mesquite-dominated floodplain along the western portion of the Project site may serve as a wildlife movement area between the Project site and the north side of I-8 for a variety of wildlife species, including mammals, birds, reptiles, and invertebrates. The western portion of the floodplain (i.e., Boundary Creek) narrows, but larger wildlife may still move through the area at night if they are traveling to the west. The eastern portion of the Project site is flatter and more open with smaller drainages and dirt roads that could serve as movement areas for wildlife travel. Birds can move freely through the region; invertebrates and smaller mammals can also move relatively freely through the region. All terrestrial species' movement is hindered by I-8, constraining movement between north and south of I-8, and, to a lesser degree, movement is hindered by Old Highway 80 and surface streets. The exit to Carrizo Gorge Road and the San Diego and Eastern Railway/Carrizo Gorge Road underpasses are the only routes across I-8 in the vicinity. These constraints make the Project site a connection between blocks of habitat to the east and west.

There is critical habitat for Quino checkerspot butterfly located approximately 0.25 miles west of the Project site (Figure 2.3-3). The Jacumba Occurrence Complex appears to be the most southeastern occurrence of Quino checkerspot butterfly in its U.S. range (USFWS 2003, 2019). According to the Recovery Plan for Quino Checkerspot Butterfly (USFWS 2003), there is

occupied habitat south of El Condor, Baja California, Mexico, further southeast of Jacumba, although this location is not specifically mentioned in the 5-Year Recovery Plan (USFWS 2009). The Jacumba Occurrence Complex west of the Project site is likely connected to the vicinity of McCain Valley and Campo west of the Project site, potentially suitable habitat in the Table Mountain area northeast of the Project site, and occupied habitat in El Condor southeast of the Project site (USFWS 2003).

The In-Ko-Pah and Jacumba Mountains are north of the Project site; the Peninsular Ranges and Anza-Borrego Desert are to the east. The Project site is located approximately 3.4 miles southeast of designated critical habitat for Peninsular bighorn sheep, and 2.6 miles from the western slope of the Peninsular Ranges (Figure 2.3-2). The Project site is too removed from mountainous terrain to be provide habitat attractive to bighorn sheep, it does not provide inter-mountain connectivity habitat between occupied mountain ranges and they have not been identified in the area previously. Based on their known range, USFWS Critical Habitat, and unsuitable habitat between the Project site and known range, this species is not expected to occur on the Project site.

"Sensitive habitat lands" is a definition by the County (County of San Diego 2010) that includes wildlife corridors. As mentioned above, the mesquite-dominated floodplain may provide the best area for terrestrial mammals and some bird species found in tree or shrub habitat. The border fence that runs along the southern boundary of the Project site is currently impermeable to large mammals, such that wildlife movement between the United States and Mexico occurs only along breaks in the border fence east and west of the Project site. Birds, small mammals, reptiles and invertebrates are still able to travel between these areas. Given the undeveloped land to the north and east, the Project site does not currently serve as a local or regional wildlife corridor since wildlife is not constrained to travel through the area. However, because the Project site extends from I-8 to the border fence, it does serve as a linkage between open space to the east and west. Therefore, the Project site is considered a sensitive habitat land with regard to wildlife corridors.

The Pacific Flyway is a major north/south migration route for birds that travel between North and South America. This is a broad-front route that covers much landscape. In Southern California, birds typically use the coast and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. The longest and most important route of the Pacific Flyway is that originating in northeastern Alaska. This route, which includes most waterfowl and shorebirds, passes through the interior of Alaska and then branches such that large flights continue southeast into the Central and Mississippi flyways, or they may turn in a southwesterly direction and pass through the interior valleys of California, ending or passing through the Salton Sea (BirdNature 2014). The southward route of long-distance migratory land birds of the Pacific Flyway that typically overwinter south of the United States extends through the interior of California to the mouth of the Colorado River and on to their winter quarters, which may be located in western Mexico (USGS 2006).

The Salton Sea, approximately 40 miles northeast, is an important stopover for many birds that travel inland (SDG&E 2009); the inland Pacific Flyway migration route, which is focused on a stopover at the Salton Sea, is east of the Project site. A study from 1985 to 1999 focused on shorebird migration and recorded avian use at the Salton Sea and adjacent Imperial Valley. Large numbers of shorebirds, including black-necked stilt (*Himantopus mexicanus*), American avocet (*Recurvirostra americana*), western sandpiper (*Calidris mauri*), and dowitchers (*Limnodromus* spp.) were recorded during migration periods (Shuford et al. 2002). In addition, the study showed that birds traveling to the Salton Sea use the sea not only as a migratory stopover, but the site is also a wintering area for many species, including the mountain plover (*Charadrius montanus*) (Shuford et al. 2002). Migration timing varies from species to species, and for some, there is little documentation of the timing; for others, the arrival and departure has been well documented species by species (Unitt 2004). In general, bird migration occurs during the months of March through April and August through November. However, the Project site does not support any bodies of water or wetlands that attract large migration stopovers or attractants for avian and bat species. The closest large bodies of water to the Project site are Tule Lake, located approximately 4 miles northwest, and Lake Domingo, located approximately 8 miles west. Therefore, although birds likely migrate over the Project site and certain birds may forage on site, the Project site is not considered a stopover for birds migrating to and from the Salton Sea, particularly with the agricultural fields and irrigation resources available in the El Centro and Brawley areas south of the Salton Sea. Additionally, many birds are known to migrate at night (Emlen 1975; Lowery 1951; USGS 2013), which reduces visibility and glare-related impacts to migrants.

Special Habitat Management Areas

Several regional habitat management programs are planned for the eastern San Diego County, including a future MSCP East County Plan. Conservation initiatives, including the Las Californias Binational Conservation Initiative and the Parque-to-Park Binational Corridor, include lands in the Project site (Figure 2.3-1, Regional Context) (Stallcup et al. 2015).

The Project site is located within the future East County MSCP Plan Area (Figure 2.3-1). As described in Section 2.3.1, Existing Conditions, a Preliminary Planning Map has been completed. The intent of preparing the East County MSCP Plan is to create a large, connected preserve system that addresses the regional habitat needs for multiple species. The majority of the Project site is mapped as "Agriculture or Natural Upland outside Focused Conservation Area." Additional designations include: "Other Public/Semi-Public Lands" associated with roads, "Riparian/Wetland Habitat and Transition Zone within FCA" associated with on-site drainages, "Land Managed as Open Space" associated with the railroad, and "Land managed with Ecological Protection" associated with the land adjacent to conserved lands in the very northwest corner of the Project site. The development footprint of the Proposed Project would be located within the "Agriculture or Natural Upland outside Focused Conservation Area" and "Other Public/Semi-Public Lands."

2.3.2 Regulatory Setting

2.3.2.1 Federal Regulations

Federal Endangered Species Act

FESA (16 USC 1531 et seq.) is implemented by USFWS through a program that identifies and provides for protection of various species of fish, wildlife, and plants deemed to be in danger of or threatened with extinction. As part of this regulatory act, FESA provides for designation of critical habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features "essential to the conservation of the species" are found and that "may require special management considerations or protection." Critical habitat may also include areas outside the current geographical area occupied by the species that are nonetheless "essential for the conservation of the species." The Project site does not contain any critical habitat.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act, ACOE regulates the discharge of dredged and/or fill material into "waters of the United States." The term "wetlands" (a subset of waters of the United States) is defined in 33 Code of Federal Regulations (CFR) 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(e).

2.3.2.2 State Regulations

California Endangered Species Act

CDFW administers the California Endangered Species Act (CESA) (California Fish and Game Code [CFGC] Section 2050 et seq.), which prohibits the "take" of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in California. Under CESA Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

Sections 3511, 4700, and 5515 of the California Fish and Game Code designate certain birds, mammals, and fish as "fully protected" species. These species may not be taken or possessed without a permit from the Fish and Game Commission, and such take may only occur pursuant to scientific research or in connection with an authorized Natural Community Conservation Plan (NCCP). No "incidental take" of fully protected species is allowed.

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating, "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (CFGC Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001)."

Section 2081(b) and (c) of the Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. In such cases, CDFW issues the applicant an incidental take permit, which functions much like an incidental take statement in the federal context. Sections 2081(b) and (c) also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. As mentioned above, CDFW may not issue a Section 2081(b) incidental take permit for take of "fully protected" species. The Fish and Game Code lists the fully protected species in Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish).

California Fish and Game Code

Streambed Alteration Agreement

Pursuant to CFGC Section 1602, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A Streambed Alteration Agreement (CFGC Section 1602 et seq.) is required for impacts to jurisdictional resources, including streambeds and associated riparian habitat.

Birds and Mammals

According to CFGC Sections 3511 and 4700, which regulate birds and mammals, a fully protected species may not be taken or possessed. CDFW may not authorize the take of such species except (1) for necessary scientific research, (2) for the protection of livestock, and (3) when the take occurs for fully protected species within an approved NCCP.

Resident and Migratory Birds

The CFGC provides protection for wildlife species. It states that no mammals, birds, reptiles, amphibians, or fish species listed as fully protected can be "taken or possessed at any time." In addition, CDFW affords protection over the destruction of nests or eggs of native bird species (CFGC Section 3503), and it states that no birds in the orders of Falconiformes or Strigiformes (birds of prey) can be taken, possessed, or destroyed (CFGC Section 3503.5). CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (CFGC Section 3511). Separate from federal and state designations of species, CDFW designates certain vertebrate species as Species of Special Concern based on declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (CFGC Sections 1900–1913) directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and to protect endangered and rare plants from take. When CESA was passed in 1984, it expanded on the original Native Plant Protection Act, enhanced legal protection for plants, and created the categories of "threatened" and "endangered" species to parallel FESA. CESA categorized all rare animals as threatened species under CESA, but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The Native Plant Protection Act remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and project proponents.

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act protects water quality and the beneficial uses of water. It applies to surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCBs) develop regional basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of statewide plans and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are not regulated by ACOE. Developments with impacts to jurisdictional waters must demonstrate compliance with the goals of the act by developing stormwater pollution prevention plans (SWPPP), standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification.

California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guideline 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guideline 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

2.3.2.3 Local Regulations

East County Multiple Species Conservation Program

The County has prepared a preliminary planning map for the future East County MSCP Plan. The intent of preparing the East County MSCP Plan is to create a large, connected preserve system that addresses the regional habitat needs for multiple species. The future East County MSCP Plan would cover approximately 1.6 million acres within the eastern unincorporated portion of the San Diego County. The Cleveland National Forest is located along the western boundary of the East

County MSCP Plan area. The East County MSCP Plan area is bounded by Riverside County to the north, Imperial County on the east, and Mexico to the south. Tribal lands will be excluded from the East County MSCP Plan. Preparation of a future East County MSCP Plan is a cooperative effort among the County of San Diego, USFWS, and CDFW. Authority for this process comes from the California Natural Community Conservation Planning Act and Section 10(a) of FESA that addresses habitat conservation plans.

The Project site is located within the East County MSCP Plan area (Figure 2.3-1, Regional Context). A preliminary planning map has been completed for the East County MSCP. According to this map, the Project site is primarily within Agriculture or Natural Upland outside of the Focused Conservation Area, which suggests that the area has regional conservation value (Figure 2.3-1).

Projects within the East County MSCP planning area were subject to a Planning Agreement (2014) between the County, the CDFW, and USFWS for the East County MSCP; however, the Planning Agreement has expired. The County anticipates a new Planning Agreement will be in place later in 2020. The Planning Agreement is intended to determine if Proposed Project approval would have an effect on the preparation and approval of the future East County MSCP. The Planning Agreement would outline preliminary conservation objectives for the future East County MSCP. In addition to the preliminary conservation objectives, the Planning Agreement would identify an interim Proposed Project review process.

County Resource Protection Ordinance

The RPO, administered by the County of San Diego, regulates biological and other natural resources within the County. These resources include wetlands, wetland buffers, floodways, floodplain fringe, steep slope lands, sensitive habitat lands, and significant prehistoric or historic sites. Generally, the ordinance stipulates that no impacts may occur to wetlands except for scientific research, removal of diseased or invasive exotic plant species, wetland creation and habitat restoration, revegetation and management projects, and crossings of wetlands for roads, driveways, or trails/pathways when certain conditions are met. The same exemptions apply to impacts to wetland buffer areas and improvements necessary to protect adjacent wetlands. Sensitive habitat lands support unique vegetation communities, habitat of sensitive species, lands essential to the healthy functioning of a balanced natural ecosystem, and/or wildlife corridors. Impacts to sensitive habitat lands are permitted when impacts have been reduced as much as possible and mitigation provides at least an equal benefit to the affected species (County of San Diego 2012).

RPO Wetlands

The RPO, Section 86.602(p), defines wetlands as (County of San Diego 2007):

Lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil, and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

Wetlands are not lands which have the attributes specified above solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Development Services determines that they:

- Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
- Do not have substantial or locally important populations of wetland dependent sensitive species.

Lands are also not considered wetland if they have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of Planning and Development Services:

- Have negligible biological function or value as wetlands;
- Are small and geographically isolated from other wetland systems;
- Are not vernal pools; and,
- Do not have substantial or locally important populations of wetland dependent sensitive species.

According to Sec. 86.604, the RPO restricts specific development on wetlands to include aquaculture; scientific research and educational or recreational uses; wetland creation and habitat restoration. In addition, the ordinance requires that a wetland buffer be provided to further protect the wetland resources. Improvements necessary to protect the adjacent wetlands and those uses allowed within the actual wetland are the only allowed uses within the buffer. Section 86.604 goes on to specify, “There must be no net loss of wetlands and any impacts to wetlands shall be mitigated at a minimum ratio of 3:1” (County of San Diego 2007).

RPO Sensitive Habitat Lands

The RPO, Section 86.602(p), defines Sensitive Habitat Lands as (County of San Diego 2007):

> Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State California Environmental Quality Act (CEQA) Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.
>
> "Unique vegetation community" refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the California Department of Fish and Game listing of community associations.

According to Section 86.604, development, grading, grubbing, clearing or any other activity or use damaging to sensitive habitat lands is prohibited. However, development may be allowed when all feasible measures necessary to protect and preserve the sensitive habitat lands are required as a condition of permit approval and where mitigation provides an equal or greater benefit to the affected species (County of San Diego 2007).

2.3.3 Analysis of Project Impacts and Determination as to Significance

2.3.3.1 Definition of Impacts

This section defines the types of impacts considered in this report to analyze the potential effects of the Proposed Project on biological resources. These impacts are discussed in more detail as follows.

Direct Impacts

Direct impacts include short term, construction-related impacts as well as permanent impacts, which refer to the 100% loss of a biological resource. Direct impacts were quantified by overlaying the MUP boundary over the mapped biological resources and quantifying impacts (Figure 2.3-6, Impacts to Vegetation Communities and Land Covers, and Jurisdictional Delineation, and Figure 2.3-7, Impacts to Biological Resources). The MUP boundary includes all areas of potential disturbance (including areas cleared and/or graded for construction and decommissioning of the Project site). Impacts related to on-site development of the Proposed Project would occur on approximately 643 acres.

Indirect Impacts

Indirect impacts result from adverse "edge effects," either short-term indirect impacts related to construction, or long-term, chronic indirect impacts associated with the location of urban development in proximity to biological resources within natural areas. During construction of the Proposed Project, short-term indirect impacts may include dust and noise, which could temporarily disrupt habitat and species' vitality; changes in hydrology; disruption of wildlife activity due to increased human activity; and construction-related chemical pollutants. However, all Proposed Project grading would be subject to restrictions and requirements that address erosion and runoff, including the federal Clean Water Act and the National Pollution Discharge Elimination System, and preparation of a SWPPP and Standard Urban Stormwater Management Plan. These programs are expected to minimize Proposed Project impacts with respect to erosion/runoff, and the potential impacts from chemical pollutants. Long-term indirect impacts to proposed preserve areas may include generation of fugitive dust, intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, effects of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), urban runoff from developed areas, litter, fire, habitat fragmentation, and hydrologic changes.

Cumulative Impacts

Cumulative impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor but become collectively significant as they occur over time.

Project Effects

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, of this EIR) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining

Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

Impacts from Open Space Easement

The designation of the on-site open space easement would result in a significant unavoidable impact to minerals resources. Pursuant to CEQA Guidelines § 15126.4, "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." As discussed in further detail in, **M-BI-3 (Habitat Preservation)**, will cause a potentially significant impact to any mineral resources underlying the open space easement areas. Please refer to Section 2.8, Mineral Resources, for a discussion of the mitigation measure's potential impact.

The designation of the on-site biological open space easements is in accordance with the County's Guidelines for Determining Significance, Section 5.2, which states that on-site open space should only be included if the "site hosts moderate value biological resources and site-specific factors dictate that on-site mitigation would be biologically-viable". The biological open space will preserve in perpetuity 435 acres of habitat, located immediately adjacent to existing preserve lands located west of the project site that play a vital role in reducing impacts to biological resources.

The on-site mitigation area has been designed to maximize its biological function as part of a wildlife corridor and to sustain habitat connectivity. According to the San Diego County Biological Mitigation Ordinance, the mitigation site is a Biological Resource Core area as it is located within the limits of the future East County MSCP Plan Area. The various habitats included in the biological open space easement will provide a similar biological function and value as the habitat being impacted. Without the onsite mitigation area, the project would not provide for the preservation of a local linkage. Instead, this area could be developed and could impact wildlife movement by fragmenting these habitat areas. Through the biological open space easement and the existing SDG&E easements, the proposed project would maintain movement along well-vegetated areas (i.e., the mesquite-dominated floodplain) as well as along the drainages that serve as natural wildlife movement areas between the Jacumba Peaks area to the west and the mountains to the north. Without providing for long-term protection of this corridor and opening, wildlife traveling east to west north of the project could be funneled toward I-8 and forced to cross the highway at grade. Preserving these areas also maintains continuity in habitat between state park lands to the west and BLM lands to the north and east, permitting wildlife movement amongst these larger habitat complexes. Without these open space easements, the Project site outside of the MUP boundary is subject to future development, which could prevent the preservation of these high value biological resources.

In addition, the open space location is within the future East County MSCP Plan Area, which has a stated intent to create a large, connected preserve system that addresses the regional habitat needs for multiple species. This mitigation area includes suitable foraging habitat for multiple wildlife species, such as tricolored blackbird; and supports desert saltbrush scrub, desert sink scrub, disturbed freshwater marsh, mesquite bosque, Sonoran mixed woody and succulent scrub, unvegetated channel, and fallow agriculture. The mitigation lands also support two special-status plant species: pygmy lotus and sticky geraea and will conserve all of the jurisdictional aquatic resources mapped on site.

2.3.3.2 Candidate, Sensitive, or Special-Status Species

Guidelines for the Determination of Significance

For the purpose of this section and because the Appendix G questions relating to Biological Resources were no substantially revised in 2018, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate direct, indirect, and cumulative impacts for the Proposed Project. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service (USFWS).

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern (SSC). Impacts to these species are considered significant; however, impacts of less than 5% of the individual plants or of the sensitive species' habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

D. The project may impact arroyo toad aestivation, foraging, or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers

constrain movement) could only be considered less than significant if a biologically based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.

E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.

F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5% of the raptor foraging habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, although smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing undeveloped lands or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.

I. The project would impact occupied burrowing owl habitat.

J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

K. The project would impact occupied Hermes copper habitat.

L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire-fuel modification, and/or other noise-generating activities such as construction.

Species	Breeding Season
Coastal cactus wren	February 15 through August 15
Least Bell's vireo	March 15 through September 15
Southwestern willow flycatcher	May 1 through September 1

Species	Breeding Season
Tree-nesting raptors	January 15 through July 15
Ground-nesting raptors	February 1 through July 15
Golden eagle	January 1 through July 31
Light-footed clapper rail	February 15 through September 30

Analysis

Special-status species are those species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes. Candidate species are eligible for listing as federal or state threatened or endangered species.

Project Effects Relevant to Guideline A

Quino Checkerspot Butterfly

One Quino checkerspot butterfly was observed within the Project site during a rare plant survey on April 10, 2019, by a biologist possessing a recovery permit for this species pursuant to Section 10(a)(1)(A) of the federal ESA. The observation was in the southwest portion of the Project site on a small hilltop nectaring on goldfields and redstem stork's bill as shown in Figure 2.3-2. No Quino checkerspot butterflies were observed during the focused protocol surveys in 2019. There is a known Quino checkerspot population approximately one mile west of the Project site near Jacumba Peak. This individual was likely using the Project site for nectar while traveling between locations and/or investigating the hilltop. With the absence of host plants in close proximity to the Quino checkerspot butterfly observation, females would not stay and males would not stake out a territory. Any future use of this hilltop by Quino checkerspot butterflies would likely have the same result (nectar, investigate, and continue to another location). Since the known populations are located west of the Project site, travel is assumed to be between the western side of the Project site and to the west to suitable habitat and known populations.

Two locations of Chinese houses (host plants for Quino checkerspot butterfly), each with approximately one to 19 individuals, were mapped in the northwest portion of the Project site (Figure 2.3-7).

The Proposed Project has been designed to avoid the hill where the Quino checkerspot butterfly was observed and the two locations of Chinese houses. The Proposed Project's MUP area is located approximately 1.5 kilometers from the host plant locations. Therefore, there are no permanent direct impacts to Quino checkerspot butterfly. Due to the lack of host plants near the Quino checkerspot butterfly sighting, and the distance of the proposed development footprint from the hill (approximately 150 feet), no indirect impacts to this species is anticipated, such as dust, construction noise, or lighting. No work would be conducted within this area, and the hill is situated at an elevation higher than the impact area, which provides an additional buffer.

There would be **no direct or indirect impacts** to Quino checkerspot butterfly.

Impact BI-W-2: Impacts to Tricolored Blackbird

Tricolored blackbirds were observed foraging, but not nesting, in the southern portion of the Project site in April 2019. No tricolored blackbirds were observed in 2018 despite surveys conducted along the southern portion of the Project site. Tricolored blackbirds nest occasionally at the pond in adjacent Jacumba Hot Springs. The pond is located approximately 0.5 miles west of the Project site. According to Beedy et al. (2018), tricolored blackbirds typically forage within 5 kilometers (3 miles) of a colony site. Therefore, Dudek reviewed the vegetation data (SANGIS 2019) within a 3-mile radius of the nesting site (the pond located west of the Project site) to determine the amount of suitable foraging habitat available in the 3-mile foraging range. Based on potential foraging habitat described in Beedy et al. (2018) suitable foraging habitat includes grasslands, irrigated pasture, grain fields, shallow wetlands, and alkali scrub habitats (Airola et al. 2015; Beedy 2008; Beedy and Hamilton 1997; Meese 2013). There are approximately 2,100 acres of suitable grassland, agricultural, and akali scrub foraging habitat within the United States and up to an additional 4,400 acres of suitable habitat in Mexico within the 3-mile radius. Of the 2,100 acres of suitable available habitat, approximately 530 acres are within federal BLM, Nature Conservancy, and State Park owned and managed lands. An aerial review of land within the 3-mile radius buffer shows open flatter land suitable for tricolored blackbird foraging in Mexico. Additionally, biologists observed tricolored blackbirds flying back and forth between the United States and Mexico.

In addition, post-construction studies for solar projects have shown species that are known to forage in an area are likely to continue to forage in the area after construction (Sinha et al. 2018). Therefore, tricolored blackbirds may forage in areas within the proposed solar facility where seeding allows for herb growth and habitat for insects on which they forage.

The Proposed Project would impact 593.5 acres potential foraging habitat (refer to Table 2.3-3, Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur), approximately half of which is in the northern portion of the Project site where tricolored blackbirds were not observed. Of the total impacts to foraging habitat, 48.52 acres of suitable foraging habitat would be hardscape (i.e., access roads and substation). Given the amount of available foraging habitat within three miles of the nest location in the United States, and additional foraging habitat within Mexico, impacts to potential foraging habitat within the Project site would not preclude this species from successfully nesting in the region.

A total of 593.5 acres of suitable foraging habitat would be directly impacted as a result of the Proposed Project (refer to Table 2.3-3). Although potential direct impacts to tricolored blackbird are expected to be minimal, the County's guidelines state that any impact to a listed species is considered a significant

impact. Direct impacts to tricolored blackbird would be **potentially significant** (**Impact BI-W-2**). A total of approximately 424.8 acres of suitable foraging habitat for tricolored blackbird occurs within the proposed biological open space easement within the Project site, including desert saltbush scrub, desert sink scrub, disturbed freshwater marsh, mesquite bosque, Sonoran mixed woody and succulent scrub, unvegetated channel, and fallow agriculture.

Project Effects Relevant to Guideline B

Special-Status Plant Species (County List A and B Species)

Impact BI-SP-1: Temporary Direct Impacts to Special-Status Plant Species

Short-term, construction-related, or temporary direct impacts to special-status plants at the edge of the development footprint and non-impacted areas interface could primarily result from construction activities. There are no planned temporary impacts associated with the Proposed Project. Clearing, trampling, or grading of special-status plants, if they occur, outside of designated construction zones could occur in the absence of avoidance and mitigation measures. Temporary direct impacts to special-status plant species would be potentially significant (**Impact BI-SP-1**).

Impact BI-SP-2: Permanent Direct Impacts to Special-Status Plant Species (County List A and B)

Long term, or permanent, direct impacts to special-status plant species were quantified by comparing the impact footprint with the occurrence ddata for each special-status plant species. There are direct impacts to two special-status species (see Table 5-2 of the Biological Resources Technical Report included as Appendix D): pygmy lotus (1 individual; 100%) and sticky geraea (43 individuals with 21 plants being impacted; 48%). Direct impacts to pygmy lotus and sticky geraea would be **potentially significant** (**Impact BI-SP-2**).

Special-Status Wildlife Species (County Group 1 or State SSC)

Impact BI-W-1: Temporary Direct Impacts to Habitat for Special-Status Wildlife Species

Loss of County Group 1 or state SSC animals (i.e., California glossy snake, San Diego tiger whiptail, San Diego banded gecko, red diamond rattlesnake, Blainville's horned lizard, Cooper's hawk, sharp-shinned hawk (foraging habitat), southern California rufous-crowned sparrow, burrowing owl, golden eagle, Bell's sage sparrow, Swainson's hawk, turkey vulture, Vaux's swift, northern harrier, loggerhead shrike, pallid bat, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, Jacumba pocket mouse, and American badger) and/or suitable habitat from construction-related activities would result in short-term direct impacts. These temporary direct impacts would be **potentially significant** (**Impact BI-W-1**).

Impact BI-W-2: Permanent Direct Impacts to Habitat for Special-Status Wildlife Species

Long-term or permanent direct impacts on special-status wildlife species (i.e., California glossy snake, San Diego tiger whiptail, San Diego banded gecko, red diamond rattlesnake, Blainville's horned lizard, Cooper's hawk, sharp-shinned hawk (foraging habitat), southern California rufous-crowned sparrow, burrowing owl, golden eagle, Bell's sage sparrow, Swainson's hawk, turkey vulture, Vaux's swift, northern harrier, loggerhead shrike, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, Jacumba pocket mouse, and American badger) were quantified by comparing the MUP boundary with suitable habitat for wildlife species (Table 2.3-3). Implementation of the Proposed Project would result in the direct loss of habitat, including foraging habitat, for some of the County Group 1, Group 2, and/or SSC species. Permanent direct impacts to habitat for special-status wildlife species would be **potentially significant** (**Impact BI-W-2**).

Golden Eagle

Two golden eagles were observed flying over the Project site during the 2019 Quino checkerspot butterfly surveys. They did not circle, forage, or land on any part of the Project site. Golden eagles are known to nest in the region, including at Table Mountain, which is approximately 2 miles northeast of the Project site (USFWS 2019). The eastern portion of Round Mountain is located within the Project site. A golden eagle nest record on the northern side of Round Mountain. This nest was described as an intact cliff nest occupied by common ravens in 2012 (USFWS 2019). This nest location, along with other crags on Round Mountain, was surveyed in April 2018 and February 2019; ravens and red-tailed hawks were observed nesting in these areas. Seven or more years with no nesting is a strong indicator that this territory has been abandoned. Aside from Round Mountain, there is no suitable nesting habitat (i.e., large trees or cliffs) within the Project site. Accordingly, there would be no impacts to nesting habitat associated with the Proposed Project. However, the Proposed Project would impact 643.0 acres of suitable foraging habitat for the species (Table 2.3-3). Permanent direct impacts to golden eagle foraging habitat would be **potentially significant** (**Impact BI-W-2**).

Burrowing Owl

Burrowing owls were not found occupying the Project site during the breeding season. As described in Section 2.3.1.6, Special-Status Animal Species, the two observations during 2018 and 2019 surveys indicate that the species may use a portion of the Project site in the winter. Both of the observations were located in the southeastern portion of the Project site. The County defines occupied burrowing owl habitat as "any land that is used by burrowing owls for any reason, including foraging, or that is known to have been used at any time during the past three years. If burrowing owls are using the habitat, it is considered Occupied Habitat for the calendar year of

the observation or survey and the following three years" (County of San Diego 2010). Therefore, the Proposed Project would result in impacts to 14.2 acres of occupied burrowing owl habitat (Figure 2.3-7). Impacts to burrowing owl would be **potentially significant** (**Impact BI-W-2**).

Although the Proposed Project would impact existing suitable undeveloped foraging habitat, post-construction, burrowing owls potentially may still forage within the developed solar facility. The vegetation within the solar facility would be maintained at 6 inches for fire protection purposes which leaves potential habitat beneath the solar panels for foraging. For example, burrowing owls were observed perching on the ground and are likely to use some of the existing solar facility sites for foraging according to the Western Burrowing Owl Relocation Plan for the Maricopa Sun Solar Project in Kern County, California (Quad Knof 2014). Additionally, burrowing owls were detected during post-construction monitoring for the California Valley Solar Ranch (H.T. Harvey & Associates 2014) and Topaz Solar Farms (Althouse and Meade 2014) solar facilities.

Impact BI-W-3: Permanent Direct Impacts on Nesting Birds

If any active nests or the young of nesting County Group 1 and/or SSC bird species are impacted through direct grading, these impacts would be significant, based on the MBTA and Fish and Game Code. The Proposed Project could also result in direct impacts on birds during clearing and grubbing of vegetation in preparation for construction. Direct impacts on nesting birds would be **potentially significant** (**Impact BI-W-3**).

Impact BI-W-4: Permanent Direct Impacts on Maternity Bat Roosts

Yuma myotis, pallid bat, and western small-footed myotis have a high potential to roost in the abandoned buildings on the Project site. These buildings are proposed to be demolished as part of the Proposed Project. If there were a maternity roost in a building, impacts on that roost site would be **potentially significant** (**Impact BI-W-4**).

Project Effects Relevant to Guideline C

Special-Status Plant Species (County List C and D Species)

Impact BI-SP-1: Temporary Direct Impacts to Special-Status Plant Species

Short-term, construction-related, or temporary direct impacts to one special-status plant—Palmer's grapplinghook (County List D)—could occur at the edge of the development footprint and the non-impacted areas interface could primarily result from construction activities such as dust. Palmer's grapplinghook is the only special-status plant that occurs within 300 feet of the development footprint. Impacts on Palmer's grapplinghook outside designated construction zones could occur from clearing, trampling, or grading. Potential temporary direct impacts to special-status plant species would be **potentially significant** (**Impact BI-SP-1**).

Impact BI-SP-2: Permanent Direct Impacts to Special-Status Plant Species

No County List C plants were observed within the Project site. There would be no impacts to County List D plants from the Proposed Project (see Table 5-2 of the Biological Resources Technical Report included as Appendix D to the EIR).

Special-Status Wildlife Species (County Group 2)

Impact BI-W-1: Temporary Direct Impacts to Habitat for Special-Status Wildlife Species

Loss of County Group 2 or other special-status species (i.e., rosy boa, Costa's hummingbird, California horned lark, merlin, black-tailed gnatcatcher, western small-footed myotis, Yuma myotis, and mule deer) and/or suitable habitat, from construction-related activities would result in short-term direct impacts that would be **potentially significant** (**Impact BI-W-1**).

Impact BI-W-2: Permanent Direct Impacts to Habitat for Special-Status Wildlife Species

Long-term or permanent direct impacts on County Group 2 or other special-status wildlife species (i.e., rosy boa, Costa's hummingbird, California horned lark, merlin, black-tailed gnatcatcher, western small-footed myotis, Yuma myotis, and mule deer) were quantified by comparing the MUP boundary with suitable habitat for wildlife species (Table 2.3-3). Implementation of the Proposed Project would result in the direct loss of habitat, including foraging habitat, for some of the County of San Diego Group 2 or other special-status species, which would be a **potentially significant** impact (**Impact BI-W-2**).

Impact BI-W-3: Permanent Direct Impacts on Nesting Birds

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, killing, or attempting to commit any of these acts (16 USC 703 et seq.). Note that impacts on habitat do not constitute take under this definition unless such impacts result in death of a migratory bird. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The executive order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species. Permanent direct impacts on nesting birds could result if active nests or the young of nesting County Group 1 and/or SSC bird species are impacts through direct grading or clearing and grubbing in preparation for construction. This impact would be **potentially significant** (**Impact BI-W-3**).

Impact BI-W-4: Permanent Direct Impacts on Maternity Bat Roosts

Yuma myotis, pallid bat, and western small-footed myotis have a high potential to roost in the abandoned buildings on site, which would be demolished as part of the Proposed Project. If there were a maternity roost in a building, impacts on that roost site would be **potentially significant** (**Impact BI-W-4**).

Project Effects Relevant to Guideline D

There are no known arroyo toad records within the Project site or vicinity; and there is not suitable habitat for the species as there are no third order stream channels present within the Project site. Therefore, the Proposed Project would have no impact on arroyo toad aestivation, foraging, or breeding habitat.

Project Effects Relevant to Guideline E

There is a golden eagle nest record on the northern side of Round Mountain. This nest was described as an intact cliff nest in 2012, but was occupied by common ravens (USFWS 2019). This nest location, along with other crags on Round Mountain, was surveyed in April 2018 and February 2019. No golden eagles were observed nesting on the Project site; ravens and red-tailed hawks were observed nesting in these areas. As described above, seven or more years with no nesting is a strong indicator that this territory has been abandoned. Golden eagles are known to nest at Table Mountain, which is approximately 2 miles northeast of the Project site (USFWS 2019). Due to lack of recent nesting by golden eagles in this area, there would be **no impacts** within 4,000 feet of an active golden eagle nest.

Project Effects Relevant to Guideline F

Impact BI-W-2: Permanent Direct Impacts to Habitat for Special-Status Wildlife Species

Foraging habitat for raptors is present throughout the Project site. The Proposed Project would result in impacts to more than 5% of the raptor foraging habitat, as shown in Table 2.3-3. Therefore, impacts to raptor foraging habitat would be **potentially significant (Impact BI-W-2)**.

Project Effects Relevant to Guideline G

Impact BI-WLC-1: Temporary Direct Impacts on Habitat Connectivity and Wildlife Corridors

Short-term, construction-related, or temporary direct impacts on potential foraging and breeding habitat for species that use the Project site (e.g., special-status birds) would primarily result from construction activities. Impacts on foraging and breeding habitat outside designated construction zones could occur from clearing, trampling, or grading. Potential temporary direct impacts on foraging and breeding habitat within the Project site would be **potentially significant** (**Impact BI-WLC-1).**

Impact BI-WLC-2: Permanent Direct Impacts to Habitat Connectivity and Wildlife Corridors

The Project site is included within a Core Wildlife Area (a large block of habitat that supports multiple wildlife species), even though the 1,356-acre property is bordered by the U.S./Mexico border fence, which may exclude some larger wildlife from moving directly through the Project site. The Project site is also a linkage between two blocks of habitat located on either side of the Project site.

The Proposed Project would impact 643 acres of land within the 1,356-acre Project site. A list of special status wildlife species that were observed or have the potential to occur within the Project site are included in Appendix E1 of the Biological Resources Technical Report (Appendix D to the EIR). This impact on a core wildlife area for would be **potentially significant** (**Impact BI-WL-C**).

Project Effects Relevant to Guideline H

Special-Status Plant Species

Impact BI-SP-3: Temporary Indirect Impacts to Special-Status Plant Species

Most of the indirect impacts to vegetation communities described in Section 2.3.3.3, Riparian Habitat or Sensitive Natural Community, can also affect special-status plants. Potential short-term or temporary indirect impacts to special-status plant species in the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). These impacts would be **potentially significant** (**Impact BI-SP-3**).

Impact BI-SP-4: Permanent Indirect Impacts to Special-Status Plant Species

Permanent indirect impacts could result from the proximity of the Proposed Project to special-status plants after construction. Permanent indirect impacts that could affect special-status plant species include generation of chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. These impacts would be potentially significant (Impact BI-SP-4). Each of these potential indirect impacts are discussed in Section 5.1.2.2 of the Biological Resources Technical Report (Appendix D to the EIR). Special-status plant species at the edge of the biological open space easement/development interface could be impacted by permanent indirect impacts such as those previously listed. These impacts would be potentially significant (Impact BI-SP-4).

Special-Status Wildlife Species

Impact BI-W-5: Temporary Indirect Impacts to Special-Status Wildlife Species

Short-term, construction-related, or temporary indirect impacts to avian foraging and wildlife access to foraging or nesting would primarily result from construction activities. Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These indirect impacts would be **potentially significant** (**Impact BI-W-5**).

Impact BI-W-6: Permanent Indirect Impacts to Special-Status Wildlife Species

Potential long-term or permanent indirect impacts to special-status wildlife species would include non-native, invasive plant and animal species introduction; habitat fragmentation; increased human activity; alteration of the natural fire regime; altered hydrology; and lighting. These impacts would be **potentially significant** (**Impact BI-W-8**). Lighting for the Proposed Project would be limited to motion detector lighting at the substation and site entry ways and would be shielded and directed downward. Therefore, lighting would have a **less than significant** impact on wildlife. Only four proposed utility poles would provide perches from which avian species may forage, this is considered a minor risk for collision due to the small number of poles and **less than significant** impacts.

Project Effects Relevant to Guideline I

Impact BI-W-2: Permanent Direct Impacts to Occupied Burrowing Owl Habitat

As described in Section 2.3.1.6, Special-Status Animal Species, a burrowing owl habitat assessment and subsequent focused surveys were conducted in 2018 by Dudek biologists within the Project site. During these surveys, one dead burrowing owl was observed within the vicinity of a burrow showing burrowing owl activity (e.g., pellets, white wash, as well as claw marks at the entrance). The grassland areas do not contain suitable friable soils or suitable cover for the species. Therefore, there are no impacts to occupied burrowing owl habitat. Biologists did not detect any other fresh burrowing owl sign or activity at/near the burrow or around the site during subsequent focused surveys. One burrowing owl was observed once in April 2019 during the Quino checkerspot butterfly surveys. Therefore, the southeast portion of the Project site is considered occupied burrowing owl habitat. However it should be noted that subsequent visits to the occupied habitat in January 2020 did not detect any burrowing owls or burrowing owl sign. The Proposed Project would result in direct impacts to 14.2 acres of occupied burrowing owl habitat (see Table 2.3-3), which would be **potentially significant** (**Impact BI-W-2**).

Project Effects Relevant to Guideline J

The Project site is outside of the range for coastal cactus wren. No cactus wrens have been detected in the Project site and the site does not support occupied coastal cactus wren habitat, or formerly occupied habitat that has been burned by wildfire. Therefore, no impacts relating to this guideline would occur.

Project Effects Relevant to Guideline K

No Hermes copper butterflies (*Lycaena hermes*) have been detected within the Project site. The larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during biological surveys within the Project site. Based on the lack of suitable habitat for this species, the Project site is not considered occupied Hermes copper butterfly habitat. Therefore, **no impacts** related to this guideline would occur.

Project Effects Relevant to Guideline L

Impact BI-W-2: Permanent Direct Impacts on Habitat for Special-Status Wildlife Species

The Project site contains moderately suitable habitat for tree-nesting raptors (mesquite bosque), as well as some rocky outcrops and poles. Red-tailed hawks were observed nest building on one of the existing poles and have also been observed nesting in the rocky outcrops on Round Mountain (see Figure 2.3-7 for nest locations). Impacts on the nesting success of tree-nesting raptors (i.e., red-tailed hawk) as a result of habitat removal associated with the Proposed Project are anticipated. There is moderate potential nesting for ground-nesting raptors (i.e., northern harrier), but this species has only been observed foraging, not nesting, within the Project site and the habitat is marginal and composed primarily of Russian thistle and other weeds. Northern harriers typically nest in tall grasses and forbs in marsh/wetland type habitats (Unitt 2004; Zeiner et al. 1990a). Permanent direct impacts on vegetation communities are described in Table 5-1 of Appendix D. Potential impacts on the nesting success of tree- and/or ground-nesting raptors associated with the loss of suitable nesting habitat would be **potentially significant** (**Impact BI-W-2**).

Impact BI-W-5: Temporary Indirect Impacts to Special-Status Wildlife Species

Temporary indirect impacts on avian foraging and wildlife access to foraging or nesting would primarily result from construction activities, such as noise producing activities.These impacts, as discussed above, are **potentially significant** (**Impact BI-W-5**).

Due to lack of suitable habitat or range for coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), and light-footed clapper rail (*Rallus longirostris levipes*), these species are not expected to nest within the Project site; therefore, **no impact** on the nesting success of those species would result.

Switchyard

Project Effects Relevant to Guideline A

No federally or state-listed endangered or threatened plant species were observed within the switchyard development footprint; therefore, there are no permanent direct impacts to federally or state-listed plants.

No federally or state-listed endangered or threatened wildlife species were observed within the switchyard development footprint. Focused surveys for Quino checkerspot butterfly were negative. However, tricolored blackbirds were observed foraging within the Project site, though outside of the switchyard development footprint, in April 2019. Based on 2019 observations, tricolored blackbirds use the southwestern portion of the Project site for foraging. The switchyard site does not contain suitable nesting habitat for this species and therefore construction of the switchyard would only impact a minimal amount of potential foraging habitat (0.63 acres). Due to the suitable foraging habitat within the switchyard development footprint and the proximity of the occurrences, potential direct impacts to tricolored blackbird would be considered potentially significant (**Impact BI-W-2**).

Project Effects Relevant to Guideline B

Special-Status Plant Species (County List A and B Species)

There are no special-status plant populations located within 300 feet of the switchyard development footprint. Therefore, short-term, construction-related, or temporary direct impacts to special-status plants (County List A and B Species) at the edge of the switchyard development footprint and non-impacted areas interface will not occur.

No special-status plants (County List A and B Species) were observed within the switchyard development footprint; therefore, no permanent direct impacts to special-status plant species would occur.

Special-Status Wildlife Species (County Group 1 or State SSC)

Loss of County Group 1 or state SSC animals (i.e., California glossy snake, San Diego tiger whiptail, San Diego banded gecko, red diamond rattlesnake, Blainville's horned lizard, Cooper's hawk, sharp-shinned hawk [foraging habitat], southern California rufous-crowned sparrow, burrowing owl, golden eagle, Bell's sage sparrow, Swainson's hawk, turkey vulture, Vaux's swift, loggerhead shrike, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, and Jacumba pocket mouse) and/or suitable habitat from construction-related activities for the switchyard would result in short-term direct impacts that would be **potentially significant** (**Impact BI-W-1**).

Long-term or permanent direct impacts on special-status wildlife species (i.e., California glossy snake, San Diego tiger whiptail, San Diego banded gecko, red diamond rattlesnake, Blainville's horned lizard, Cooper's hawk, sharp-shinned hawk [foraging habitat], southern California rufous-crowned sparrow, burrowing owl, golden eagle, Bell's sage sparrow, Swainson's hawk, turkey vulture, Vaux's swift, loggerhead shrike, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, and Jacumba pocket mouse) were determined by comparing the switchyard site with suitable habitat for wildlife species. Implementation of the switchyard would result in the direct loss of habitat, including foraging habitat, for some of the County Group 1, Group 2, and/or SSC species, resulting in a potentially significant impact, absent mitigation (**Impact BI-W-2**).

If any active nests or the young of nesting County Group 1 and/or SSC bird species are impacted through direct grading, these impacts would be significant, absent mitigation, based on the MBTA and Fish and Game Code. Therefore, this impact is potentially significant (**Impact BI-W-3**).

Project Effects Relevant to Guideline C

Special-Status Plant Species (County List C and D Species)

No special-status plant species occur within 300 feet of the switchyard development footprint; therefore, there are no temporary direct impacts to special-status plants.

No County List C plants were observed within the switchyard development footprint. There are no impacts to County List D plants.

Special-Status Wildlife Species (County Group 2)

Loss of County Group 2 or other special-status species (i.e., rosy boa, Costa's hummingbird, California horned lark, black-tailed gnatcatcher, Yuma myotis, and mule deer) and/or suitable habitat, from construction-related activities for the switchyard would result in short-term direct impacts that would be **potentially significant** (**Impact BI-W-1**).

Long-term or permanent direct impacts on County Group 2 or other special-status wildlife species (i.e., rosy boa, Costa's hummingbird, California horned lark, black-tailed gnatcatcher, Yuma myotis, and mule deer) were determined by comparing the switchyard site with suitable habitat for wildlife species. Implementation of the switchyard would result in the direct loss of habitat, including foraging habitat, for some of the County of San Diego Group 2 or other special-status species, which would be a potentially significant impact (**Impact BI-W-2**).

If any active nests or the young of nesting County Group 2 or other special-status bird species are impacted through direct grading, these impacts would be **potentially significant**, based on the MBTA mitigation (**Impact BI-W-3**).

Project Effects Relevant to Guideline D

There are no known arroyo toad records within the switchyard development footprint or vicinity; and there are no third order stream channels present within the switchyard footprint. Therefore, the switchyard would have no impact on arroyo toad aestivation, foraging, or breeding habitat.

Project Effects Relevant to Guideline E

As described above, due to lack of recent nesting by golden eagles in this area, there would be no impacts within 4,000 feet of an active golden eagle nest.

Project Effects Relevant to Guideline F

Foraging habitat for raptors is present throughout the Project site, including the switchyard development footprint. Overall, the Proposed Project would result in impacts to more than 5% of the raptor foraging habitat, as shown in Table 2.3-3. Therefore, impacts to raptor foraging habitat would be potentially significant **(Impact BI-W-2)**.

Project Effects Relevant to Guideline G

Short-term, construction-related, or temporary direct impacts on potential foraging and breeding habitat for species that use the switchyard development footprint (e.g., special-status birds) would primarily result from construction activities. Impacts on foraging and breeding habitat outside designated construction zones could occur from clearing, trampling, or grading. Potential temporary direct impacts on foraging and breeding habitat would be **potentially significant** (**Impact BI-WLC-1)**

The switchyard would impact up to 0.63 acres of land. This impact to populations of wildlife species would not be significant; therefore, there are no permanent direct impacts to habitat connectivity and wildlife corridors.

Project Effects Relevant to Guideline H

Special-Status Plant Species

There are no special-status plant species located within the 300 feet of the switchyard development footprint. Therefore, there will be no temporary or permanent indirect impacts to special-status plants resulting from construction of the switchyard.

Special-Status Wildlife Species

Short-term, construction-related, or temporary indirect impacts to avian foraging and wildlife access to foraging or nesting would primarily result from construction activities for the switchyard. Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These impacts would be **potentially significant** (**Impact BI-W-5**).

Potential long-term or permanent indirect impacts to special-status wildlife species would include non-native, invasive plant and animal species introduction; habitat fragmentation; increased human activity; alteration of the natural fire regime; altered hydrology; and lighting (**Impact BI-W-8**). Lighting for the switchyard would be limited to motion detector lighting and would be shielded and directed downward. Therefore, lighting would have a **less than significant** impact on wildlife. Only four proposed utility poles would provide perches from which avian species may forage, this is considered a minor risk for collision due to the small number of poles and **less than significant** impacts.

Project Effects Relevant to Guideline I

No burrowing owls have been detected in the switchyard development footprint. Therefore, no impacts relating to this guideline would occur.

Project Effects Relevant to Guideline J

The Project site, including the switchyard site, is outside of this range for coastal cactus wren. Therefore, no impacts relating to this guideline would occur.

Project Effects Relevant to Guideline K

No Hermes copper butterflies (*Lycaena hermes*) have been detected in the Project site, including the switchyard development footprint. The larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during biological surveys. Based on the lack of suitable habitat for this species, the switchyard site is not considered occupied Hermes copper butterfly habitat. Therefore, no impacts related to this guideline would occur.

Project Effects Relevant to Guideline L

The switchyard development footprint contains moderately suitable habitat for ground-nesting raptors. Potential impacts on the nesting success of tree- and/or ground-nesting raptors associated with the loss of suitable nesting habitat would be **potentially significant** (**Impact BI-W-2**).

Temporary indirect impacts on avian foraging and wildlife access to foraging or nesting would primarily result from construction activities for the switchyard. These impacts would be **potentially significant** (**Impact BI-W-5**).

Due to lack of suitable habitat or range for coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), and light-footed clapper rail (*Rallus longirostris levipes*), these species are not expected to nest in the Project site, including the switchyard development footprint; therefore, **no impact** on the nesting success of those species would result.

2.3.3.3 Riparian Habitat or Sensitive Natural Community

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 [County of San Diego 2010] excluding those without a mitigation ratio) on or off the project site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No de minimus standard is specified under which an impact would not be significant; however, minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acres in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in the project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g.,

vernal pools). An area that is disturbed or partially developed may provide a habitat "island" that would serve as a functional refuge area "stepping stone" or "archipelago" for migratory species.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG [now CDFW]), and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historically low groundwater levels.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing undeveloped lands or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance (RPO), buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance. The following examples provide guidance on determining appropriate buffer widths:

- A 50-foot wetland buffer would be appropriate for lower quality RPO-wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, and slopes do not exceed 25%.
- A wetland buffer of 50 to 100 feet is appropriate for moderate- to high-quality RPO-wetlands that support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25%) with highly erosive soils. Within the 50- to 100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.

- Wetland buffers of 100 to 200 feet are appropriate for RPO-wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species, or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- Buffering of greater than 200 feet may be necessary when an RPO-wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) that could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO-wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

Analysis

Riparian vegetation occurs along rivers, streams, and other drainages in the County. Riparian areas connect terrestrial and aquatic habitats and provide linkages between water bodies and upstream vegetation communities.

Project Effects Relevant to Guideline A

Impact BI-V-1: Temporary Direct Impacts to Riparian Habitat or Sensitive Vegetation Communities

Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of special-status vegetation communities outside designated construction zones could occur. Temporary direct impacts to special-status vegetation communities within the Project site would be **potentially significant** (**Impact BI-V-1**).

Impact BI-V-2: Permanent Direct Impacts to Riparian Habitat or Sensitive Vegetation Communities

The Proposed Project would result in permanent direct impacts to 126.99 acres of riparian habitat or sensitive vegetation communities and 467.63 acres of fallow agriculture (Table 2.3-4, Proposed On-Site Mitigation for Impacts to Vegetation Communities and Land Covers). Although fallow agriculture is typically not considered a sensitive vegetation community, the areas mapped as fallow agriculture do provide foraging habitat for wildlife and therefore would be considered a sensitive vegetation community (Table 2.3-4). These impacts would be potentially significant (**Impact V-2**).

Project Effects Relevant to Guideline B

Any adverse change to jurisdictional aquatic resources (i.e., wetlands and riparian habitat under the jurisdiction of ACOE, RWQCB, CDFW, and/or County RPO wetlands) resulting from construction activities would be considered significant, as analyzed below. For the Proposed Project, RPO wetlands are a subset of the ACOE, RWQCB, and CDFW jurisdiction.

Impact BI-JAR-1: Temporary Direct Impacts to Jurisdictional Aquatic Resources

Short-term, construction-related, or temporary direct impacts to jurisdictional aquatic resources would primarily result from construction activities. Clearing, trampling, or grading of jurisdictional aquatic resources could result outside of designated construction zones. These potential impacts could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to jurisdictional aquatic resources within the Project site would be **potentially significant** (**Impact BI-JAR-1**).

The Proposed Project would result in **no impacts** to potential ACOE and RWQCB non-wetland waters or CDFW streambed.

Impact BI-JAR-2: Temporary Indirect Impacts to Jurisdictional Aquatic Resources

Potential short-term or temporary indirect impacts to jurisdictional aquatic resources in the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. Therefore, this impact would be **potentially significant** (**Impact BI-JAR-2**).

Impact BI-JAR-3: Permanent Indirect Impacts to Jurisdictional Aquatic Resources

Long-term or permanent indirect impacts could result from the proximity of the Proposed Project to jurisdictional aquatic resources after construction (e.g., maintenance of roads). Permanent indirect impacts that could affect jurisdictional aquatic resources include generation of fugitive dust, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term indirect impacts to jurisdictional aquatic resources that occur outside of the impact area would be **potentially significant** (**Impact BI-JAR-3**).

Project Effects Relevant to Guideline C

Estimated drawdown at the nearest groundwater-dependent habitat from pumping Well No. 2 and Well No. 3 would be less than three feet. Further, current groundwater levels in Well No. 3 are at least 12 feet higher than the historical low groundwater level recorded in the Jacumba Valley alluvial aquifer (Appendix J, Groundwater Investigation Report). Therefore, drawdown as a result of Proposed Project groundwater use would be unlikely to exceed the historical low groundwater level, and impacts on the groundwater table would be **less than significant**.

Project Effects Relevant to Guideline D

Impact BI-V-3: Temporary Indirect Impacts to Riparian Habitat or Sensitive Vegetation Communities

Potential short-term or temporary indirect impacts to sensitive vegetation communities within the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. These temporary indirect impacts would be **potentially significant** (**Impact BI-V-3**).

Impact BI-V-4: Permanent Indirect Impacts to Riparian Habitat or Sensitive Vegetation Communities

Long-term or permanent indirect impacts could result from the proximity of the Proposed Project to sensitive vegetation communities after construction (e.g., maintenance of roads, fencing, and landscaping). Permanent indirect impacts that could affect sensitive vegetation communities include generation of fugitive dust, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term indirect impacts to sensitive vegetation communities that occur outside of the impact area would be **potentially significant** (**Impact BI-V-4**).

Project Effects Relevant to Guideline E

The Proposed Project includes wetland buffers adequate to protect the functions and values of the existing RPO wetlands as shown in Figure 2.3-6. A 50-foot wetland buffer is deemed appropriate because the vegetation lacks hydrophytes in the understory and hydric soils, is dominated by mesquite which is a facultative upland plant (plants that usually occur in non-wetlands, but may occur in wetlands), and are within slopes that are less than 25%. The small disturbed freshwater marsh is fed from subsurface water seasonally and lacks consistent water sources; therefore, a 50-foot buffer is appropriate for these RPO wetlands.

The Proposed Project is designed to avoid RPO wetlands and the 50-foot RPO wetland buffer. Therefore, **no impacts** relating to Guideline 4.2.E would occur.

Switchyard

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to sensitive upland vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of sensitive vegetation communities outside designated construction zones could occur. Temporary direct impacts to sensitive vegetation communities on the switchyard site would be **potentially significant** (**Impact BI-V-1**).

The construction of the switchyard would result in permanent direct impacts 0.63 acres of sensitive vegetation communities (0.53 acres of Sonoran mixed woody and succulent scrub and 0.10 acres of disturbed habitat – vegetated) (refer to Table 2.3-4). These direct impacts would be **potentially significant** (**Impact BI-V-2**).

Project Effects Relevant to Guideline B

No jurisdictional aquatic resources (i.e., wetlands and riparian habitat under the jurisdiction of ACOE, RWQCB, CDFW, and/or RPO wetlands) occur within the switchyard development footprint. Therefore, there are **no direct impacts** to jurisdictional aquatic resources.

Potential short-term or temporary indirect impacts to jurisdictional aquatic resources would primarily result from construction activities for the switchyard and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. These potential short-term indirect impacts to jurisdictional aquatic resources would be **potentially significant** (**Impact BI-JAR-2**).

Long-term or permanent indirect impacts could result from the proximity of the switchyard to jurisdictional aquatic resources after construction (e.g., maintenance of roads). Permanent indirect impacts that could affect jurisdictional aquatic resources include generation of fugitive dust, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term indirect impacts to jurisdictional aquatic resources that occur outside of the impact area would be **potentially significant** (**Impact BI-JAR-3**).

Project Effects Relevant to Guideline C

As discussed above, drawdown as a result of the switchyard's groundwater use would be unlikely to exceed the historical low groundwater level and impacts on the groundwater table would be **less than significant**.

Project Effects Relevant to Guideline D

Potential short-term or temporary indirect impacts to sensitive vegetation communities within the switchyard development footprint would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. These potential short-term indirect impacts to sensitive vegetation communities outside of the switchyard impact area would be **potentially significant** (**Impact BI-V-3**).

Long-term or permanent indirect impacts could result from the proximity of the switchyard to sensitive vegetation communities after construction (e.g., maintenance of roads, fencing, and landscaping). Permanent indirect impacts that could affect special-status vegetation communities include generation of fugitive dust, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term indirect impacts to sensitive vegetation communities that occur outside of the switchyard impact area would be **potentially significant** (**Impact BI-V-4**).

Project Effects Relevant to Guideline E

The switchyard would impacts to the avoid RPO wetlands and the 50-foot RPO wetland buffer. Therefore, **no impacts** relating to Guideline 4.2.E would occur.

2.3.3.4 Jurisdictional Wetlands and Waterways

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and cumulative impact analysis.

A significant impact would result if:

The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.

Analysis

Project Effects Relevant to Guideline 4.3

As described in Section 2.3.3.3, there are no wetlands or "waters of the United States" under the jurisdiction of the ACOE, RWQCB, CDFW, or County within the MUP area for the Proposed Project. However, the Proposed Project would have potential temporary direct impacts, and potential temporary and permanent indirect impacts, on jurisdictional aquatic resources as defined by Section 404 of the Clean Water Act if grading occurred outside the approved limits of disturbance—e.g., outside the MUP. These impacts would be **potentially significant** (**Impacts BI-JAR-1, BI-JAR-2,** and **BI-JAR-3**). There are no direct impacts to federally regulated waters.

Switchyard

Project Effects Relevant to Guideline 4.3

The switchyard could have potential temporary and permanent indirect impacts to jurisdictional aquatic resources as defined by Section 404 of the Clean Water Act. These impacts would be **potentially significant** (**Impacts JAR-2** and **JAR-3**). There are no direct impacts to federally regulated waters. There are no potential temporary direct impacts on jurisdictional aquatic resources within the switchyard footprint.

2.3.3.5 Wildlife Movement and Nursery Sites

Guidelines for the Determination of Significance

For the purpose of this section, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would 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.

A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor

or linkage. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges will be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a site-specific analysis of wildlife movement. Another example is increased traffic on an existing road that would result in significant road-kill or interference with an existing wildlife corridor/linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns; for example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path. The adequacy of the width shall be based on the biological information for the target species, the quality of the habitat within and adjacent to the corridor, topography, and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages.

F. The project does not maintain adequate visual continuity (i.e., long lines of site) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.

Analysis

Project Effects Relevant to Guideline A

Impact BI-WLC-1: Temporary Direct Impacts to Habitat Connectivity and Wildlife Corridors

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the Project site (e.g., special-status birds) would primarily result from construction activities. Clearing, trampling, or grading of foraging and breeding habitat outside

designated construction zones could occur. Potential temporary direct impacts to foraging and breeding habitat within the Project site would be **potentially significant** (**Impact BI-WLC-1).**

Impact BI-WLC-2: Permanent Direct Impacts to Habitat Connectivity and Wildlife Corridors

Permanent direct impacts to 643 acres of potential foraging and breeding habitat for species that use the Project site would occur as a result of the Proposed Project. Permanent direct impacts to foraging and breeding habitat would be **potentially significant** (**Impact BI-WLC-2**).

Impact BI-WLC-3: Temporary Indirect Impacts to Habitat Connectivity and Wildlife Corridors

Short-term, construction-related, or temporary indirect impacts to avian foraging, and wildlife access to foraging, or nesting would primarily result from construction activities. Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These impacts would be **potentially significant** (**Impact BI-WLC-3**).

Project Effects Relevant to Guideline B

As shown in Figure 2.3-6, the Project site is located between high to very high habitat value areas. The proposed development footprint (643 acres) for the Proposed Project is mapped as "agriculture" or "developed" in the Habitat Evaluation Model layer (Figure 2.3-4). This portion of the Project site was historically used for dairy and agricultural operations but has been fallow since 2014. As discussed in Section 2.3.1.8, Habitat Connectivity and Wildlife Corridors, the Project site currently functions as a large block of habitat which, after Proposed Project development, would be altered as described below.

The Proposed Project would require permanent fencing around five separate areas within the MUP boundary. The areas of the solar facility would be fenced separately to accommodate existing easements on site for Carrizo Gorge Road, Old Highway 80, and an SDG&E easement. The fencing would be 7 feet in height total, with a 6-foot-high chain-link perimeter fence and 1 foot of three strands of barbed wire along the top. Fencing would still allow small reptiles, amphibians, and mammals to pass through, but would not provide movement for larger species. Although the fencing would limit the ability of particularly large wildlife to access and traverse the solar facility, the undeveloped SDG&E easement between the fence lines is approximately 700 to 1,100 feet wide and more than 4,000 feet long and would allow uninterrupted wildlife movement from Boundary Creek to currently undeveloped land to the east (Figure 2.3-4). The habitat to the west of the easement corridor not part of the project development expands upon existing conserved lands located west of the Project site, and protects the only north/south movement corridor across I-8. Additionally, the Project is designed to include a 50- to 100-foot opening in the fence north of the easement to allow for wildlife moving within the SDG&E easement corridor or north of the

easement to move in and out of the easement (Figure 2.3-4 and Figure 2.3-8, Potential Mitigation Areas). Without this opening wildlife traveling west to east north of the Project site could be funneled toward the I-8 and forced to cross the highway at grade. The opening in the fence would allow wildlife traveling along the fence line to find a break in the fencing leading them into the larger wildlife corridor.

Wildlife currently are able to traverse the Project site and surrounding undeveloped areas in an unencumbered manner until they arrive at the U.S./Mexico border fence along the southern boundary of the Project site. Since openings in the border fence are located off site, approximately 1.2 miles to the east and 2 miles to the west, north/south wildlife movement is anticipated to be higher near these openings. These breaks in the border fence are located in areas of steep terrain; however, this topography does not pose difficulties for most wildlife use. Coyote, mountain lion, bobcat, and other species are readily able to scale steep slopes. Further, the Project site is situated adjacent to State Park lands and federal BLM lands, which allows for unhindered movement. Figure 2.3-4 shows the border fence openings, Habitat Evaluation Model, existing Conserved Lands, and adjacent land ownership.

Small wildlife species (e.g., lizards and small mammals) would be able to access the solar facility through openings in the fence. Even though vegetation within solar site may grow to 6 inches above ground, this may still cause a permanent significant wildlife movement impact due to loss of habitat for smaller wildlife that cannot easily move around or through the site.

Larger wildlife (e.g., coyotes, bobcats, mountain lions) could still move along the mesquite-dominated floodplain and unvegetated portion of Boundary Creek to access undeveloped lands to the west as well as cross into Mexico at the open border to the west. Wildlife movement is more restricted along the eastern side since there are less topographic features for cover; however, there is the undeveloped SDG&E easement between the fence line that is approximately 700 to 1,100 feet wide and more than 4,000 feet long, which would allow uninterrupted movement from Boundary Creek to currently undeveloped land to the east, and the border crossing to the east. There is also land between Carrizo Gorge Road and I-8 that allows movement for some wildlife species, particularly nocturnal wildlife. Additionally, the Proposed Project design is consistent with the recommendations by the Las California Binational Conservation Initiative 2015, which recommends that renewable energy companies “site facilities on lands of lower ecological value, design road networks that minimize fragmentation, designate off-site conservation of land as mitigation for direct and indirect impacts of development, and establish conservation easements on the lands where facilities are sited” (Stallcup et al. 2015). The Proposed Project is primarily sited on the previously disturbed agricultural areas to reduce impacts to native vegetation and avoids unnecessary fragmentation of the landscape.

The Proposed Project would impact wildlife movement through the open, flatter areas of the Project site; however, the more suitable movement areas, such as creeks and drainages, the mesquite-dominated floodplain and even dirt roads, would not be impacted. These non-impacted areas would allow movement between larger blocks of habitat to the east, Jacumba Peaks area to the west, and the mountains to the north (via the floodplain).

However, the Proposed Project may substantially interfere with a local linkage and connectivity between blocks of habitat and would impact wildlife movement between the east and west core habitat areas. This impact would be **potentially significant** (**Impact BI-WLC-2**).

Project Effects Relevant to Guideline C

Impact WLC-2: Permanent Direct Impacts on Habitat Connectivity and Wildlife Corridors

The Proposed Project would maintain movement along well-vegetated areas (i.e., the mesquite-dominated floodplain) as well as creeks and drainages that serve as natural movement areas for wildlife. Although the Proposed Project fencing would limit the ability of particularly large wildlife to access and traverse the solar facility, the undeveloped SDG&E easement between the fence lines, which is approximately 700 to 1,100 feet wide and more than 4,000 feet long, would allow uninterrupted wildlife movement from Boundary Creek to currently undeveloped land to the east (Figure 2.3-4). The location of the Proposed Project has the potential to create a "dead-end" for wildlife traveling west to east along the northern portion of the Project site. This could funnel wildlife toward I-8 and result in increased mortality of wildlife forced to cross at grade. However, to ensure that wildlife traversing that area are directed toward the SDG&E easement, the Proposed Project has been designed to provide a 50- to 100-foot opening in the fence north of the easement. This opening will allow for wildlife that may be moving along the northern portion of the Project site to enter into the easement corridor and move through the site to habitat located on either side of the Project site (Figure 2.3-4 and Figure 1-2 in Chapter 1). Therefore, the Proposed Project does not create unnatural movement corridors. The impacts would **less than significant**.

Project Effects Relevant to Guideline D

Impact BI-WLC-3: Temporary Indirect Impacts to Habitat Connectivity and Wildlife Corridors

There would be short-term, construction-related noise. These temporary indirect impacts would be **potentially significant** (**Impact BI-WLC-3**).

Permanent Indirect Impacts to Habitat Connectivity and Wildlife Corridors

Permanent indirect impacts to habitat connectivity and wildlife corridor may occur as a result of noise and lighting. Noise associated with the Proposed Project would include pad-mounted

inverters, transformers, and HVAC units cooling energy storage equipment—all of which would be distributed across 26 locations throughout the solar facility. The electrical transformer located within the collector substation, and to a much lesser degree the smaller transformers within the switchyard, would also generate relatively steady-state sources of continuous noise. These noise receptors would be dispersed throughout the solar facility.

Permanent lighting associated with the Proposed Project would be motion detector security lighting. Nighttime lighting would comply with the County of San Diego Light Pollution Code (LPC), also known as the Dark Sky Ordinance, Section 59.101 et seq. Additionally, lighting for the Proposed Project would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards Sections 6320, 6322, and 6324 which guide performance standards for glare, and controls excessive or unnecessary outdoor light emissions.

Therefore, long-term (permanent) indirect impacts from noise and lighting would be **less than significant**.

Project Effects Relevant to Guideline E

As described above, after development of the Proposed Project larger wildlife (e.g., coyotes, bobcats, mountain lions) could still move along the mesquite-dominated floodplain and unvegetated portion of Boundary Creek to access undeveloped lands to the west as well as cross into Mexico at the opening in the border fence to the west. Wildlife movement is more restricted along the eastern side since there are less topographic features for cover; however, there is the undeveloped SDG&E easement between the Proposed Project fence lines. The SDG&E easement is approximately 700 to 1,100 feet wide and 4,000 feet long, which would allow uninterrupted movement from Boundary Creek to currently undeveloped land to the east. There is also land between Carrizo Gorge Road and I-8 that allows movement for some wildlife species, particularly nocturnal wildlife. A 50- to 100-foot break in the fence would be provided to facilitate movement from this open space to the SDG&E easement (see Figure 2.3-4). Without this opening wildlife traveling west to east north of the Project site could be funneled toward the I-8 and forced to cross the highway at grade. The opening in the fence would allow wildlife traveling along the fence line to find a break in the fencing leading them into the larger wildlife corridor. The Project site is situated adjacent to State Park lands and federal lands managed by the Bureau of Land Management, which allows for unhindered wildlife movement. Further, the fence would be raised off the ground, due to terrain, in multiple areas allowing for small wildlife species to move through the solar facility areas. Vegetation within the solar facility would be maintained at a height of 6 inches within the fuel modification areas, which would allow for some cover and habitat for wildlife species.

There is a potential for birds to collide with the gen-tie line during migration, but that risk was assessed to be low due to the minimal overhead line. Certain types of solar panels may create a "pseudo-lake effect," and birds may collide with solar panels that appear like a body of water due to the sky's reflection. However, there is little scientific information available regarding the pseudo-lake effect, and a detailed discussion of the impacts would be speculative. Further, the following factors would minimize the risk of collision due to sky reflection: (1) the Project site is not located near bodies of water that would attract wetland-associated birds; (2) the locale is not considered to be a major contributor to the Pacific Flyway; and (3) the solar units would be uniformly dark in color, coated to be non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces, and may not appear like water from above, as water displays different properties by both reflecting and absorbing light waves. Therefore, glare and pseudo-lake effect are deemed to be a low risk due to a number of factors, including the Proposed Project solar facility design and the Project site location.

The fenced solar panels and facilities would be unstaffed and therefore would be compatible with adjacent wildlife movement, since human activity would be limited. Although fencing is proposed around the solar facility, wildlife movement could still occur within the SDG&E easement that transects the Project site and drainage corridor along the western portion of the proposed solar facility. Therefore, the Proposed Project would result in a **less than significant** impact on corridor widths.

Project Effects Relevant to Guideline F

Although focused wildlife corridor studies have not been completed within the vicinity, based on knowledge of the area, probable key wildlife species, and typical wildlife movement patterns the following discussion applies. Large mammals, such as deer, are not likely to use the fallow agricultural areas as movement corridors due to lack of cover; however, it is likely that they use the open space on the western side of the railroad tracks which is dominated by mesquite. Avian species use the area during migrations, but those movements typically are oriented in a north/south direction, are broad-fronted, and are not focused on this Project site. Broader regional wildlife corridors likely connect between the Laguna Mountains to the west and north, and to the east, the Anza-Borrego Desert and the eastern slope of the Peninsular Range. However, connections to the east likely occur north of the site and possibly along I-8 corridor, which provides the most direct and obvious potential corridor route between the Proposed Project and habitats east of the Peninsular Range. Much of this area is large, core blocks of habitat through which wildlife are free to move with minimal constraint. The Project site is not located between lakes/ponds, loafing spots, foraging areas, or nesting sites that might entice local movement of birds or larger wildlife. However, as previously described, the Project site does function as a movement corridor between large blocks of habitat located east and west of the Project site. The placement of fencing and the solar arrays within the Project site could disrupt the visual continuity of wildlife using the Project site as a movement corridor.

The existing U.S./Mexico border fence along the southern boundary of the Project site already creates a visual and structural barrier to north and south wildlife movement in the Project site. The Proposed Project would be situated adjacent to the border fencing (there would be an approximate 100- to 330-foot buffer from the existing border fence to the Proposed Project fencing). Although visual continuity within the Project site could be exacerbated by the addition of the solar facility and fencing, wildlife can likely use a variety of local wildlife corridors outside of the Project site to move east, west, and north of the Project site. The Proposed Project would disrupt visual continuity if larger terrestrial wildlife was attempting to move from the northern portion of the Project site to the southeast. However, the existing SDG&E easement which transects the Project site would provide an east/west corridor to facilitate wildlife movement through the Project site. The easement corridor is largely composed of native habitat and a large channel which provides better coverage for wildlife moving through the Project site as well as visual continuity between patches of habitat west of the easement and contiguous habitat located east of the easement. The drainages and mesquite-lined floodplain along the western boundary of the Proposed Project are located outside of the fenced areas within the proposed biological open space, and would maintain visual continuity for wildlife moving between the areas north, south and west of the Project site.

In summary, the placement of fencing and the solar facility within the Project site could disrupt the visual continuity of the Project site as a wildlife movement corridor. This impact is **potentially significant (Impact BI-WLC-2**).

Switchyard

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the switchyard footprint (e.g., special-status birds) would primarily result from construction activities. Clearing, trampling, or grading of foraging and breeding habitat outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to foraging and breeding habitat on the switchyard site would be potentially **significant** (**Impact BI-WLC-1).**

Permanent direct impacts to 0.63 acres of potential foraging and breeding habitat for species that use the switchyard site would occur. Permanent direct impacts to foraging and breeding habitat would be **potentially significant**, (**Impact BI-WLC-2**).

Short-term, construction-related, or temporary indirect impacts to avian foraging and wildlife access to foraging or nesting would primarily result from construction activities. Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These impacts would be potentially

significant (**Impact BI-WLC-3**). Lighting and noise are the long-term indirect impacts identified for habitat connectivity and wildlife corridors, which are discussed in detail in Guidelines 4.4.D below.

Project Effects Relevant to Guideline B

The switchyard component of the Proposed Project would not significantly impact wildlife movement due to its small size. This impact would be **less than significant**.

Project Effects Relevant to Guideline C

The Proposed Project does not create unnatural movement corridors. **No impact** would occur.

Project Effects Relevant to Guideline D

There would be short-term, construction-related noise. This impact would be **potentially significant** (**Impact BI-WLC-3**).

Noise associated with the switchyard would include smaller transformers, which would generate relatively steady-state sources of continuous noise. Permanent lighting associated with the switchyard would include motion detector security lighting Nighttime lighting would comply with the County of San Diego Light Pollution Code (LPC), also known as the Dark Sky Ordinance, Section 59.101 et seq. Additionally, lighting for the Proposed Project would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards Section 6320, 6322, and 6324 which guide performance standards for glare, and controls excessive or unnecessary outdoor light emissions. Therefore, long-term (permanent) indirect impacts from noise and lighting would be **less than significant**.

Project Effects Relevant to Guideline E

As described above, the switchyard component of the Proposed Project would not impact wildlife movement due to its small size. Therefore, **no impact** would occur.

Project Effects Relevant to Guideline F

Due to its relatively small size, the switchyard would not significantly impact wildlife movement. Therefore, the impact to visual continuity would be **less than significant**.

2.3.3.6 Local Policies, Ordinances, and Adopted Plans

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

A. For lands outside of the Multiple Species Conservation Plan (MSCP), the project would impact coastal sage scrub vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning (NCCP) Process Guidelines.

B. The project would preclude or prevent the preparation of the subregional NCCP Process. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Process Guidelines.

E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.

F. For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Process Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis

Project Effect as Relevant to Guideline A

The Project site does not support coastal sage scrub; therefore, there are no significant impacts under this threshold.

Project Effect as Relevant to Guideline B

The Proposed Project would not preclude or prevent the preparation of an NCCP because the Proposed Project has been planned in accordance with the planning principles of the MSCP and in consideration of preparation of a future MSCP East County Plan. As described in Section 2.3.1.8, the proposed development footprint would be located areas identified as "Agriculture or Natural Upland outside Focused Conservation Area" and "Other Public/Semi-Public Lands." The proposed development footprint avoids the major mapped drainages, as well as the following Preliminary MSCP map designations: "Land Managed as Open Space" and "Land managed with Ecological Protection."

Although a preliminary draft map of the focused conservation areas has been prepared, the future MSCP East County Plan currently has no schedule for completion. The Proposed Project would not conflict with the draft MSCP East County planning effort. Therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline C

Although RPO wetlands are located within the Project site, the Proposed Project would avoid RPO wetlands and the wetland buffer. Therefore, no impacts would occur to RPO wetlands or wetland buffers. The County also regulates sensitive habitat lands, which include lands that support unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by CEQA Section 15380. Per County guidelines, the occupied burrowing owl habitat is considered sensitive habitat lands. Thus, the impacts to occupied burrowing owl habitat would be **potentially significant** (**Impact BI-W-2**).

Project Effect as Relevant to Guideline D

The Project site does not support coastal sage scrub; therefore, there are **no impacts** under this threshold.

Project Effect as Relevant to Guideline E

The Proposed Project conforms to the goals and requirements as outlined in all applicable regional planning efforts; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline F

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the Proposed Project and therefore **no impacts** would occur.

Project Effect as Relevant to Guideline G

As shown in Figure 2.3-5, the Project site is located between high to very high habitat value areas. The proposed development footprint is located within lands mapped as "agriculture" or "developed" in the Habitat Evaluation Model layer. As discussed in Section 2.3.3.5, Wildlife Movement and Nursery Sites, development of the Proposed Project would convert the Project site from a large open space available for unimpeded wildlife movement. This impact would be **potentially significant** (**Impact BI-WLC-2**).

Project Effect as Relevant to Guideline H

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the Proposed Project; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline I

This guideline only applies to areas with an adopted MSCP Plan. Since there is no approved MSCP East County Plan, this guideline does not apply to the Proposed Project; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline J

Quino Checkerspot Butterfly

One federally listed wildlife species was observed in the southwestern portion of the Project site (Quino checkerspot butterfly). The Proposed Project is designed to avoid the location where the Quino checkerspot butterfly was observed as well as the two locations of Chinese houses (i.e., host plants). Therefore, there are no permanent direct impacts to Quino checkerspot butterfly. Due to the lack of host plants near the Quino checkerspot butterfly sighting, and the distance of the proposed solar facility from the hill (approximately 150 feet), no significant indirect impacts (such as dust, construction noise, lighting) to this species is anticipated. No work will be conducted within this area, and the hill is situated at an elevation higher than the impact area, which provides an additional buffer. Based on this analysis, the Proposed Project would not reduce the likelihood of survival or recovery of Quino checkerspot butterfly in the wild. Therefore, the Proposed Project would not have any impacts (direct or indirect) on Quino checkerspot butterfly, including host plants. No impact would occur.

Tricolored Blackbird

One state-listed species, tricolored blackbird, was observed within the Project site. Tricolored blackbirds were observed foraging, but not nesting, in the southern portion of the Project site in April 2019. No tricolored blackbirds were observed in 2018 despite surveys conducted along the southern portion of the Project site. Tricolored blackbirds nest occasionally at a pond in Jacumba, approximately 0.5 miles west of the Project site. According to Beedy et al. (2018), tricolored blackbirds typically forage within 5 kilometers (3 miles) of a colony site.

Dudek reviewed the vegetation data (SANGIS 2019) available within a 3-mile radius of the nesting site (located west of the Project site). Based on potential foraging habitat described in Beedy et al. (2018) (e.g., grasslands, irrigated pasture, grain fields, shallow wetlands, and alkali scrub habitats), there are approximately 2,100 acres of suitable foraging habitat within the United States in the vicinity of the Project site. In addition, up to an additional 4,400 acres of suitable habitat is located in Mexico within the 3-mile radius from the tricolored blackbird colony site. Aerial review of land within the 3-mile radius buffer shows open, flatter land suitable for tricolored blackbird foraging in Mexico. Additionally, biologists observed tricolored blackbirds flying back and forth between the United States and Mexico side of the border.

The Proposed Project would impact 593.5 acres of potential tricolored blackbird foraging habitat within the Project site. Approximately half of the impacted habitat is located in the northern portion of the Project site where tricolored blackbirds were not observed. Of the total impacts, there are 48.52 acres of suitable foraging habitat that would be hardscape (i.e., access roads and substation).. It may be possible that tricolored blackbirds would forage in and around the solar panels since there would be herb growth underneath the panels and could provide habitat for insects on which they forage. Given the amount of available foraging habitat within three miles of the nest location, impacts to potential foraging habitat on the Project site would not preclude this species from successfully nesting in the region. Because the tricolored blackbird is a listed species, based on the County's guidelines, the impacts to tricolored blackbird would be **potentially significant** (**Impact BI-W-2**).

Project Effect as Relevant to Guideline K

Impacts to migratory birds (**Impact BI-W-3**) are discussed in Section 2.3.3.2, Candidate, Sensitive, or Special-Status Species.

Project Effect as Relevant to Guideline L

Golden eagles are known to nest in the region, including at Table Mountain, which is approximately two miles northeast of the Project site (USFWS 2019). The eastern portion of Round Mountain is located within the Project site and there is a golden eagle nest record on the northern side of Round Mountain. This nest was described as an intact cliff nest in 2012, but was

occupied by common ravens (USFWS 2019). This nest location, along with other crags on Round Mountain, was surveyed in April 2018 and February 2019. No golden eagles were observed in the nest; ravens and red-tailed hawks were observed nesting in these areas. As described in Section 2.3.1.6, Special-Status Animal Species, seven or more years with no nesting is a strong indicator that this territory has been abandoned by golden eagles. Aside from Round Mountain, there is no suitable nesting habitat (i.e., large trees or cliffs) within the Project site. Based on the limited use of the site by golden eagles, the Proposed Project would not result in the take of eagles, eagle eggs, or any part of an eagle. Due to lack of recent nesting by golden eagles in this area, permanent direct impacts to golden eagle would be **less than significant**.

Switchyard

Project Effect as Relevant to Guideline A

The switchyard development footprint does not support coastal sage scrub; therefore, there are **no impacts** under this threshold.

Project Effect as Relevant to Guideline B

The Proposed Project, including the switchyard, would not preclude or prevent the preparation of an NCCP because the Proposed Project has been planned in accordance with the planning principles of the MSCP and in consideration of preparation of a future MSCP East County Plan. Therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline C

There proposed switchyard would avoid impacts to the RPO wetlands and the wetland buffer. The County also regulates sensitive habitat lands, which include lands that support unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by CEQA Section 15380. The switchyard site is not located within the occupied burrowing owl habitat. Therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline D

The switchyard footprint does not support coastal sage scrub; therefore, there **no impacts** would occur.

Project Effect as Relevant to Guideline E

The switchyard would conform to the goals and requirements as outlined in all applicable regional planning efforts; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline F

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the Proposed Project, including the switchyard, and therefore **no impacts** would occur.

Project Effect as Relevant to Guideline G

The switchyard is not expected to preclude habitat connectivity; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline H

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the switchyard; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline I

This guideline only applies to areas with an adopted MSCP Plan. Since there is no approved MSCP East County Plan, this guideline does not apply to the switchyard; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline J

No federally or state-listed endangered or threatened wildlife species were observed within the switchyard development footprint. The only Quino checkerspot butterfly observation and host plants are located in the southwestern portion of the Project site. Tricolored blackbirds were observed foraging within the Project site, outside of the switchyard development footprint, in April 2019. Based on 2019 observations, Tricolored blackbirds use the southwestern portion of the site for foraging. The switchyard does not contain suitable nesting habitat for this species and therefore construction of the switchyard would only impact a minimal amount of potential foraging habitat (0.63 acres). Due to the suitable foraging habitat within the switchyard footprint and the proximity of the occurrences, potential direct impacts to tricolored blackbird would be a **potentially significant** impact (**Impact BI-W-2**).

Project Effect as Relevant to Guideline K

Impacts to migratory birds (**Impact BI-W-3**) are discussed in Section 2.3.3.2.

Project Effect as Relevant to Guideline L

There is no suitable nesting habitat (i.e., large trees or cliffs) in the switchyard development footprint. Due to lack of recent nesting by golden eagles in this area, permanent direct impacts on golden eagle would be **less than significant**.

2.3.4 Cumulative Impact Analysis

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with biological resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County. Within the extent of the cumulative projects, the Peninsular Ranges of the California Floristic Province, as defined in the Jepson Flora Project, was initially chosen to define the biological resources cumulative study area. However, since the Proposed Project is located approximately 1 mile east of the Peninsular Range boundary the southeastern portion of the Carrizo Creek Watershed (Hydrologic Unit Code 18100202) was also included to define the southeastern extent of the cumulative study area (Figure 2.3-9, Cumulative Impact Analysis).

The Peninsular Ranges eco-geographic extent was chosen because the geographic system developed by the Jepson Flora Project "combines features of natural landscapes and biota to delimit the units, as opposed to using the often arbitrary and unnatural boundaries of counties for that purpose. The Jepson geographic system most importantly reflects broad patterns of natural vegetation (and, at a finer scale, more specific plant assemblages), geology, topography, and climate" (Jepson Flora Project 2020). In addition, habitat within the Peninsular Ranges would be biologically representative of that present within the Project site. The southeastern portion of Carrizo Creek Watershed is used to define the southeastern extents of the cumulative study area. The approximately 653-square-mile Carrizo Creek Watershed boundaries are defined by "hydrographic and topographic criteria that delineate an area of land upstream from a specific point on a river, stream or similar surface waters" (USDA 2019). Similar to the Jepson Flora Project, the boundaries of this watershed also reflect natural patterns of the landscape. The additional use of the Carrizo Creek Watershed boundaries provide a southeastern biologically relevant connection between the Proposed Project and Peninsular Ranges. Based on this system, the Peninsular Ranges and southeastern portion of the Carrizo Creek Watershed would define an appropriate study area for biological resources assessed in this EIR. The biological cumulative analysis study area is explained in the "Existing Cumulative Conditions" section that follows. The cumulative projects analyzed for biological resources are a subset of those projects summarized in Table 1-7, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects (see Chapter 1, Project Description, of this EIR).

Existing Cumulative Conditions

The southeastern San Diego County area is considered a transition zone between biogeographic regions. The California Floristic Province occurs in the biological cumulative analysis study area, which encompasses a majority of California west of the extreme dry regions. The Desert Province occurs east of the cumulative analysis area, which encompasses the dry desert regions, and is not

included in the biological cumulative analysis study area. Within the California Floristic Province, the Peninsular Ranges subregion (i.e., an area of similar climatic and plant community associations) stretches from southern Los Angeles County along the valley, foothills, and mountains south to Baja California, Mexico. Although the Project site is located within the Desert Province boundaries, habitat within the Project site is more characteristic of that within the Peninsular Ranges subregion. Therefore, the southeastern portion of the Carrizo Creek Watershed is included to define the southeastern boundaries of the biological cumulative analysis study area.

Cumulative Methodology

The cumulative analysis conducted for biological resources is based on the list method and considers relevant projects from Table 1-4 in Chapter 1. Figure 2.3-9 shows the extent of the cumulative study area. Of the cumulative projects listed in Table 1-7 in Chapter 1, the following completed projects would potentially affect biological resources within the cumulative study area. Completed cumulative projects include the following: Energia Sierra Juarez wind project (located in Mexico), Tule Wind project (Phase I), Ocotillo Express wind project, Kumeyaay Wind, Energia Sierra Juarez transmission line, ECO Substation, Jacumba Solar, Golden Acorn Casino and Travel Center, Freedom Ranch, Boulevard Fire Station. Cumulative projects which are either under review, approved, or under construction (but not completed) include the following: Tule Wind project (Phase 2), Campo Wind with Boulder Brush Facilities project, Torrey Wind project, Rugged Solar, Boulevard Solar, Cameron Solar, Boulevard Energy Storage, Rough Acres Foundation Campground Facility, Jacumba Community Services District new well, Meteorological Testing Facilities, Level 2 Communications, Site Master water tank, Pacific Telephone, White Star Communications Site, Pactel White Star, Mazanita T-Mobile, and VZW I-8 Boulevard. The locations of these cumulative projects can be found in Figure 2.3-9. Reasonably foreseeable cumulative projects located east of the overall cumulative analysis area are not included because they would affect more arid vegetation communities than those present on site; therefore, the Proposed Project would not cumulatively contribute to impacts to natural vegetation communities in this region or to impacts to species that are associated with these habitat types. Reasonably foreseeable cumulative projects located in the western, central, and southeastern portion of the cumulative analysis area (within San Diego County) within the cumulative study area, as described above, have the potential to affect similar vegetation communities as the Proposed Project, and therefore, could cumulatively contribute to impacts to natural vegetation communities in this region, or to impacts to species that are associated with these habitat types.

The cumulative analysis for wildlife movement and local and regional planning is similarly limited to the western, central, and southeastern portions of the cumulative study area. As described in Section 2.3.4.3, Wildlife Movement, since the analysis area is largely undeveloped; wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of the reasonably foreseeable cumulative projects, the area

would remain predominantly rural with significant undeveloped areas and wildlife movement opportunity. Local and regional planning efforts are defined by the jurisdiction of local planning authorities, which in the case of the Proposed Project is San Diego County.

2.3.4.1 Candidate, Sensitive, or Special-Status Species

Special-Status Plant Species

Direct

The Project site is characterized by a diverse assemblage of vegetation communities (see Table 2.3-1 for vegetation communities and associated acreage in the Project site) that supports or has the potential to support special-status plant species. Focused surveys for special-status plants within the Project site were conducted in spring and summer 2019 resulting in the detection of six special-status plant species (see Section 2.3.1.5). Short-term, construction-related, or temporary direct impacts on special-status plants, if they occur, at the edge of the development footprint and non-impacted areas interface could primarily result from construction activities. One population of sticky geraea, a County List B species, occurs along the edge of development and non-impacted areas and could be subject to these temporary impacts. The Proposed Project will result in direct impacts to 22 individuals of two plant species: pygmy lotus (List A; 1 individual) and sticky geraea (List B; 21 individuals). These proposed direct impacts would be potentially significant.

For a cumulative impact to special-status plant species to occur, the cumulative projects would have to result in the loss of the same special-status plant species or their habitat as the Proposed Project such that those species become more limited in their distribution, population size, or available suitable habitat within the cumulative analysis area.

The Proposed Project would result in direct impacts to small populations of two plant species (22 individuals total) and could temporarily impact one small population of sticky geraea during construction. These impacts, when added to the potential impacts to suitable habitat from other projects, would not result in a reduced distribution of these two species in the region. Therefore, loss of special-status plant species from the Proposed Project combined with the reasonably foreseeable cumulative projects would **not contribute to a cumulatively considerable impact**.

Indirect

Invasive Plant Species

Ground-disturbing activities and increased vehicle and human uses associated with construction of the Proposed Project have the potential to introduce and spread invasive, non-native, and noxious plant species in the area, which is generally characterized by undisturbed native vegetation

communities with low levels of invasive and noxious plant species. The introduction of invasive, non-native, or noxious plant species resulting from the Proposed Project would result in potentially significant indirect impacts.

For a cumulative impact related to the introduction and spread of invasive, non-native, or noxious plant species to occur, reasonably foreseeable cumulative projects would have to result in the introduction and spread of these species across the biological cumulative analysis study area. The biological cumulative analysis study area is a largely undeveloped area characterized by large expanses of undisturbed native vegetation communities. The listed cumulative projects have the potential to result in the introduction and spread of invasive, non-native, or noxious plant species due to the cumulative increase in ground disturbance in undeveloped native vegetation communities (as discussed above, the total estimate of disturbance in the biological cumulative analysis study area to vegetation as a result of reasonably foreseeable cumulative projects was determined to be approximately 3,886 acres). However, the development of the Proposed Project is largely located within fallow agriculture, disturbed habitat, and developed lands (586.47 of the 643.13 acres of impact or approximately 80% of the impact footprint). The Proposed Project would remove 508.46 acres of non-native plant species associated with the fallow agriculture from the Project site, thus reducing the potential for these species to invade nearby native habitat. Conversely, the Proposed Project would remove 126.99 acres of sensitive vegetation and could spread invasive plants into adjacent native habitat.

Fugitive Dust

For a cumulative impact related to construction dust generation resulting in vegetation degradation to occur, the reasonably foreseeable cumulative projects would have to be constructed at the same time and in proximity to each other. The listed cumulative projects within the biological cumulative analysis study area involve a variety of project types. Additionally, most of the biological cumulative analysis study area is characterized by undisturbed native vegetation communities. Construction of some cumulative projects may partially overlap or would be completed prior to commencement of Proposed Project construction activities, and impacts would be less severe than if they were constructed simultaneously. If all of the reasonably foreseeable cumulative projects in proximity to the Proposed Project were to be constructed simultaneously, which is highly unlikely, substantial dust generation could degrade nearby vegetation.

Indirect impacts stemming from the Proposed Project could affect one population of sticky gerea located at the development edge. The remaining populations of special-status plants would be located away from Proposed Project development. Given the potential impact to only one small population of one plant species, the Proposed Project would **not contribute to a cumulatively considerable significant impact** from indirect impacts on special-status plant species.

Special-Status Wildlife Species

Direct

For a cumulative impact to special-status wildlife species to occur, the cumulative projects would have to result in the loss of the same special-status wildlife species or their habitat as the Proposed Project such that those species become more limited in their distribution, population size, or available suitable habitat within the biological cumulative analysis study area. The listed cumulative projects that occur in the biological cumulative analysis study area would have the potential to impact the same special-status wildlife species as the Proposed Project due to a similar climate and similar distribution of vegetation communities. As stated previously, the total estimated area of disturbance to similar native vegetation communities as the Proposed Project for reasonably foreseeable cumulative projects in the biological cumulative analysis study area was determined to be approximately 3,886 acres.

As described above, the biological cumulative analysis study area includes the Peninsular Ranges eco-geographic extent as defined by the Jepson Flora Project (Jepson Flora Project 2020). To analyze potential cumulative impacts to wildlife species, a habitat-based approach was used, which provides an overall view of suitable habitats within the biological study area. Similar to plants, the habitat model included suitable vegetation communities that are being impacted within the biological cumulative analysis study area, and known elevation ranges for the wildlife species. The habitat model is provided in Table 2.3-3, which includes the vegetation communities, elevation ranges, total suitable acreage in the biological cumulative analysis study area, total impacted acreage, and a discussion of the results. The Proposed Project, combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more special-status wildlife species such that they are vulnerable to environmental variability and are at a higher risk of becoming imperiled.

However, the suite of wildlife species that occur or have potential to occur within the biological study area are wide-ranging and occur in a wide variety of habitat types that occur throughout the biological cumulative analysis study area. The Proposed Project would **not contribute to a cumulatively considerable significant impact**.

Indirect

Given the nature, location, and timing of the reasonably foreseeable cumulative projects, the potential for cumulatively significant indirect construction-related impacts is low. Reasonably foreseeable cumulative projects within the biological cumulative analysis study area involve a variety of project types. Projects within a few miles of the Project site are generally not anticipated to be constructed simultaneously.

However, construction of some listed cumulative projects in proximity to the Proposed Project may overlap, in which case increased human presence, vehicle traffic, and construction noise could cause wildlife behavior modifications and avoidance of the area. These disruptions could result in changes in habitat usage and potentially affect species fitness and productivity. The potential mortality resulting from increased vehicle use in the area and construction area hazards (e.g., trenches) across the Project site and listed cumulative Project site areas could lead to decreased population numbers and reduced productivity. The Proposed Project and other reasonably foreseeable cumulative projects are located in a rural area and adjacent properties provide undeveloped areas for wildlife to evacuate. Additionally, there is suitable habitat available for wildlife species on portions of the Project site and throughout the biological cumulative analysis study area. Therefore, the potential for construction-related wildlife disturbance and mortality impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would **not contribute to a cumulatively considerable impact**.

2.3.4.2 Riparian Habitat or Sensitive Natural Community

The reasonably foreseeable cumulative projects have the potential to result in adverse impacts to vegetation communities. Reasonably foreseeable cumulative projects have the potential to affect more than 3,886 acres of vegetation communities and land covers within the biological cumulative analysis study area. For cumulative effects to occur, cumulative projects would have to result in the loss of the same vegetation communities as the Proposed Project such that those vegetation communities become limited in acreage or extent within the cumulative analysis area. Additionally, a cumulative impact to native vegetation communities could occur if the cumulative projects use all available land for mitigation such that the loss of native vegetation communities cannot be adequately compensated within the cumulative analysis study area.

The Proposed Project would impact up to 643.13 acres of vegetation communities and land covers. Many of the vegetation communities impacted by the Proposed Project are similar to those impacted by the other cumulative projects in the region. Impacts to fallow agriculture account for more than 50% of the total cumulative project impacts. Impacts to other vegetation communities vary, but are generally similar between the Proposed Project and the other cumulative projects.

The Proposed Project's impacts to vegetation communities total approximately 0.13% of the cumulative analysis study area. The Proposed Project combined with the reasonably foreseeable cumulative projects would impact approximately 0.91% of the cumulative analysis study area. Therefore, the Proposed Project, combined with the reasonably foreseeable cumulative projects in the biological cumulative analysis study area, would contribute incrementally to adverse impacts on vegetation communities. However, the cumulative scenario would impact less than 1% of the total cumulative analysis study area; therefore, vegetation communities would not become limited in acreage or extent within the cumulative analysis area. Therefore, the Proposed Project would **have a less than significant cumulative impact**.

2.3.4.3 Wildlife Movement

A cumulative impact to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites would occur if the listed cumulative projects, combined with the Proposed Project, result in constraining or blocking known habitat linkages or result in a cumulative barrier to wildlife movement through the cumulative analysis area. The cumulative analysis study area encompasses a largely undeveloped landscape with few barriers to movement, except for I-8, the U.S./Mexico border fence, and, to a lesser extent, scattered rural development and property fencing.

Reasonably foreseeable projects that occur in the cumulative analysis area could potentially inhibit wildlife movement. Several of the larger reasonably foreseeable projects, including wind energy projects could block wildlife movement (particularly for avian species) due to their size and location (e.g., along an avian flyway or migration route).

The Proposed Project combined with the cumulative projects would result in energy-related and other development throughout the cumulative analysis area. These projects have the potential to disrupt wildlife movement patterns for wildlife species moving east/west and traversing the I-8 freeway (in particular, typical wide-ranging terrestrial species including mule deer, mountain lion, bobcat, and coyote). To reduce impacts to wildlife movement, the Proposed Project has been designed to maintain movement corridors throughout the Project site and concentrate development in the least sensitive portions of the Project site. In addition, the cumulative analysis area is largely undeveloped, and wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of these projects, the area would remain predominantly rural with significant undeveloped areas and wildlife movement opportunity. Additionally, the total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 499,048 acres and the Proposed Project combined with reasonably foreseeable cumulative projects would only impact approximately 0.91% of the total acreage. Therefore, impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would be **less than significant** for habitat linkages and wildlife movement corridors.

2.3.4.4 Local Policies, Ordinances, and Adopted Plans

A cumulative impact to regional planning would occur if the reasonably foreseeable cumulative projects, combined with the Proposed Project, conflict with one or more local policies or ordinances protecting biological resources. Those projects within the biological cumulative analysis study area would, similar to the Proposed Project, be within the future MSCP East County Plan area. The cumulative projects under the land use planning jurisdiction of the County of San Diego would be reviewed for consistency with the draft MSCP East County Plan currently in progress (no schedule for completion currently). Therefore, reasonably foreseeable projects, in combination with the Proposed Project, would not cumulatively contribute to a potential conflict with local plans.

2.3.5 Significance of Impacts Prior to Mitigation

Candidate, Sensitive or Special-Status Species

Project Effects Relevant to Guideline A

There are no direct or indirect impacts to Quino checkerspot butterfly.

A total of 593.5 acres of suitable foraging habitat for the tricolored blackbird would be directly impacted as a result of the Proposed Project; therefore, direct impacts to tricolored blackbird would be **potentially significant (Impact BI-W-2)**.

Project Effects Relevant to Guideline B

Special-Status Plant Species (County List A and B Species)

The Proposed Project would result in short-term, construction-related, or temporary direct impacts to one special-status plant (Palmer's grapplinghook) that could occur at the edge of the development footprint. Potential temporary direct impacts on special-status plant species would be **potentially significant**. (**Impact BI-SP-1**)

In addition, there are direct impacts to two special-status species (see Table 5-2 of the Biological Resources Technical Report included as Appendix D): pygmy lotus (1 individual) and sticky geraea (21 individuals). Direct impacts to pygmy lotus and sticky geraea would be **potentially significant** (**Impact BI-SP-2**).

Special-Status Wildlife Species (County Group 1 or State SSC)

Loss of County Group 1 or state SSC animals and/or suitable habitat from construction-related activities would result in short-term direct impacts. These temporary direct impacts would be **potentially significant** (**Impact BI-W-1**).

Implementation of the Proposed Project would result in the direct loss of habitat, including foraging habitat, for some of the County Group 1, Group 2, and/or SSC species. Permanent direct impacts to habitat for special-status wildlife species would be **potentially significant** (**Impact BI-W-2**).

The Proposed Project would impact 643.0 acres of suitable foraging habitat for the golden eagle; therefore, permanent direct impacts to golden eagle foraging habitat would be **potentially significant** (**Impact BI-W-2**).

The Proposed Project would result in impacts to 14.2 acres of occupied burrowing owl habitat; therefore, impacts to burrowing owl would be **potentially significant** (**Impact BI-W-2**).

The Proposed Project would result in direct impacts on special-status wildlife species, if any active nests or the young of nesting County Group 1 and/or SSC bird species are impacted through direct grading, these impacts would be **potentially significant**, based on the MBTA and Fish and Game Code (**Impact BI-W-3**).

Yuma myotis, pallid bat, and western small-footed myotis have a high potential to roost in the abandoned buildings on site, which would be demolished as part of the Proposed Project. If there were a maternity roost in a building, impacts on that roost site would be potentially significant, absent mitigation (**Impact BI-W-4**).

Project Effects Relevant to Guideline C

Special-Status Plant Species (County List C and D Species)

Impacts on Palmer's grapplinghook outside designated construction zones could occur from clearing, trampling, or grading. Potential temporary direct impacts to special-status plant species would be **potentially significant** (**Impact BI-SP-1**).

No County List C plants were observed within the Project site. There are **no impacts** to County List D plants.

Special-Status Wildlife Species (County Group 2)

Loss of County Group 2 or other special-status species and/or suitable habitat, from construction-related activities would result in short-term direct impacts that would be **potentially significant** (**Impact BI-W-1**).

Implementation of the Proposed Project would result in the direct loss of habitat, including foraging habitat, for some of the County of San Diego Group 2 or other special-status species, which would be a **potentially significant** impact (**Impact BI-W-2**).

Permanent direct impacts on nesting birds could result if active nests or the young of nesting County Group 1 and/or SSC bird species are impacts through direct grading or clearing and grubbing in preparation for construction. This impact would be **potentially significant** (**Impact BI-W-3**).

Yuma myotis, pallid bat, and western small-footed myotis have a high potential to roost in the abandoned buildings on site, which would be demolished as part of the Proposed Project. If there were a maternity roost in a building, impacts on that roost site would be **potentially significant** (**Impact BI-W-4**).

Project Effects Relevant to Guideline D

There are no known arroyo toad records within the Project site or vicinity; and there are no third order stream channels present within the Project site. Therefore, the Proposed Project would have **no impact** on arroyo toad aestivation, foraging, or breeding habitat.

Project Effects Relevant to Guideline E

Due to lack of recent nesting by golden eagles in this area, there would be **no impacts** within 4,000 feet of an active golden eagle nest.

Project Effects Relevant to Guideline F

The Proposed Project would result in impacts to more than 5% of the raptor foraging habitat; therefore, impacts to raptor foraging habitat would be **potentially significant (Impact BI-W-2)**.

Project Effects Relevant to Guideline G

Short-term, construction-related, or temporary direct impacts on potential foraging and breeding habitat for species that use the Project site (e.g., special-status birds) would primarily result from construction activities. Potential temporary direct impacts on foraging and breeding habitat within the Project site would be **potentially significant** (**Impact BI-WLC-1**).

The Project site is included within a Core Wildlife Area (a large block of habitat that supports multiple wildlife species), even though the 1,356-acre property is bordered by the U.S./Mexico border fence, which may exclude some larger wildlife from moving directly through the Project site. The Project site is also a linkage between two blocks of habitat located on either side of the Project site. The Proposed Project would impact 643 acres of land within the 1,356-acre Project site. A list of special status wildlife species that were observed or have the potential to occur within the Project site are included in Appendix E1 of the Biological Resources Technical Report (Appendix D to the EIR). This impact on a core wildlife area for would be **potentially significant** (**Impact BI-WL-C**).

Project Effects Relevant to Guideline H

Special-Status Plant Species

Potential short-term or temporary indirect impacts to special-status plant species in the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). These impacts would be **potentially significant** (**Impact BI-SP-3**).

Permanent indirect impacts could result from the proximity of the Proposed Project to special-status plants after construction. Permanent indirect impacts that could affect special-status plant species include generation of chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. These impacts would be potentially significant (Impact BI-SP-4).

Special-status plant species at the edge of the biological open space easement/development interface could be impacted by permanent indirect impacts such as those previously listed. These impacts would be potentially significant (Impact BI-SP-4).

Special-Status Wildlife Species

Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These indirect impacts would be **potentially significant** (**Impact BI-W-5**).

Potential long-term or permanent indirect impacts to special-status wildlife species would include non-native, invasive plant and animal species introduction; habitat fragmentation; increased human activity; alteration of the natural fire regime; altered hydrology; and lighting. These impacts would be **potentially significant** (**Impact BI-W-8**).

Lighting for the Proposed Project would be limited to motion detector lighting at the substation and site entry ways and would be shielded and directed downward. Therefore, lighting would have a **less than significant** impact on wildlife.

Only five proposed utility poles would provide perches from which avian species may forage, this is considered a minor risk for collision due to the small number of poles and **less than significant** impacts.

Project Effects Relevant to Guideline I

The Proposed Project would result in direct impacts to 14.2 acres of occupied burrowing owl habitat (see Table 2.3-3), which would be **potentially significant** (**Impact BI-W-2**).

Project Effects Relevant to Guideline J

The Project site is outside of the range for coastal cactus wren. Therefore, **no impacts** relating to this guideline would occur.

Project Effects Relevant to Guideline K

No Hermes copper butterflies (*Lycaena hermes*) have been detected within the Project site. The larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected

during biological surveys within the Project site. Based on the lack of suitable habitat for this species, the Project site is not considered occupied Hermes copper butterfly habitat. Therefore, **no impacts** related to this guideline would occur.

Project Effects Relevant to Guideline L

Potential impacts on the nesting success of tree and/or ground-nesting raptors associated with the loss of suitable nesting habitat would be **potentially significant** (**Impact BI-W-2**).

Temporary indirect impacts on avian foraging and wildlife access to foraging or nesting would primarily result from construction activities. These impacts, as discussed above, are **potentially significant** (**Impact BI-W-5**).

Due to lack of suitable habitat or range for coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), and light-footed clapper rail (*Rallus longirostris levipes*), these species are not expected to nest within the Project site; therefore, **no impact** on the nesting success of those species would result.

Riparian Habitat or Sensitive Upland Natural Community

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. Temporary direct impacts to special-status vegetation communities within the Project site would be **potentially significant** (**Impact BI-V-1**).

The Proposed Project would result in permanent direct impacts to 126.99 acres of riparian habitat or sensitive vegetation communities and 467.63 acres of fallow agriculture. Although fallow agriculture is typically not considered a sensitive vegetation community, the areas mapped as fallow agriculture do provide foraging habitat for wildlife and therefore would be considered a sensitive vegetation community. These impacts would be potentially significant (**Impact BI-V-2**).

Project Effects Relevant to Guideline B

Short-term, construction-related, or temporary direct impacts to jurisdictional aquatic resources would primarily result from construction activities. Potential temporary direct impacts to jurisdictional aquatic resources within the Project site would be **potentially significant** (**BI-JAR-1**).

The Proposed Project would result in **no impacts** to potential ACOE and RWQCB non-wetland waters or CDFW streambed.

Potential short-term or temporary indirect impacts to jurisdictional aquatic resources in the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. Therefore, this impact would be **potentially significant** (**Impact BI-JAR-2**).

Long-term or permanent indirect impacts could result from the proximity of the Proposed Project to jurisdictional aquatic resources after construction (e.g., maintenance of roads). Potential long-term indirect impacts to jurisdictional aquatic resources that occur outside of the impact area would be **potentially significant** (**Impact BI-JAR-3**).

Project Effects Relevant to Guideline C

Estimated drawdown at the nearest groundwater-dependent habitat from pumping Well No. 2 and Well No. 3 would be less than three feet. Further, current groundwater levels in Well No. 3 are at least 12 feet higher than the historical low groundwater level recorded in the Jacumba Valley alluvial aquifer (Appendix J, Groundwater Investigation Report). Therefore, drawdown as a result of Proposed Project groundwater use would be unlikely to exceed the historical low groundwater level, and impacts on the groundwater table would be **less than significant**.

Project Effects Relevant to Guideline D

Potential short-term or temporary indirect impacts to sensitive vegetation communities within the Project site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. These temporary indirect impacts would be **potentially significant** (**Impact BI-V-3**).

Long-term or permanent indirect impacts could result from the proximity of the Proposed Project to sensitive vegetation communities after construction (e.g., maintenance of roads, fencing, and landscaping). Potential long-term indirect impacts to sensitive vegetation communities that occur outside of the impact area would be **potentially** significant (**Impact BI-V-4**).

Project Effects Relevant to Guideline E

The Proposed Project is designed to avoid RPO wetlands and the 50-foot RPO wetland buffer. Therefore, **no impacts** relating to Guideline 4.2.E would occur.

Jurisdictional Wetlands and Waterways

Project Effects Relevant to Guideline 4.3

The Proposed Project would have potential temporary direct impacts, and potential temporary and permanent indirect impacts, on jurisdictional aquatic resources as defined by Section 404 of the Clean Water Act if grading occurred outside the approved limits of disturbance. These impacts would be **potentially significant** (**Impacts BI-JAR-1, BI-JAR-2,** and **BI-JAR-3**).

There would be **no direct impacts** to federally regulated waters.

Wildlife Movement and Nursery Sites

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the Project site (e.g., special-status birds) would primarily result from construction activities. Potential temporary direct impacts to foraging and breeding habitat within the Project site would be **potentially significant** (**Impact BI-WLC-1).**

Permanent direct impacts to 643 acres of potential foraging and breeding habitat for species that use the Project site would occur as a result of the Proposed Project. Permanent direct impacts to foraging and breeding habitat would be **potentially significant** (**Impact BI-WLC-2**).

Indirect impacts to sensitive bird species may occur if clearing of vegetation is conducted during the nesting season for MBTA protected species (generally January 15 through August 31). These impacts would be **potentially significant** (**Impact BI-WLC-3**).

Project Effects Relevant to Guideline B

The Proposed Project would substantially interfere with a local linkage and connectivity between blocks of habitat and would impact wildlife movement between the east and west core habitat areas. This impact would be **potentially significant** (**Impact BI-WLC-2**).

Project Effects Relevant to Guideline C

The Proposed Project does not create unnatural movement corridors. The impacts would **less than significant**.

Project Effects Relevant to Guideline D

There would be short-term, construction-related noise. These temporary indirect impacts would be **potentially significant** (**Impact BI-WLC-3**).

Permanent Indirect Impacts to Habitat Connectivity and Wildlife Corridors

Long-term (permanent) indirect impacts from noise and lighting would be **less than significant**.

Project Effects Relevant to Guideline E

The fenced solar panels and facilities would be unstaffed and therefore would be compatible with adjacent wildlife movement, since human activity would be limited. Although fencing is proposed around the solar facility, wildlife movement could still occur within the SDG&E easement that transects the Project site and drainage corridor along the western portion of the proposed solar facility. Therefore, with the incorporation of mitigation, the Proposed Project would result in a **less than significant** impact on corridor widths.

Project Effects Relevant to Guideline F

The placement of fencing and the solar facility within the Project site could disrupt the visual continuity of the Project site as a wildlife movement corridor. This impact is **potentially significant (Impact BI-WLC-2**).

Local Policies, Ordinances and Adopted Plans

Project Effect as Relevant to Guideline A

The Project site does not support coastal sage scrub; therefore, there are **no significant impacts** under this threshold.

Project Effect as Relevant to Guideline B

The Proposed Project would not conflict with the draft MSCP East County planning effort. Therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline C

Although RPO wetlands occur within the Project site, the Proposed Project would avoid RPO wetlands and the wetland buffer. Therefore, **no impacts** would occur to RPO wetlands or wetland buffers.

Per County guidelines, the occupied burrowing owl habitat is considered sensitive habitat lands. Thus the impacts to occupied burrowing owl habitat would be **potentially significant** (**Impact BI-W-2**).

Project Effect as Relevant to Guideline D

The Project site does not support coastal sage scrub; therefore, there are **no impacts** under this threshold.

Project Effect as Relevant to Guideline E

The Proposed Project conforms to the goals and requirements as outlined in all applicable regional planning efforts; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline F

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the Proposed Project and therefore **no impacts** would occur.

Project Effect as Relevant to Guideline G

In regard to wildlife Movement and Nursery Sites, development of the Proposed Project would convert the Project site from a large open space available for unimpeded wildlife movement. This impact would be **potentially significant** (**Impact BI-WLC-2**).

Project Effect as Relevant to Guideline H

Since there is no approved MSCP East County Plan and no associated BMO, this guideline does not apply to the Proposed Project; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline I

This guideline only applies to areas with an adopted MSCP Plan. Since there is no approved MSCP East County Plan, this guideline does not apply to the Proposed Project; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline J

Quino Checkerspot Butterfly

The Proposed Project would not reduce the likelihood of survival or recovery of Quino checkerspot butterfly in the wild. Therefore, the Proposed Project would have **no impacts** (direct or indirect) on Quino checkerspot butterfly, including host plants.

Tricolored Blackbird

The Proposed Project would impact 593.5 acres of potential tricolored blackbird foraging habitat within the Project site. Because the tricolored blackbird is a listed species, based on the County's guidelines, the impacts to tricolored blackbird would be **potentially significant** (**Impact BI-W-2**).

Project Effect as Relevant to Guideline K

The Proposed Project would have potential impacts to migratory birds (**Impact BI-W-3**).

Project Effect as Relevant to Guideline L

Based on the limited use on site by golden eagles, the Proposed Project would not result in the take of eagles, eagle eggs, or any part of an eagle. Due to lack of recent nesting by golden eagles in this area, permanent direct impacts to golden eagle would be **less than significant**.

Cumulative Impacts

Candidate, Sensitive, or Special-Status Species

Special-Status Plant Species

The Proposed Project would result in direct impacts to small populations of two plant species (22 individuals total) and could temporarily impact one small population of sticky geraea during construction. These impacts, when added to the potential impacts to suitable habitat from other projects, would not result in a reduced distribution of these two species in the region. Therefore, loss of special-status plant species from the Proposed Project combined with the reasonably foreseeable cumulative projects would **not contribute to a cumulatively considerable impact**.

Indirect impacts stemming from the Proposed Project could affect one population of sticky gerea located at the development edge. The remaining populations of special-status plants would be located away from the Proposed Project development. Given the potential impact to only one small population of one plant species, the Proposed Project would **not contribute to a cumulatively considerable significant impact** on special-status plant species.

Special-Status Wildlife Species

The suite of wildlife species that occur or have potential to occur within the biological study area are wide-ranging and occur in a wide variety of habitat types that occur throughout the biological cumulative analysis study area. The Proposed Project would **not contribute to a cumulatively considerable significant impact**.

The Proposed Project and other reasonably foreseeable cumulative projects are located in a rural area and adjacent properties provide undeveloped areas for wildlife to evacuate. Additionally, there is suitable habitat available for wildlife species on portions of the Project site and throughout the biological cumulative analysis study area. Therefore, the potential for construction-related wildlife disturbance and mortality impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would **not contribute to a cumulatively considerable impact**.

Riparian Habitat or Sensitive Natural Community

The cumulative scenario would impact less than 1% of the total cumulative analysis study area; therefore, vegetation communities would not become limited in acreage or extent within the cumulative analysis area. Therefore, the Proposed Project would **not contribute to a cumulatively significant impact**.

Wildlife Movement

The Proposed Project has been designed to maintain movement corridors throughout the Project site and concentrate development in the least sensitive portions of the Project site. Therefore, when combined with other projects in the cumulative area, the Proposed Project would not **contribute to a cumulatively significant impact** on wildlife movement.

In addition, the cumulative analysis area is largely undeveloped, and wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of these projects, the area would remain predominantly rural with significant undeveloped areas and wildlife movement opportunity. Additionally, the total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 499,048 acres and the Proposed Project combined with reasonably foreseeable cumulative projects would only impact approximately 0.91% of the total acreage. Therefore, impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would be **less than significant** for habitat linkages and wildlife movement corridors.

Local Policies, Ordinances, and Adopted Plans

A cumulative impact to regional planning would occur if the reasonably foreseeable cumulative projects, combined with the Proposed Project, conflict with one or more local policies or ordinances protecting biological resources. Those projects within the biological cumulative analysis study area would, similar to the Proposed Project, be within the future MSCP East County Plan area. The cumulative projects under the land use planning jurisdiction of the County of San Diego would be reviewed for consistency with the draft MSCP East County Plan currently in progress (no schedule for completion currently). Therefore, reasonably foreseeable projects, in combination with the Proposed Project, would not cumulatively contribute to a potential conflict with local plans, and the Proposed Project would **not contribute to a cumulatively significant impact**.

2.3.6 Mitigation Measures

M-BI-1 Biological Monitoring.

(a) In order to prevent inadvertent disturbance to sensitive resource areas outside the approved area of impact, a County of San Diego (County)-approved biologist

(Project Biologist) shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*. The contract provided to the County shall include an agreement that this will be completed, and a memorandum of understanding between the biological consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*, the Project Biologist shall also perform the following duties:

    a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).

    b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading and clarifying that the Project Biologist has the authority to halt work that could harm or harass a protected species.

    c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.

    d. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.

    e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.

    f. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts on biological resources that are intended to be protected and preserved.

    g. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and

earthmoving activities. If brush-clearing and earth-moving activities take place within the bird breeding season, flushing shall not occur in an area identified as having an active nest and thus resulting in a potential take of a species.

h. Verify that grading plans include a stormwater pollution prevention plan (SWPPP) (if required pursuant to provisions of the State Water Resources Control Board 2009-0009-DWQ Construction General Permit, or equivalent applying the standards set forth in the County of San Diego Stormwater Standards Manual) to address hydrology impacts; see **M-BI-7**.

i. Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that temporarily impacted areas are revegetated as soon as possible.

j. Periodically monitor the construction site to verify that artificial security light fixtures are directed away from open space and are shielded.

k. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas are provided on a daily basis during vegetation clearing, grubbing and grading. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles shall be covered at night to prevent wildlife from burrowing in. The edges of the sheeting shall be weighted down with sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area at the end of the day) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.

l. Except as stated otherwise herein, biological monitoring is daily during vegetation clearing, grubbing and grading. Once the PV field construction commences, the monitoring shall be weekly.

2. The cost of the monitoring shall be added to the grading bonds or bonded separately with the County Planning & Development Services (PDS).

Documentation: The Applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to the PDS. Additionally, the cost amount of the monitoring work shall be added to the grading bond cost estimate.

Timing: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits.

Monitoring: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate should be forwarded to the Project manager, for inclusion in the grading bond cost estimate, and grading bonds. The DPW/PDS shall add the cost of the monitoring to the grading bond costs.

(b) In order to ensure that the biological monitoring occurred during the grading phase of the Project, a final biological monitoring report shall be prepared. The Project Biologist shall prepare the final biological monitoring report. The report shall substantiate the supervision of the grading activities, and confirm that grading or construction activities did not impact any additional areas or any other sensitive biological resources. The report shall conform to the County *Report Format Guidelines for Biological Resources*, and include the following items:

a. Photos of the fencing or temporary flagging that was installed during the trenching, grading, or clearing activities

b. Monitoring logs showing the date and time that the monitor was on site

c. Photos of the site after the grading and clearing activities.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform the applicant to release the bond back to the Applicant.

(c) Compliance with this measure shall be required during decommissioning activities.

M-BI-2 **Temporary Construction Fencing.** Prior to issuance of permits, including clearing, grubbing, grading, and/or construction permits, the project applicant or its designee shall install fencing wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the Project Biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on plans. Prior to release of grading and/or

improvement bonds, a qualified biologist shall provide evidence to the satisfaction of the Director of the San Diego County Department of Planning and Development Services (or his/her designee) that work was conducted as authorized under the approved permits and associated plans.

M-BI-3 **Habitat Preservation.** In order to mitigate for impacts to loss of sensitive vegetation communities, plant and wildlife species habitat, special status plant species, burrowing owl occupied habitat, and wildlife movement, the applicant shall provide an on-site biological open space easement.

(a) In order to protect sensitive biological resources, pursuant to the Resource Protection Ordinance (RPO) and California Environmental Quality Act, a biological open space easement will be granted over up to 435.00 acres of sensitive vegetation communities, special-status plant species, and habitat for special-status species. The project is estimated to impact sensitive vegetation communities that require mitigation as summarized in the following table.

Vegetation Community/Land Cover	Ratio	Permanent Direct Impacts (Acres)	Required Mitigation (Acres)	Biological Open Space Easement (Acres)
*Desert saltbush scrub	2:1	50.39	100.78	4.69
*Desert sink scrub	3:1	—	—	12.43
*Disturbed freshwater marsh	3:1	—	—	0.08
*Mesquite bosque	3:1	2.64	7.92	126.12
*Sonoran mixed woody scrub	1:1	—	—	139.33
*Sonoran mixed woody and succulent scrub	1:1	72.85	72.85	132.05
*Tamarisk scrub	3:1	1.11	3.33	—
*Non-wetland waters of the United States/state	1:1	—	—	0.78
Fallow agriculture[1]	0.5:1	467.63	233.82	9.35
Disturbed habitat	N/A	27.27	—	10.17
Urban/developed	N/A	21.24	—	<0.01
Total	**—**	**643.13**	**418.70**	**435.00**

Note: An asterisk (*) marks land cover types for which the County of San Diego (2010a) requires mitigation.
[1] The fallow agriculture is considered raptor foraging habitat mitigated at a 0.5:1 mitigation ratio.

This biological open space easement shall mitigate for project impacts to sensitive vegetation communities and habitat for wildlife species, thereby preserving compensatory habitat that provides equal or greater benefit to plant and wildlife species. This biological open space easement will be granted to the County of San Diego (County). Granting of this open space authorizes the County and its agents to periodically access the land to perform management

and monitoring activities for the purposes of species and habitat conservation. This easement is for the protection of biological resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. The only exceptions to this prohibition are (1) vegetation clearing by hand, by written order of the fire authority for reduction of an identified fire hazard; (2) activities conducted pursuant to an approved revegetation or resource management plan; (3) vector control by written order of the County; and (4) construction, use, and maintenance of approved multi-use, non-motorized trails. No trails have been approved as part of this Project and would require subsequent environmental review and approval by PDS. Permanent signage indicating the area is a biological open space will be required and will be installed by the developer.

Documentation: The applicant shall prepare the draft plats and legal descriptions of the easements, then submit them for preparation and recordation with the DGS, and concurrence with PDS, and pay all applicable fees associated with preparation of the documents.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: The DGS shall prepare and approve the easement documents and send them to PDS for pre-approval. The PDS shall pre-approve the language and estimated location of the easements before they are released to the applicant for signature and subsequent recordation. Upon Recordation of the easements, DGS shall forward a copy of the recorded documents to PDS for satisfaction of the condition.

(b) **Special-Status Plants.** Mitigation shall be provided for one pygmy lotus (County List A) and 21 sticky geraea individuals (County List B). County List A plant species will be mitigated at a 3:1 ratio, and County List B species will be mitigated at a 1:1 mitigation ratio. Mitigation for these plants shall be achieved through a combination of (1) salvaging the plants located in proposed impact areas and replanting in suitable mitigation lands, and (2) establishment of additional plants to meet the mitigation requirements. The Resource Management Plan (RMP) for the biological open space easement shall include the required measures to ensure viability of the transplanted and established

individuals. The RMP (see M-BI-4) will include the locations of the plant restoration. The RMP will be the basis for monitoring and mitigation activities for the entire biological open space, including locations of plant mitigation.

Documentation: The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: A RMP Annual Report will be submitted to the County along with the submittal fee to cover County staff review time.

(c) **Burrowing owl occupied habitat**. Based on mitigation ratios provided in Table 1 of the Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County (Attachment A, County of San Diego 2010b), the project is required to provide 1:1 mitigation ratio for impacts to occupied burrowing owl habitat. Impacts to burrowing owl habitat will be mitigated by dedicating 22 acres of suitable burrowing owl habitat as an on-site biological open space easement. This acreage is included in the overall up to 435-acre biological open space easement. This area is comprised of open, relatively flat habitat which contains similar vegetation communities as the impacted habitat. This biological open space easement shall mitigate for project impacts to occupied burrowing owl habitat. Refer to M-BI-3(a) which describes the biological open space easement requirements.

(d) **Wildlife Corridor Access.** The project shall provide a 50 to 100 foot opening in the perimeter fence north of the SDG&E easement to allow for wildlife moving within the easement corridor or north of the easement to move in and out of the easement. The opening in the fence will allow wildlife traveling along the fence line to find a break in the fencing leading them into the larger wildlife corridor. This opening in the fence shall be provided and maintained for the life of the project.

Documentation: The fencing on the construction plans shall show an opening in the perimeter fencing as described above. The applicant shall install the project fencing or walls as indicated above and provide site photos and a statement from a California Registered Engineer, or licensed surveyor that the fencing has been installed to provide the required opening.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: The *[PDS, PCC]* shall review the photos and statement for compliance with this condition.

M-BI-4 **Resource Management Plan (RMP).** In order to provide for the long-term management of the proposed on-site biological open space, an RMP will be prepared and implemented. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of Planning & Development Services as follows:

1. The plan will be prepared and approved pursuant to the most current version of the County of San Diego (County) Biological Report Format and Content Requirements.
2. The habitat land to be managed will be owned by a land conservancy or equivalent.
3. Open space easements will be dedicated to the County in perpetuity, unless conveyed to another public agency subject to approval by the Director of PDS.
4. A resource manager will be selected and approved, with evidence provided demonstrating acceptance of this responsibility.
5. The RMP funding mechanism to fund annual costs for basic stewardship shall be identified and approved by the County. The RMP funding mechanism will be identified and adequate to fund annual costs for implementation; typically determined by a Property Analysis Record as a non-wasting endowment.
6. A contract between the applicant and County will be executed for the implementation of the RMP.

Documentation: The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the RMP shall be approved.

Monitoring: The PDS shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.

M-BI-5 This mitigation measure serves to avoid take of birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during the nesting season (M-BI-5(a)) and take avoidance for burrowing owls during the breeding and non-breeding season (M-BI-5(b).

(a) Nesting Bird Survey. To avoid any direct impacts on raptors and/or any migratory birds protected under the Migratory Bird Treaty Act and California Fish and Game Code, removal of habitat that supports active nests on the

proposed area of disturbance shall occur outside the nesting season for these species (which is January 15 through August 31, annually). If construction work must occur during the avian breeding season (January 15 to August 31, annually), the applicant shall:

1. Work with the County, CDFW and the USFWS to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds.
    a. The applicant(s) will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following:
    b. Nest survey protocols describing the nest survey methodologies
    c. A management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks
    d. A monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFSW and CDFW to monitor the applicant's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513
    e. A schedule for the submittal (usually weekly) of the NML
    f. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks
    g. A detailed explanation of how the buffer widths were determined.
    h. All measures the applicant will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting.
2. Conduct preconstruction nesting bird surveys within 72 hours of construction-related activities; conduct preconstruction survey sweeps immediately prior to ground-disturbing activities; and implement appropriate avoidance measures for identified nesting birds in the NBMMRP. Resurvey, if construction activities are halted for ten consecutive days.
3. To determine presence of nesting birds that the project activities may affect, surveys shall be conducted beyond the project area—300 feet for passerine

birds and 500 feet for raptors. The survey protocols shall include a detailed description of methodologies utilized by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols shall include but are not limited to the size of the project area being surveyed, method of search, and behavior that indicates active nests.

4. Each nest identified in the project area shall be included in the NML. The NMLs should be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs shall include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs shall provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs shall allow for tracking the success and failure of the buffers and would provide data on the adequacy of the buffers for certain species.
5. The applicant(s) will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths shall be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths shall consider the following factors:
    a. Nesting chronologies
    b. Geographic location
    c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
    d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the ground-nesting birds flush the nests)
    e. Visibility of disturbance
    f. Duration and timing of disturbance
    g. Influence of other environmental factors
    h. Species' site-specific level of habituation to the disturbance.

6. Application of the standard buffer widths shall avoid the potential for project-related nest abandonment and failure of fledging and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened. This measure does not apply to nests that are started on construction equipment or panels or supporting structures.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then the PDS shall inform DPW to release the bond back to the applicant.

(b) Burrowing Owl Take Avoidance Surveys. Take avoidance surveys are intended to detect the presence of burrowing owls on a project site at a fixed period in time and inform necessary take avoidance actions. Take avoidance surveys may detect changes in owl presence such as colonizing owls that have recently moved onto the site, migrating owls, resident burrowing owls changing burrow use, or young of the year that are still present and have not dispersed (CDFG 2012). Surveys must be completed no less than 14 days prior to the initiating ground disturbance activities.

1. If burrowing owls are detected during the breeding season (February 1 through August 1) surveys, a Burrowing Owl Management Plan will need to be written and approved by the County and the California Department of Fish and Wildlife before construction continues. The Plan shall include, at a minimum: 1) measures to protect burrowing owls during grading; 2) description of passive or active burrowing relocation during the non-breeding season; and 3) description of BMPs to implement during construction (e.g., ensure that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms). Table 6-2, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls, provides the CDFW-recommended restricted activity dates and setback distances around occupied burrowing owl nests for varying levels of disturbance (CDFG 2012).

2. If construction activities occur during the non-breeding season for burrowing owl (1 September – 31 January), a biologist shall conduct a take avoidance survey, following the methods described in the Burrowing Owl Staff Report (CDFG 2012). The take avoidance survey(s) can be conducted between 14 days and 24 hours prior to initiating ground disturbance activities; however, time lapses between project activities may require subsequent surveys within 24 hours prior to ground disturbance. If any burrowing owls are found during these surveys, avoidance and minimization measures must be implemented.

The following avoidance and minimization measures shall be implemented:

a. Avoid working within 50 meters (160 feet) from the occupied burrow during the non-breeding season;

b. Avoid direct destruction of occupied burrows during the non-breeding season until the burrowing owl has vacated the burrow (determined through monitoring of the burrow);

If these measures cannot be implemented, the applicant shall obtain written approval of an accepted plan (written or verbal) from the County and the California Department of Fish and Wildlife before construction continues. The plan shall include 1) identification of artificial burrow sites, 2) passive relocation methods, 3) monitoring and management of the artificial burrow site, and 4) reporting.

Documentation: The Project Biologist shall prepare the final survey report and/or Burrowing Owl Management Plan and submit it to the PDS for review and approval.

Timing: Prior to final grading release, or use of the premises in reliance of this permit, the final survey report and/or Burrowing Owl Management Plan shall be approved.

Monitoring: The PDS shall review the final survey report and/or Burrowing Owl Management Plan for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished.

(c) In order to avoid impacts to nesting birds and burrowing owls during decommissioning the Project operator shall be required to implement the measures outlined in subsections (a) and (b) prior to undertaking decommissioning activities.

M-BI-6 **Bat Surveys and Roost Avoidance or Exclusion.** To determine whether there is an active maternity roost within the buildings and other structures to be demolished, a bat biologist shall conduct surveys prior to demolition of the buildings or any other areas that provide suitable roosting habitat for bats. If a potential maternity roost is present, the following measures shall be implemented to reduce the potential impact on special-status bat species to a less than significant level:

a. **Maternity Roosting Season Avoidance.** All demolition activities, or bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August to reduce any potentially significant impact to maternity roosting bats. If the maternity roosting season cannot be avoided, then roost exclusion can occur outside the maternity roosting season (September through February) to exclude bats from the demolition area prior to the start of demolition during the maternity roosting season. Items b and c below will be required to ensure no impacts occur to roosting bats during the exclusion process.

b. **Replacement Roost Installation.** If there is a potential or known maternity roost within a structure to be demolished, a replacement roost installation shall occur outside of the maternity roosting season within the biological open space easement. At least one month prior to the exclusion of bats from the roost(s), the project applicant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in an area that is close to suitable foraging habitat as determined by a biologist who specializes in bats in consultation with County staff. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours daily) to allow the bat boxes to reach an optimum internal temperature (approximately 90°F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on a 20-foot-tall steel pole. Should the bat boxes be required, maintenance of the boxes will be included in the RMP to ensure long-term use/functionality.

c. **Roost Exclusion.** Roost exclusion must only occur September through February to increase the potential to exclude all bats from roosts and minimize the potential for a significant impact to occur by avoiding the maternity roosting season. Approximately one month after bat boxes have been installed, exclusion of the existing roost within the buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/egress locations on the buildings

will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (e.g., poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top of the roost location and sealed and passing 2 feet below the bottom of the primary exit point. The exclusion devices will be installed at night to increase the potential that bats will have already left the roost and are less likely to return. Exclusion devices will be left in place for one week to ensure that any remaining bats in the roost(s) are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor whether bat activity has decreased during the exclusion period. Periodic monitoring should also be conducted during the exclusion period to observe whether any bats are still emerging from additional areas within the impact footprint, and an active monitoring survey should be conducted on the final night of exclusion to ensure that no bats are emerging from the buildings and determine whether exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule. The exclusion devices may remain in place until the start of demolition activities. If any bats are found roosting in any proposed demolition areas prior to demolition, additional exclusion will be required and follow the same methodology described in this mitigation measure. This will occur until all bats are excluded.

d. **Survey Report**. Following completion of the survey the bat biologist will complete a survey report which records the findings. If active roosts are observed, and the maternity roosting season cannot be avoided, and bats must be removed, the report will also document the replacement roost installation and roost exclusion.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished.

M-BI-7 **Biological Monitoring of Stormwater Pollution Prevention Plan (SWPPP) Implementation.** During construction monitoring, the Project Biologist shall verify the following are implemented:

a. No planting or seeding of invasive plant species on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region.

b. Dust-control fencing is in place and intact if fencing is required.

c. Construction activity is located outside of jurisdictional waters of the United States/state except as authorized by applicable law and permit(s), including permits and authorizations approved by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board.

d. Silt-settling basins installed during the construction process are located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes. Design of drainage facilities shall incorporate long-term control of pollutants and stormwater flow to minimize pollution and hydrologic changes.

e. Temporary structures, staging, and storage areas for construction equipment and/or materials are located outside of jurisdictional waters, including wetlands and riparian areas.

f. No material stockpiles, debris, bark, slash sawdust, rubbish, cement, concrete or washing thereof, oil, or petroleum products are stored where they may be washed by rainfall or runoff into jurisdictional waters of the United States/state.

g. When construction operations are completed, excess materials or debris have been removed from the work area.

h. No equipment maintenance is performed within or near jurisdictional waters of the United States/state where petroleum products or other pollutants from the equipment may enter these areas.

i. Fully covered trash receptacles that are animal-proof and weather-proof are installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Littering is prohibited and removal of trash from construction areas daily is required. All food-related trash and garbage are removed from construction sites on a daily basis.

j. There are no pets on or adjacent to construction sites.

k. Speed limits in and around all construction areas are enforced so that vehicles do not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site, or 10 miles per hour during the night.

M-BI-8 **Prevention of Chemical Pollutants.** Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego (County) agriculture commissioner. The application of herbicides shall be in compliance with all federal and state laws and regulations under the prescription of a licensed Pest Control Adviser with at least 2-years' experience and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the Pest Control Adviser, the County agriculture commissioner, and the California Invasive Plant Council, with the goal of controlling populations before they start producing seeds.

During project operation, all areas that use chemicals that are potentially toxic or impactive to sensitive habitats or plants shall incorporate best management practices (e.g., avoid applications during or before rain events and avoid placing materials close to sensitive habitats) on site to reduce impacts caused by the application and/or drainage of such materials within the development footprint. In addition, use of rodenticides shall not be allowed. Weed treatment shall occur at least once per year throughout the life of the project.

M-BI-19 **Prevention of Invasive Plant Species.** A County of San Diego-approved plant list shall be used for areas immediately adjacent to open space. A hydroseed mix that incorporates native species, is appropriate to the area, and is free from invasive species shall be used for landscaped areas adjacent to the biological open space. The San Diego County Planning & Development Services landscape architect shall require that all final landscape plans comply with the following: no invasive plant species, as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with these requirements.

M-BI-10 **Operations and Maintenance Signage**. Signage shall be posted at all entrances to the facility stating that operations and maintenance personnel shall be prohibited from the following:

- Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species

- Smoking
- Traveling (either on foot or in a vehicle) outside of the solar facility undisturbed portions of the Project site
- No pets
- No Littering
- No persons not conducing operations and maintenance activities shall remain at the facility after daylight hours or exceed normal nighttime operational noise or lighting

M-BI-11 **Noise Reduction.** Construction-related activities that are excessively noisy (e.g., clearing, grading, or grubbing) adjacent to breeding/nesting areas shall incorporate noise-reduction measures (described below) or be curtailed during the breeding/nesting season of sensitive bird species.

1. Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer.
2. Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements.
3. Usage of truck engine exhaust compression braking systems shall be limited to emergencies.
4. Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and Cal OSHA's safety requirements are not violated. These settings shall be retained for the duration of construction activities.
5. Vehicle horns shall be used only when absolutely necessary, as specified in the contractor's specifications.
6. Radios and other noise-generating "personal equipment" shall be prohibited

If construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) occur during the period of January 15 through August 31, a County of San Diego-approved biologist shall conduct preconstruction surveys in suitable nesting habitat adjacent to the construction area to determine the location of any active nests in the area (see **M-BI-5**).

M-AQ-2 **Fugitive Dust Control Plan.** Refer to **M-AQ-2**, Fugitive Dust Control Plan.

M-WF-1 **Fire Protection Plan (FPP).** Refer to **M-WF-1**, Fire Protection Plan.

M-WF-2 **Construction Fire Protection Plan (CFPP)**. Refer to **M-WF-2**, Construction Fire Protection Plan.

2.3.7 Conclusion

This section provides a synopsis of the conclusion reached in each of the impact analyses, and the level of impact that would occur after mitigation measures are implemented. A summary is also provided in Table 2.3-7, Summary of Significant Impacts and Mitigation.

Candidate, Sensitive or Special-Status Species

Focused surveys for special-status plants were conducted in spring and summer 2019. The significant short-term direct impacts to suitable habitat for special-status plants (**Impact BI-SP-1**), if they occur, will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur, and **M-BI-2** (temporary construction fencing) which prevents inadvertent impacts to special-status plants. The significant long-term direct impacts to suitable habitat for special-status plants (**Impact BI-SP-2**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation) and **M-BI-4** (Resource Management Plan (RMP)).

The significant short-term indirect impacts to suitable habitat for special-status plants (**Impact BI-SP-3**), if they occur, will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-7** (biological monitoring of SWPPP), **M-BI-8** (prevention of chemical pollutants), and **M-AQ-2** (fugitive dust control plan). The significant long-term indirect impacts to suitable habitat for special-status plants (**Impact BI-SP-4**), if they occur, will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation), **M-BI-4** (RMP), **M-BI-8** (prevention of chemical pollutants), **M-BI-09** (prevention of invasive plant species), **M-BI-10** (Operations and Maintenance (O&M) signage), and **M-WF-1** (fire protection plan (FPP)).

Potential significant short-term direct impacts from loss of County Group 1 wildlife species (**Impact BI-W-1**) will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status wildlife species may occur, and **M-BI-2** (temporary construction fencing). The significant long-term direct loss of habitat, including

foraging habitat, for some of the County of San Diego Group 1, Group 2, and/or SSC wildlife species will be reduced to **less than significant** through implementation of mitigation measure **M-BI-3** (habitat preservation), **M-BI-4** (RMP), and **M-BI-5** (nesting bird surveys).

The significant long-term direct impacts to any active nests or the young of nesting special-status bird species (**Impact BI-W-3**) will be reduced to **less than significant** through implementation of mitigation measure **M-BI-1** (biological monitoring) and **M-BI-5** (nesting bird surveys).

The significant long-term direct impacts to maternity bat roost sites (**Impact BI-W-4**) will be reduced to **less than significant** through implementation of mitigation measure **M-BI-6** (Bat Surveys and Roost Avoidance or Exclusion).

The significant short-term indirect impacts to avian foraging and wildlife access to foraging, nesting , or water resources (**Impact BI-W-5**) will be reduced to **less than significant** through implementation of mitigation measure **M-BI-1** (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-5** (nesting bird surveys), **M-BI-7** (biological monitoring of SWPPP), **M-BI-10** (O&M signage), **M-BI-11** (noise reduction), and **M-AQ-2** (fugitive dust control plan).

The significant long-term indirect impacts on special-status wildlife species (**Impact BI-W-6**) , if they occur, will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation), **M-BI-4** (RMP), **M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species), **M-BI-10** (O&M signage), and **M-WF-1** (FPP).

Habitat Connectivity and Wildlife Corridors

The significant short-term direct impacts to habitat connectivity and wildlife movement (**Impact BI-WLC-1**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring) and **M-BI-2** (temporary construction fencing). The significant long-term direct impacts to habitat connectivity between and wildlife movement (**Impact BI-WLC-2**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation) and **M-BI-4** (RMP).

The significant temporary indirect impacts to habitat connectivity and wildlife corridors (**Impact BI-WLC-3**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-5** (nesting bird survey), **M-BI-7** (biological monitoring of SWPPP), and **M-BI-11** (noise reduction).

Riparian Habitat or Sensitive Upland Natural Community

Mitigation for some of the vegetation communities being impacted will be out-of-kind, as shown in Table 2.3-4. The Project site has an excess of desert sink scrub, disturbed freshwater marsh, mesquite bosque, Sonoran mixed woody scrub, Sonoran mixed woody and succulent scrub and unvegetated stream channel. These vegetation communities will be conserved as mitigation for impacts to desert saltbush scrub, tamarisk scrub and fallow agriculture. The 100.78 acres of mitigation required for impacts to 50.39 acres of desert saltbush scrub will be met through the preservation of 4.69 acres of like habitat, desert sink scrub (12.43 acres), mesquite bosque (24.46 acres), and Sonoran mixed woody and succulent scrub (59.20 acres). Both desert sink scrub and desert saltbush scrub vegetation communities have similar species composition and are both classified as Chenopod Scrub (36000) and therefore desert sink scrub is a suitable replacement vegetation for desert saltbush scrub. Sonoran mixed woody and succulent scrub has the same habitat structure as desert saltbush scrub and all of the special-status wildlife species present or with a high potential to occur, which would utilize desert saltbush scrub would also utilize Sonoran mixed woody and succulent scrub (see Table 2.3-3). The mesquite bosque provides habitat for several wildlife species which may also utilize desert saltbush scrub such as San Diegan tiger whiptail, Blainville's horned lizard, Cooper's hawk and mule deer (see Table 2.3-3). Mitigation for tamarisk scrub will be provided by the preservation of mesquite bosque (3.33 acres) which provides the same habitat structure as tamarisk scrub. The fallow agriculture is foraging habitat for raptors and other sensitive species observed and with potential to occur on-site; therefore will be mitigated at a 0.5:1 mitigation ratio. Impacts to 467.63 acres of fallow agriculture will be mitigated through the preservation of 233.82 acres of the following vegetation communities: fallow agriculture (9.35 acres), mesquite bosque (90.41 acres), Sonoran mixed woody scrub (133.27 acres), and unvegetated streambed (0.78 acres). Each of these communities is expected to provide foraging habitat for various wildlife species, such as California glossy snake, San Diegan tiger whiptail, tri-colored blackbird, Vaux's swift and Jacumba pocket mouse, including any raptors which may currently utilize the site (see Table 2.3-3). Therefore, the various habitats included in the biological open space easement will provide a similar biological function and value as the habitat being impacted.

The significant short-term direct impacts to sensitive vegetation communities (**Impact BI-V-1**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring) and **M-BI-2** (temporary construction fencing). The significant long-term direct impacts to sensitive vegetation communities (**Impact BI-V-2**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation) and **M-BI-4** (RMP)

The significant short-term indirect impacts to sensitive vegetation communities (**Impact BI-V-3**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-**

BI-1 (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-7** (biological monitoring of SWPPP), **M-BI-8** (prevention of chemical pollutants, and **M-AQ-2** (fugitive dust control plan). The significant long-term indirect impacts to sensitive vegetation communities (**Impact BI-V-4**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation), **M-BI-4** (RMP), **M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species), and **M-WF-1** (FPP).

Jurisdictional Resources

The Proposed Project would result in **no impacts** to potential ACOE and RWQCB non-wetland waters or CDFW streambed.

The significant short-term direct impacts to jurisdictional aquatic resources (**Impact BI-JAR-1**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-7** (biological monitoring of SWPPP), **M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species), **M-AQ-2** (fugitive dust control plan), and **M-WF-2** (CFPP).

The significant short-term indirect impacts to jurisdictional aquatic resources (**Impact BI-JAR-2**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), **M-BI-2** (temporary construction fencing), **M-BI-7** (biological monitoring of SWPPP), **M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species), **M-AQ-2** (fugitive dust control plan), and **M-WF-2** (CFPP).

The significant long-term indirect impacts to jurisdictional aquatic resources (**Impact BI-JAR-3**) will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-3** (habitat preservation), **M-BI-4** (RMP), **M-BI-8** (prevention of chemical pollutants), **M-BI-9** (prevention of invasive plant species), and **M-WF-1** (FPP).

Cumulative Impacts

The Proposed Project would not result in cumulatively considerable impacts to sensitive biological resources including special-status plant and wildlife species, sensitive habitat and wildlife movement corridors due to the small amount of impact in the larger landscape, type of habitat impacted and project design.

Table 2.3-1
Vegetation Communities and Land Covers

Vegetation Community or Land Cover	Code[1]	Acres	Typical County Mitigation Requirement
Sensitive Vegetation Communities and Land Covers			
Big Sagebrush Scrub	35210	0.26	2:1
Desert Saltbush Scrub	36110	77.39	2:1
Desert Sink Scrub	36120	12.43	3:1
Disturbed freshwater marsh	52400	0.08	3:1
Mesquite Bosque	61820	133.61	3:1
Sonoran Mixed Woody Scrub	33210	139.34	1:1
Sonoran Mixed Woody and Succulent Scrub	33220	390.34	1:1
Tamarisk scrub	63810	2.11	3:1
Sensitive Vegetation Communities and Land Covers Subtotal		*755.55*	—
Non-Sensitive Land Covers			
Disturbed Habitat	11300	55.00	N/A
Fallow agriculture	N/A	508.46	N/A
Urban/Developed	12000	26.00	N/A
Non-Sensitive Land Covers		*589.47*	—
Non-wetland waters of the U.S.		10.56	1:1
Total		**1,355.58**	**—**

N/A = not applicable.
[1] Oberbauer et al. 2008.

Table 2.3-2
Jurisdictional Aquatic Resources within the Biological Study Area

Jurisdictional Aquatic Resources	Acreage
ACOE/RWQCB Non-Wetlands and CDFW Streambed	
Non-Wetland Waters – Desert Sink Scrub	12.43
Non-Vegetated Channel	9.96
Non-Vegetated Channel (isolated)	0.60
*ACOE/RWQCB Wetlands and CDFW Riparian Areas Subtotal**	*22.99*
ACOE/RWQCB Non-Wetland Waters; CDFW Riparian Areas; and County RPO Wetlands	
Mesquite Bosque	130.96
ACOE/RWQCB Wetland Waters, CDFW Riparian Areas, and County RPO Wetlands	
Disturbed Freshwater Marsh	0.08
Total Jurisdictional Area*	**154.02**

* Totals may not sum due to rounding.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
Reptiles						
California glossy snake (*Arizona elegans occidentalis*)	USFWS: None CDFW: SSC County: None	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • southern mixed chaparral • chamise chaparral • non-native grassland • disturbed habitat • wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest	There is 435,099 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,183.2 acres of modeled habitat within the Project site, of which 618.1 acres would be directly impacted. Of the 618.1 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
San Diegan tiger whiptail (Aspidoscelis tigris stejnegeri)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • mesquite bosque • Sonoran mixed woody and succulent scrub • tamarisk scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • southern mixed chaparral • chamise chaparral • non-native	There is 435,099 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,318.9 acres of modeled habitat within the Project site, of which 621.9 acres would be directly impacted. Of the 621.9 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			grassland • disturbed habitat • wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest • sea level to 7,000 feet (2,130 meters)			
San Diego banded gecko *(Coleonyx variegatus abbotti)*	USFWS: None CDFW: SSC County: Group 1	• big sagebrush scrub • desert saltbush scrub and sink scrub • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • mulefat scrub • alluvial fan scrub	There is 399,880 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 619.7 acres of modeled habitat within the Project site, of which 123.2 acres would be directly impacted. Of the 123.2 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
red diamond rattlesnake *(Crotalus ruber)*	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral	There is 399,880 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 619.7 acres of modeled habitat within Project site, of which 123.2 acres would be directly impacted. Of the 123.2 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• mulefat scrub • alluvial fan scrub			
rosy boa (*Lichanura trivirgata*)	USFWS: None CDFW: None County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • mesquite bosque • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • mulefat scrub • alluvial fan scrub	There is 399,880 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 753.4 acres of modeled habitat within the Project site, of which 125.9 acres would be directly impacted. Of the 125.9 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Blainville's horned lizard (*Phrynosoma blainvillii*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • mesquite bosque • Sonoran mixed woody and succulent scrub • Tamarisk scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • southern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • non-native grassland • southern arroyo willow riparian forest • coast live oak woodland	There is 472,398 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 755.5 acres of modeled habitat within the Project site, of which 127.0 acres would be directly impacted. Of the 127.0 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• desert woodland • pine forest • oak riparian forest • riparian forest • riparian scrub • alluvial fan scrub • sea level to 8,000 feet (2,438 meters)			
Birds						
Cooper's Hawk (*Accipiter cooperii*)	USFWS: None CDFW: WL County: Group 1	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • mesquite bosque • Sonoran mixed woody and succulent scrub • unvegetated channel	Nesting • coast live oak woodland • southern arroyo willow riparian forest • eucalyptus woodland • oak riparian forest • riparian forest • pine forest • riparian scrub • mulefat scrub Foraging • montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • non-native	There is 59,756 acres of modeled nesting habitat and 448,719 acres of modeled foraging habitat within the biological cumulative study area.	Observed. There is 1,353.5 acres of modeled habitat within the Project site, of which 643.0 acres would be directly impacted. No potential suitable nesting habitat (the mesquite in the northern portion of the Project site) will be impacted. Of the 643.0 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of foraging habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			grassland • southern arroyo willow riparian forest • coast live oak woodland • eucalyptus woodland • oak riparian forest • riparian forest • riparian scrub • mulefat scrub • cismontane alkali marsh			
Sharp-Shinned Hawk (*Accipiter striatus*)	USFWS: None CDFW: WL County: Group 1	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • mesquite bosque • Sonoran mixed woody and succulent scrub • unvegetated channel	Foraging • montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • non-native grassland • southern arroyo willow riparian forest • coast live oak woodland • eucalyptus woodland • oak riparian forest	There is 448,719 acres of modeled foraging habitat within the biological cumulative study area.	Observed. There is 1,353.5 acres of modeled habitat within the Project site, of which 643.0 acres would be directly impacted. Of the 643.0 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of foraging habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• riparian forest • riparian scrub • mulefat scrub • cismontane alkali marsh			
Tricolored blackbird *Agelaius tricolor* (nesting colony)	USFWS: BCC CDFW: ST, SSC County: Group 1	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • fallow agriculture • disturbed freshwater marsh • mesquite bosque • sonoran mixed woody and succulent scrub • unvegetated channel	Foraging habitat limited to areas within 3 miles of nesting sites. Suitable vegetation communities within the cumulative study area could include the following: • big sagebrush scrub • desert scrub • disturbed habitat • mulefat scrub • alluvial fan scrub	Because foraging habitat is typically modeled within a distance of nesting colonies, it is not quantified.	Observed. There are 1,272.5 acres of modeled habitat in the Project site, of which 593.5 acres would be directly impacted (excluding access roads and substation). Of the 593.5 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of foraging habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	USFWS: None CDFW: WL County: Group 1	• big sagebrush scrub • desert saltbush scrub and sink scrub • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • mulefat scrub • alluvial fan scrub	There is 399,880 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 619.7 acres of modeled habitat within the Project site, of which 123.2 acres would be directly impacted. Of the 123.2 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
Golden eagle (*Aquila chrysaetos*)	USFWS: BCC CDFW: FP, WL County: Group 1	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • mesquite bosque • Sonoran mixed woody and succulent scrub • unvegetated channel • tamarisk scrub	Foraging • montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • chamise chaparral • southern mixed chaparral • non-native grassland • southern arroyo willow riparian forest • coast live oak woodland • eucalyptus woodland • oak riparian forest • riparian forest • riparian scrub • mulefat scrub • cismontane alkali marsh	There is 448,719 acres of modeled foraging habitat within the biological cumulative study area.	Observed. There are 1,355.6 acres of modeled habitat in the Project site, of which 643.1 acres would be directly impacted. Of the 643.1 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
burrowing owl (*Athene cunicularia*)	USFWS: BCC CDFW: SSC County: Group 1	• Model (area surrounding burrows, excluding developed land)	• non-native grassland	There is 5,481.2 acres of modeled habitat within the biological cumulative study area.	Observed. There is 14.3 acres of modeled occupied habitat within the Project site, of which 14.2 acres would be directly impacted. The switchyard	Burrowing owls were not found occupying the site during the breeding season; therefore, the potential habitat is not considered occupied. Given the large amount

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
					would not impact any occupied burrowing owl habitat.	of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Costa's hummingbird (*Calypte costae*)	USFWS: BCC CDFW: None County: None	• big sagebrush scrub • desert saltbush scrub and sink scrub • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • semi-desert chaparral • southern arroyo willow riparian forest • coast live oak woodland • desert woodland • pine forest • oak riparian forest • riparian forest • riparian scrub • alluvial fan scrub	There is 35,579.8 acres of modeled habitat within the biological cumulative study area.	Observed. There is 619.7 acres of modeled habitat in the Project site, of which 123.2 acres would be directly impacted. Of the 123.2 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
turkey vulture (*Cathartes aura*)	USFWS: None CDFW: None County: Group 1	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • southern mixed chaparral	There is 435,099 acres of modeled habitat within the biological cumulative study area.	Observed. There is 1,183.2 acres of modeled habitat in the Project site, of which 618.1 acres would be directly impacted. Of the 618.1 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• chamise chaparral • non-native grassland • disturbed habitat • wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest			
Vaux's swift (*Chaetura vauxi*)	USFWS: None CDFW: SSC County: None	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • Sonoran mixed woody and succulent scrub • unvegetated channel • tamarisk scrub	Foraging • montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	There is 57,950 acres of modeled habitat within the biological cumulative study area.	Observed. There are 1,222.0 acres of modeled habitat in the Project site, of which 640.5 acres would be directly impacted. Of the 640.5 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Northern Harrier (*Circus cyaneus*)	USFWS: None CDFW: SSC County: Group 1	• disturbed habitat • fallow agriculture	• disturbed habitat • non-native grassland	There is 10,086.6 acres of modeled habitat within the biological cumulative study area.	Observed. There is 563.5 acres of modeled habitat within the Project site, of which 494.9 acres would be directly impacted. Of the 494.9 acres of	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
					impact 0.10 acres are associated with the switchyard.	be less than significant.
California horned lark (*Eremophila alpestris actia*)	USFWS: None CDFW: WL County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • fallow agriculture • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral • southern mixed chaparral • chamise chaparral • non-native grassland • disturbed habitat • wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest	There is 435,099 acres of modeled habitat within the biological cumulative study area.	Observed. There is 1,128.2 acres of modeled habitat within the Project site, of which 590.9 acres would be directly impacted. Of the 590.9 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
merlin (*Falco columbarius*) (wintering)	USFWS: None CDFW: WL County: Group 2	• fallow agriculture • disturbed freshwater marsh • unvegetated channel	• cismontane alkali • eucalyptus woodland • mulefat scrub • non-native grassland • oak riparian forest • riparian forest • riparian scrub • southern arroyo willow riparian forest • wildflower field	There is 8,115.1 acres of modeled habitat within the biological cumulative study area.	Observed. There is 519.1 acres of modeled habitat in the Project site, of which 467.6 acres would be directly impacted. Of the 467.6 acres of impact 0.10 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
loggerhead shrike (*Lanius ludovicianus*)	USFWS: BCC CDFW: SSC County: Group 1	• big sagebrush scrub • desert saltbush scrub and sink scrub • fallow agriculture • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	There is 57,950 acres of modeled habitat within the biological cumulative study area.	Observed. There is 1,128.2 acres of modeled habitat within the Project site, of which 590.9 acres would be directly impacted. Of the 590.9 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
black-tailed gnatcatcher (*Polioptila melanura*)	USFWS: None CDFW: WL County: None	• big sagebrush scrub • desert saltbush scrub and sink scrub • mesquite bosque • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	There is 57,360 acres of modeled habitat within the biological cumulative study area.	Observed. There is 753.4 acres of modeled habitat within the Project site, of which 125.9 acres would be directly impacted. Of the 125.9 acres of impact 0.53 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Lawrence's goldfinch (*Spinus lawrencei*)	USFWS: BCC CDFW: None County: None	Foraging • big sagebrush scrub	Foraging • montane buckwheat scrub	There is 57,950 acres of modeled habitat within the	Observed. There are 1,130.3 acres of modeled habitat	Given the large amount of habitat within the region, impacts to

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
		• desert saltbush scrub and sink scrub • fallow agriculture • Sonoran mixed woody and succulent scrub • tamarisk scrub	• big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	biological cumulative study area.	in the Project site, of which 590.9 acres would be directly impacted. Of the 590.9 acres of impact 0.63 acres are associated with the switchyard.	suitable habitat associated with the Proposed Project would be less than significant.
Brewer's sparrow (*Spizella breweri*)	USFWS: BCC CDFW: None County: None	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • fallow agriculture • Sonoran mixed woody and succulent scrub • tamarisk scrub	Foraging • montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	There is 57,950 acres of modeled habitat within the biological cumulative study area.	Observed. There are 1,130.3 acres of modeled habitat in the Project site, of which 590.9 acres would be directly impacted. Of the 590.9 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	USFWS: None CDFW: SSC	Foraging • big sagebrush scrub	Foraging habitat limited to areas within 3 miles of nesting sites. Suitable	Because foraging habitat is typically modeled within a	Observed. There is 1,138.9 acres of modeled habitat in the	Given the large amount of foraging habitat within the region,

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
(nesting)	County: None	• desert saltbush scrub and sink scrub • fallow agriculture • disturbed freshwater marsh • Sonoran mixed woody and succulent scrub • unvegetated channel	vegetation communities within the cumulative study area could include the following: • big sagebrush scrub • desert scrub • disturbed habitat • mulefat scrub • alluvial fan scrub	distance of nesting colonies, it is not quantified.	Project site, of which 590.9 acres would be directly impacted (excluding roads and substation). Of the 590.9 acres of impact 0.53 acres are associated with the switchyard.	impacts to suitable habitat associated with the Proposed Project would be less than significant.
Mammals						
Pallid bat (*Antrozous pallidus*)	USFWS: None CDFW: SSC County: Group 2	• disturbed habitat • fallow agriculture • developed	• disturbed habitat • non-native grassland	There is 10,086.6 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 589.5 acres of modeled habitat in the Project site, of which 516.1 acres would be directly impacted. Of the 516.1 acres of impact 0.10 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • Sonoran mixed woody	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus	There is 69,468 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,209.2 acres of modeled habitat within the Project site, of which 639.4 acres would be directly impacted. Of the 639.4 acres of impact 0.63	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
		and succulent scrub • developed	woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral • developed		acres are associated with the switchyard.	
pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • developed • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral • developed	There is 69,468 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,209.2 acres of modeled habitat within the Project site, of which 639.4 acres would be directly impacted. Of the 639.4 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • granitic northern mixed chaparral • red shank chaparral • semi-desert chaparral	There is 413,938 acres of modeled habitat within the biological cumulative study area.	Observed. There is 619.7 acres of modeled habitat within the Project site, of which 123.2 acres would be directly impacted. Of the 123.2 acres of impact 0.53 acres are	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• chamise chaparral • southern mixed chaparral • non-native grassland • mulefat scrub • riparian scrub • alluvial fan scrub • desert woodland		associated with the switchyard.	
Western small-footed myotis (*Myotis ciliolabrum*)	USFWS: None CDFW: None County: Group 2	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub • developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • sonoran mixed woody and succulent scrub • unvegetated channel Roosting (abandoned building; not quantified)	• big sagebrush scrub • semi-desert chaparral • non-native grassland • wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest • cismontane alkali • oak riparian forest • riparian forest • riparian scrub • southern arroyo willow riparian forest	There is 37,282.8 acres of modeled habitat within the biological cumulative study area.	High potential. There are 1,219.9 acres of modeled habitat in the Project site, of which 639.4 acres would be directly impacted. Of the 639.4 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Yuma myotis (*Myotis yumanensis*)	USFWS: None CDFW: None County: Group 2	Foraging • big sagebrush scrub • desert saltbush scrub and sink scrub	• big sagebrush scrub • semi-desert chaparral • non-native grassland	There is 37,282.8 acres of modeled habitat within the biological cumulative study area.	High potential. There is approximately 1,353.5 acres of modeled habitat in the Project site, of which	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
		• developed • disturbed habitat • fallow agriculture • disturbed freshwater marsh • mesquite bosque • Sonoran mixed woody and succulent scrub • unvegetated channel Roosting (abandoned building and/or rocky outcrops on Round Mountain; not quantified)	• wildflower field • mulefat scrub • alluvial fan scrub • desert woodland • pine forest • cismontane alkali • oak riparian forest • riparian forest • riparian scrub • southern arroyo willow riparian forest		643.0 acres would be directly impacted. Of the 643.0 acres of impact 0.63 acres are associated with the switchyard.	Project would be less than significant.
San Diego desert woodrat (*Neotoma lepida intermedia*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • granitic chamise chaparral • chamise chaparral • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • alluvial fan scrub • desert woodland • southern mixed	There is 415,819 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,183.2 acres of modeled habitat within the Project site, of which 618.1 acres would be directly impacted. Of the 618.1 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			chaparral • semi-desert chaparral			
Mule deer (*Odocoileus hemionus*)	USFWS: None CDFW: None County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrib • developed • disturbed habitat • fallow agriculture • mesquite bosque • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral • southern mixed chaparral	There is 57,950 acres of modeled habitat within the biological cumulative study area.	Observed. There is 1,342.8 acres of modeled habitat in the Project site, of which 643.0 acres would be directly impacted. Of the 643.0 acres of impact 0.10 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Jacumba pocket mouse (*Perognathus longimembris internationalis*)	USFWS: None CDFW: SSC County: Group 2	• big sagebrush scrub • desert saltbush scrub and sink scrub • disturbed habitat • fallow agriculture • developed • Sonoran mixed woody and succulent scrub	• montane buckwheat scrub • big sagebrush scrub • non-native grassland • mulefat scrub • riparian scrub • disturbed habitat • wildflower • eucalyptus woodland • desert woodland • alluvial fan scrub • semi-desert chaparral	There is 69,468 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 1,209.2 acres of modeled habitat within the Project site, of which 639.4 acres would be directly impacted. Of the 639.4 acres of impact 0.63 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

Table 2.3-3
Permanent Impacts to Special-Status Wildlife Species Present within the Project Site or with High Potential to Occur

Species Common Name (Scientific Name)	Regulatory Status: Federal State County of San Diego	Modeled Habitat within the Project Site	Modeled Habitat within the Biological Cumulative Study Area	Biological Cumulative Study Area Habitat Total	Impacts to Modeled Habitat within Project Site and Occurrence	Significance Determination
			• southern mixed chaparral • developed			
American badger (*Taxidea taxus*)	USFWS: None CDFW: SSC County: Group 2	• Disturbed habitat • Fallow agriculture	• disturbed habitat • non-native grassland	10,086.6 acres of modeled habitat within the biological cumulative study area.	High potential to occur. There is 563.5 acres of modeled habitat in the Project site, of which 494.9 acres would be directly impacted. Of the 494.9 acres of impact 0.10 acres are associated with the switchyard.	Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.
Invertebrates						
Quino checkerspot butterfly (*Euphydryas editha quino*)	USFWS: FE CDFW: None County: Group 1	No model; this species was observed once on a hilltop in the southwest corner with host plants absent from the hilltop and surrounding area.	No model; this species was observed once on a hilltop in the southwest corner with host plants absent from the hilltop and surrounding area.	N/A. This species is being avoided.	N/A. Hilltop and southwest corner is being avoided.	Quino checkerspot butterfly was observed once on a hilltop, however the hilltop is being avoided. Given the large amount of habitat within the region, impacts to suitable habitat associated with the Proposed Project would be less than significant.

[1] Desert scrub modeled habitat includes desert saltbush scrub, desert sink scrub, Sonoran mixed woody and succulent scrub, and Sonoran mixed woody scrub vegetation communities.

Table 2.3-4
Proposed On-Site Mitigation for Impacts to Vegetation Communities and Land Covers (Acres)

Habitat Types/ Vegetation Communities	Existing	Total Impacts	Mitigation Ratio	Mitigation Required	Conservation Easement	Mitigation Excess or (Deficit)
Sensitive Vegetation Communities and Land Covers						
Big sagebrush scrub	0.26	—	2:1	0	0	N/A
Desert saltbush scrub	77.39	50.39	2:1	100.78	4.69	(96.09 acres)[1]
Desert sink scrub	12.43	—	3:1	0	12.43	12.43 acres. Applied excess 12.43 acres to desert saltbush scrub deficit
Disturbed freshwater marsh	0.08	—	3:1	0	0.08	0.08 acres
Mesquite bosque	133.61	2.64	3:1	7.92	126.12	118.20 acres. Applied excess 24.46 acres to desert saltbush scrub deficit, 3.33 acres to tamarisk scrub deficit, and 90.41 acres to fallow agriculture (raptor foraging habitat) deficit
Sonoran mixed woody scrub	139.34	—	1:1	0	139.34	139.33 acres. Applied 133.27 acres to fallow agriculture (raptor foraging habitat) deficit
Sonoran mixed woody and succulent scrub	390.34	72.85	1:1	72.85	132.05	59.20 acres. Applied excess 59.20 acres to desert saltbush scrub deficit
Tamarisk scrub	2.11	1.11	3:1	3.33	0	(3.33 acres)[2]
Unvegetated streambed (non-wetland water of the U.S./state)	10.56	—	1:1	0	0.78	0.78 acres. Applied 0.78 acres to fallow agriculture (raptor foraging habitat) deficit
Subtotal[3]	*766.11*	*126.99*	—	*184.88*	*415.47*	*6.86*
Non-Sensitive Land Covers						
Fallow agriculture (raptor foraging habitat)	508.46	467.63	0.5:1[4]	233.82	9.35	(224.46 acres)[5]
Disturbed habitat	55.00	27.27	0	0	10.17	N/A

Table 2.3-4
Proposed On-Site Mitigation for Impacts to Vegetation Communities and Land Covers (Acres)

Habitat Types/ Vegetation Communities	Existing	Total Impacts	Mitigation Ratio	Mitigation Required	Conservation Easement	Mitigation Excess or (Deficit)
Urban/developed	26.00	21.24	0	0	<0.01	N/A
Subtotal[3]	*598.47*	*516.14*	*N/A*	*233.82*	*19.52*	*0*
Total[3]	**1,355.58**	**643.13**	**N/A**	**418.70**	**435.00**	**6.86**

1 This deficit is mitigated through the preservation of desert sink scrub (12.43 acres), mesquite bosque (24.46 acres), and Sonoran mixed woody and succulent scrub (59.20 acres).
2 This deficit is mitigated through the preservation of mesquite bosque (3.33 acres).
3 May not total due to rounding.
4 While fallow agriculture is not defined by Oberbauer or the County, fallow agriculture is considered raptor foraging habitat mitigated at a 0.5:1 mitigation ratio, which is the mitigation ratio for non-native grassland and extensive agriculture – field/pasture.
5 This deficit is mitigated through the preservation of mesquite bosque (90.41 acres), Sonoran mixed woody scrub (133.27 acres), and unvegetated streambed (0.78 acres).

Table 2.3-5
Cumulative Impacts – Vegetation Communities

Vegetation Community[1,2]	Inventory of Vegetation Communities in the Cumulative Analysis Study Area (acres)	Proposed Project Impacts (acres)	Cumulative Project Impacts (acres)		Cumulative Analysis Study Area	
			Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area	*Total Cumulative Impacts*	*Proposed Project Impacts as Percentage of Cumulative Analysis Study Area*	*Total Cumulative Impacts as Percentage of Cumulative Analysis Study Area*
Alkali Marsh	87.6	—	—	—	—	—
Broadleaved Upland Forest	2,884.1	—	—	—	—	—
Chaparral	358,001.7	—	2,904	2,904	<0.00%	0.81%
Chenopod Scrub	1,801.0	*50.39*	3	52	2.79%	2.89%
Cismontane Woodland	25,085.0	—	98	98	<0.00%	0.39%
Closed-cone Coniferous Forest	113.5	—	—	—	<0.00%	<0.00%
Coastal Sage-Chaparral Transition	7,828.1	—	—	—	<0.00%	<0.00%
Coastal Scrub	18,887.9	—	9	9	<0.00%	0.05%
Disturbed Habitat[3]	590.2	*27.27*	105	132.27	4.62%	22.41%
Freshwater Marsh	278.6	—	2	2	<0.00%	0.72%
General Agriculture[2]	6,696.3	*467.63*	2	469.63	6.98%	7.01%
Great Basin Scrub	2,147.2	—	185	185	<0.00%	8.61%
Lower Montane Coniferous Forest	9,644.1	—	—	—	<0.00%	<0.00%

Table 2.3-5
Cumulative Impacts – Vegetation Communities

Vegetation Community[1,2]	Inventory of Vegetation Communities in the Cumulative Analysis Study Area (acres)	Proposed Project Impacts (acres)	Cumulative Project Impacts (acres)		Cumulative Analysis Study Area	
			Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area	*Total Cumulative Impacts*	*Proposed Project Impacts as Percentage of Cumulative Analysis Study Area*	*Total Cumulative Impacts as Percentage of Cumulative Analysis Study Area*
Meadows and Seeps	5,379.5	—	0	0	<0.00%	<0.00%
Mojavean Desert Scrub	180.9	—	—	—	<0.00%	<0.00%
Non-Native Vegetation	30.5	—	—	—	<0.00%	<0.00%
Non-Native Woodland	48.4	—	—	—	<0.00%	<0.00%
Pinon and Juniper Woodlands	3,014.3	—	119	119	<0.00%	3.95%
Riparian Forests	7,070.9	—	*0.11*	0.11	<0.00%	<0.00%
Riparian Scrub	1,415.0	*3.75*	5	8.75	<0.00%	0.61%
Riparian Woodlands	143.3	—	0	0	<0.00%	<0.00%
Sonoran Desert Scrub	6,023.5	*72.85*	56	128.85	<0.00%	2.14%
Undifferentiated Open Woodland	194.0	—	—	—	<0.00%	<0.00%
Unvegetated Habitat	1,728.1	—	4	4	<0.00%	0.23%
Upper Montane Coniferous Forest	13,585.2	—	—	—	<0.00%	<0.00%
Upper Sonoran Subshrub Scrub	3,815.0	—	29	29	<0.00%	0.77%
Urban/Developed	11,518.2	*21.24*	219	240	<0.00%	2.08%
Valley and Foothill Grassland, meadows, herb communities	10,786.8	—	144	144	0.05%	0.05%
Total	**499,048.7**	**643.13**	**3,886**	**4,525.61**	**0.13%**	**0.91%**

1 The vegetation communities are described within the higher level of their classification category (e.g., semi-desert chaparral is described under chaparral).

2 Vegetation community categories are based on Oberbauer et al. 2008 classifications.

3 Disturbed Habitat vegetation mapping was acquired from SanGIS (2018). Impacts to Disturbed Habitat are more than the Inventory of Vegetation Communities in the Cumulative Analysis Study Area because more detailed mapping data is available for the cumulative projects; therefore the acreages are not equal. Fallow agriculture is included in this category.

Table 2.3-6
Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls

Location	Time of Year	Level of Disturbance (meters)		
		Low	*Medium*	*High*
Nesting Sites	April 1–August 15	200	500	500
Nesting sites	August 16–October 15	200	200	500
Nesting Sites	October 16–March 31	50	100	500

Source: CDFG 2012

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 4.1: The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service.					
4.1.A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.					
2.3.3.2	Impact BI-W-2	State-listed wildlife species (Tricolored blackbird)	Direct and indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.1.B. The project would impact an on-site population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern [SSC]. Impacts to these species are considered significant; however, impacts of less than 5 percent of the individual plants or of the sensitive species' habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.					
2.3.3.2	Impact BI-SP-1	Special-status plants	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.2	Impact BI-SP-2	Special-status plants	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
2.3.3.2	Impact BI-W-1	Special-status wildlife	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.2	Impact BI-W-2	Special-status wildlife	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-5** (nesting bird survey)	Less than significant
2.3.3.2	Impact BI-W-3	Nesting birds	Permanent direct	**M-BI-1** (biological monitoring) **M-BI-5** (nesting bird survey)	Less than significant
2.3.3.2	Impact BI-W-4	Special-status wildlife (bats)	Permanent direct	**M-BI-6** (bat surveys and roost avoidance or exclusion)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
4.1.C. The project would impact the local long-term survival of a County List C or D plant species or a County Group II animal species.					
2.3.3.2	Impact BI-SP-1	Special-status plants	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.2	Impact BI-W-1	Special-status wildlife	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.2	Impact BI-W-2	Special-status wildlife	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
2.3.3.2	Impact BI-W-3	Nesting birds	Permanent direct	**M-BI-1** (biological monitoring) **M-BI-5** (nesting bird survey)	Less than significant
2.3.3.2	Impact BI-W-4	Special-status wildlife (bats)	Permanent direct	**M-BI-6** (bat surveys and roost avoidance or exclusion)	Less than significant
4.1.F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5 percent of the raptor foraging habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species					
2.3.3.2	Impact BI-W-2	Special-status wildlife (raptor foraging habitat)	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.1.G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.					
2.3.3.2	Impact BI-WLC-1	Wildlife movement	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.2	Impact BI-WLC-2	Core wildlife area	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.1.H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.					
2.3.3.2	Impact BI-SP-3	Special-status plants	Temporary indirect	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing) **M-BI-7** (biological monitoring of SWPPP)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				M-BI-8 (prevention of chemical pollutants) **M-AQ2** (fugitive dust control plan)	
2.3.3.2	Impact BI-SP-4	Special-status plants	Permanent indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-8** (prevention of chemical pollutants) **M-BI-9** (prevention of invasive plant species) **M-BI-10** (O&M signage) **M-WF-1** (FPP)	Less than significant
2.3.3.2	Impact BI-W-5	Special-status wildlife	Temporary indirect	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing) **M-BI-5** (nesting bird survey) **M-BI-7** (biological monitoring of SWPPP) **M-BI-11** (noise reduction) **M-AQ-2** (fugitive dust control plan)	Less than significant
2.3.3.2	Impact BI-W-6	Special-status wildlife	Permanent indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-8** (prevention of chemical pollutants) **M-BI-9** (prevention of invasive plant species) **M-BI-10** (O&M signage) **M-WF-1** (FPP)	Less than significant
4.1.I. The project would impact occupied burrowing owl habitat.					
2.3.3.2	Impact BI-W-2	Special-status wildlife (burrowing owl)	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-5** (nesting bird survey)	Less than significant
4.1.L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction: coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, tree-nesting raptors, ground-nesting raptors, golden eagle, and light-footed clapper rail.					
2.3.3.2	Impact BI-W-2	Special-status wildlife (sensitive bird nesting)	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
2.3.3.2	Impact BI-	Special-status	Temporary	**M-BI-1** (biological monitoring)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
	W-5	wildlife (sensitive bird nesting)	indirect	**M-BI-2** (temporary construction fencing) **M-BI-5** (nesting bird survey), **M-BI-7** (biological monitoring of SWPPP) **M-BI-10** (O&M signage) **M-BI-11** (noise reduction) **M-AQ-2** (fugitive dust control plan)	
Guideline 4.2: The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations or by California Department of Fish and Game or U.S. Fish and Wildlife Service.					
4.2.A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 [County of San Diego 2010] excluding those without a mitigation ratio) on or off the project site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No de minimus standard is specified under which an impact would not be significant; however, minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acres in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in the project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g., vernal pools). An area that is disturbed or partially developed may provide a habitat "island" that would serve as a functional refuge area "stepping stone" or "archipelago" for migratory species.					
2.3.3.3	Impact BI-V-1	Riparian habitat or sensitive vegetation communities	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.3	Impact BI-V-2	Riparian habitat or sensitive vegetation communities	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.2.B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), CDFG [now CDFW] and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.					
2.3.3.3	Impact BI-JAR-1	Jurisdictional resources	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.3	Impact BI-JAR-2	Jurisdictional resources	Temporary indirect	**M-BI-1** (biological monitoring)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

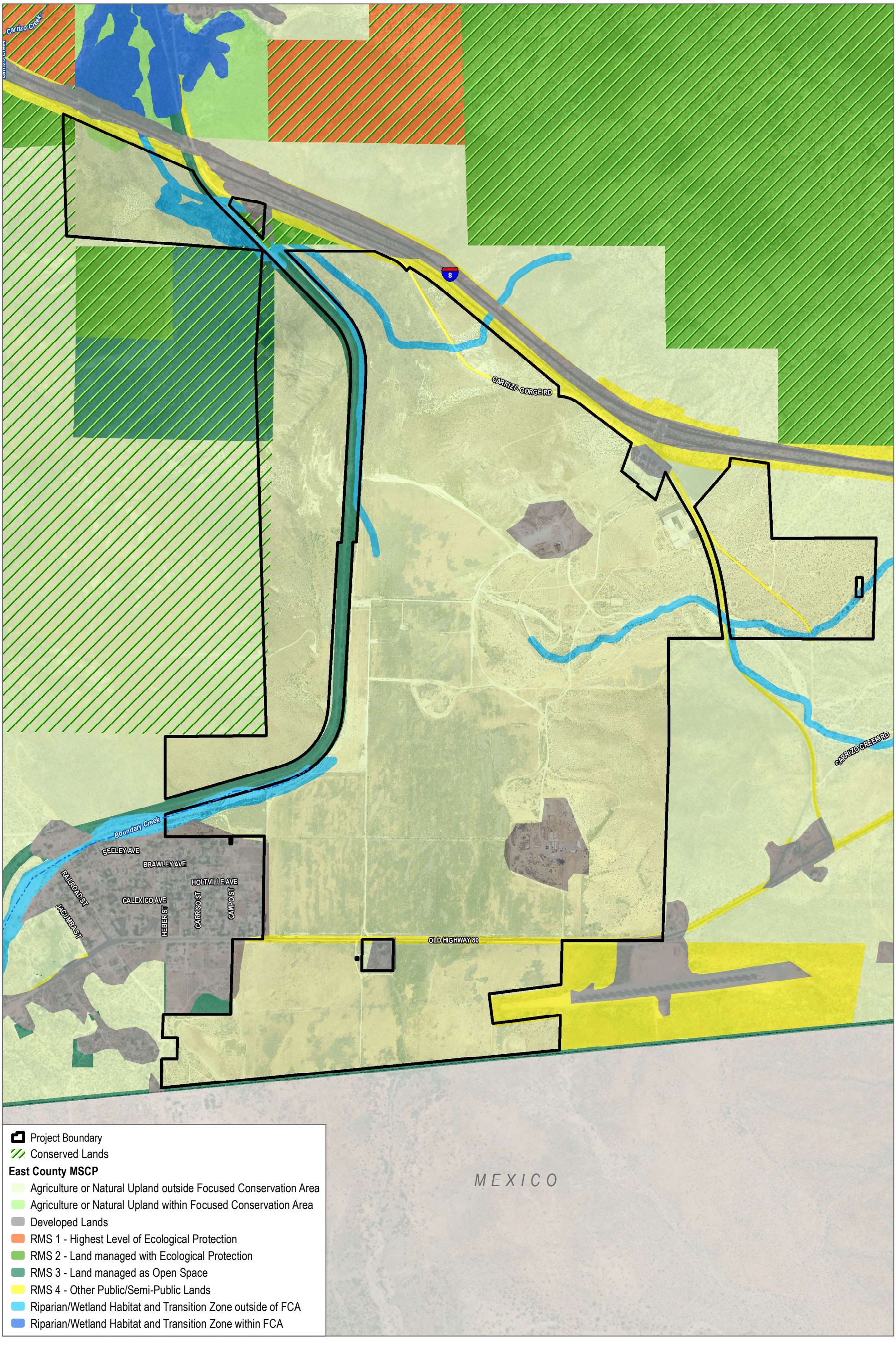
Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				M-BI-2 (temporary construction fencing) **M-BI-7** (biological monitoring of SWPPP) **M-BI-8** (prevention of chemical pollutants) **M-AQ-2** (fugitive dust control plan)	
2.3.3.3	Impact BI-JAR-3	Jurisdictional resources	Permanent indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-7** (biological monitoring of SWPPP) **M-BI-8** (prevention of chemical pollutants) **M-BI-9** (prevention of invasive plant species) **M-WF-1** (FPP)	Less than significant
4.2.D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing undeveloped lands or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.					
2.3.3.3	Impact BI-V-3	Riparian habitat or sensitive vegetation communities	Temporary indirect	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing) **M-BI-7** (biological monitoring of SWPPP) **M-BI-8** (prevention of chemical pollutants) **M-AQ-2** (fugitive dust control plan)	Less than significant
2.3.3.3	Impact BI-V-4	Riparian habitat or sensitive vegetation communities	Permanent indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-7** (biological monitoring of SWPPP) **M-BI-8** (prevention of chemical pollutants) **M-BI-9** (prevention of invasive plant species) **M-WF-1** (FPP)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 4.3: The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means.					
2.3.3.4	Impact BI-JAR-1, Impact JAR-2, and Impact BI-JAR-3	Jurisdictional resources	Temporary direct, and temporary and permanent indirect	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing) **M-BI-3** (habitat preservation) **M-BI-4** (RMP) **M-BI-7** (biological monitoring of SWPPP) **M-BI-8** (prevention of chemical pollutants) **M-BI-9** (prevention of invasive plant species) **M-AQ-2** (fugitive dust control plan) **M-WF-2** (CFPP)	Less than significant
Guideline 4.4: The project would interfere substantially with the movement of a 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.					
4.4.A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.					
2.3.3.5	Impact BI-WLC-1	Wildlife movement	Temporary direct	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing)	Less than significant
2.3.3.5	Impact BI-WLC-2	Wildlife movement	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
2.3.3.5	Impact BI-WLC-3	Wildlife movement	Temporary indirect	**M-BI-1** (biological monitoring) **M-BI-2** (temporary construction fencing) **M-BI-5** (nesting bird survey) **M-BI-7** (biological monitoring of SWPPP) **M-BI-11** (noise reduction)	Less than significant
4.4.B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.					
2.3.3.5	Impact WLC-2	Wildlife movement	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.4.C. The project would create artificial wildlife corridors that do not follow natural movement patterns.					
2.3.3.5	Impact WLC-2	Wildlife movement	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant

Table 2.3-7
Summary of Significant Impacts and Mitigation

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
4.4.D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.					
2.3.3.5	Impact BI-WLC-3	Wildlife movement	Temporary indirect	**M-BI-11** (noise reduction)	Less than significant
4.4.E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor.					
2.3.3.5	Impact WLC-2	Wildlife movement	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.4.F. The project would create artificial wildlife corridors that do not follow natural movement patterns.					
2.3.3.5	Impact WLC-2	Wildlife movement	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
Guideline 4.5: The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.					
4.5.C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).					
2.3.3.6	Impact BI-W-2	Sensitive habitat lands (occupied burrowing owl habitat)	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-5** (nesting bird survey and take avoidance surveys)	Less than significant
4.5.G. The project would preclude connectivity between areas of high habitat values.					
10.2.7	Impact W-2	Sensitive habitat lands (occupied burrowing owl habitat)	Permanent direct	**M-BI-3** (habitat preservation) **M-BI-5** (nesting bird survey and take avoidance surveys)	Less than significant
4.5.J. The project would reduce the likelihood of survival and recovery of listed species in the wild.					
2.3.3.6	Impact BI-W-2	State-listed wildlife species (Tricolored blackbird)	Direct and indirect	**M-BI-3** (habitat preservation) **M-BI-4** (RMP)	Less than significant
4.5.K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).					
2.3.3.6	Impact BI-W-3	Nesting birds	Permanent direct	**M-BI-1** (biological monitoring) **M-BI-5** (nesting bird survey)	Less than significant



SOURCE: SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.3-1

Regional Context

JVR Energy Park Project EIR

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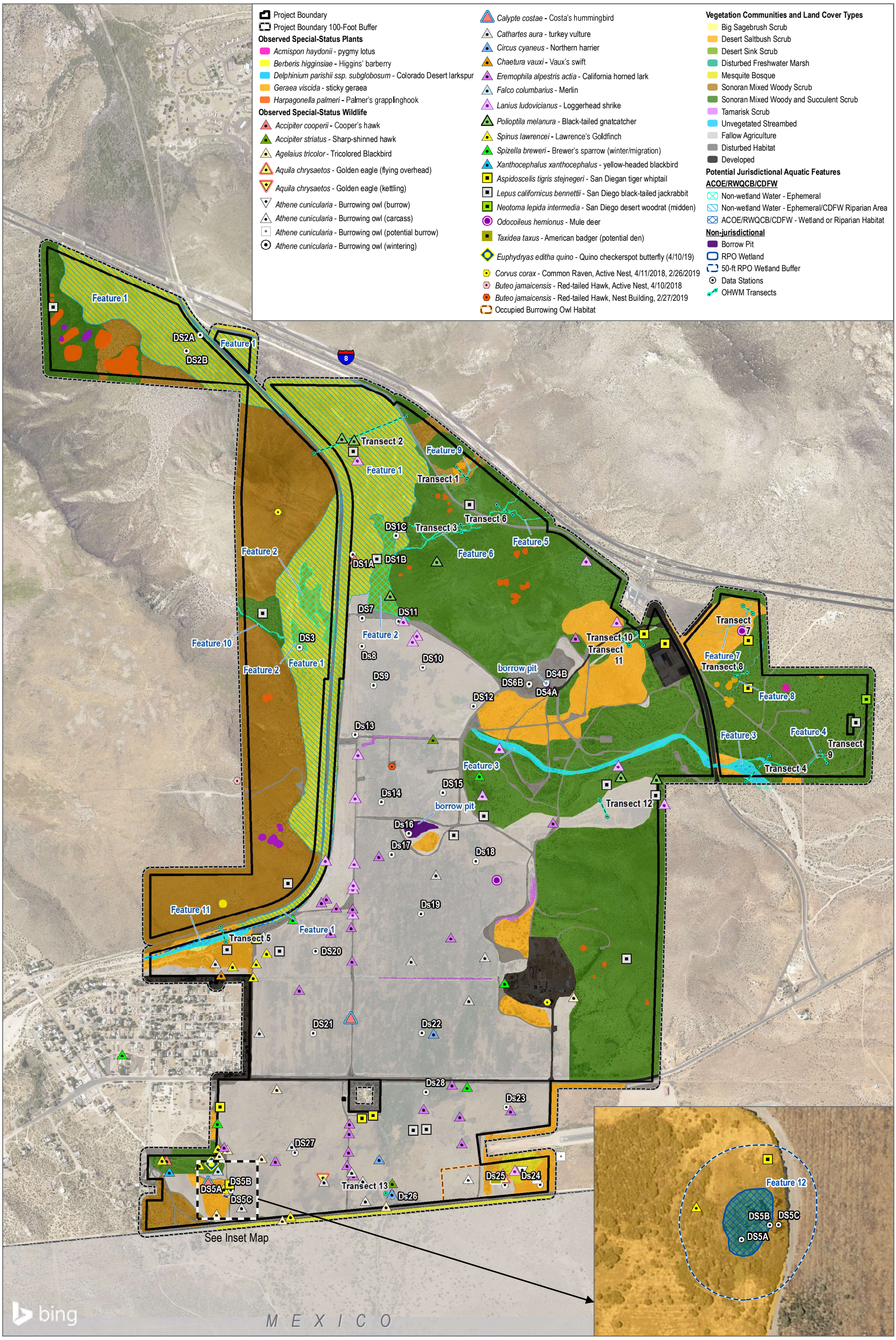

SOURCE: SANGIS 2017, 2020

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FIGURE 2.3-2

Biological Resources

JVR Energy Park Project EIR

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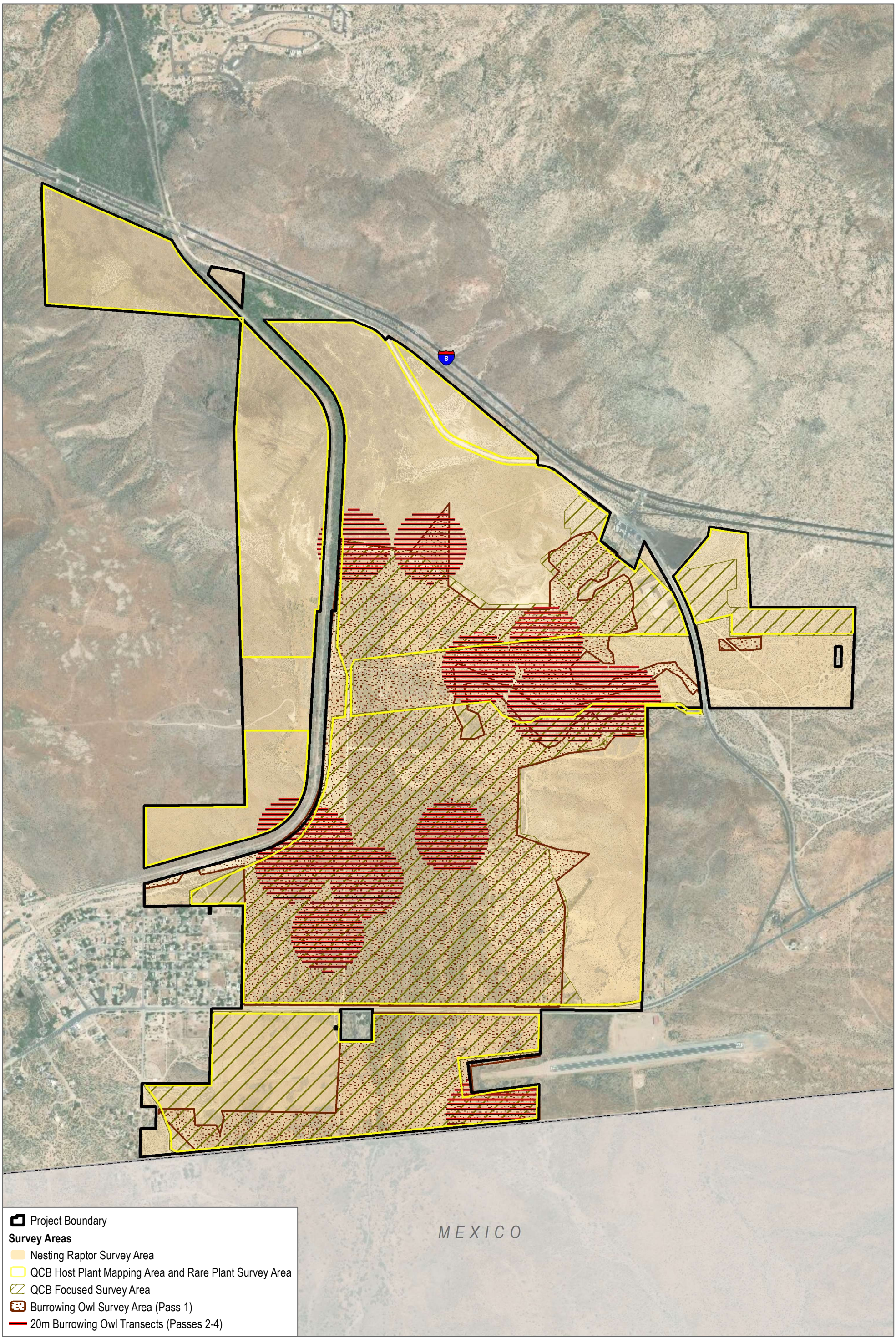

SOURCE: Baywa 2020; SANGIS 2017, 2020

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FIGURE 2.3-3

Survey Areas

JVR Energy Park Project EIR

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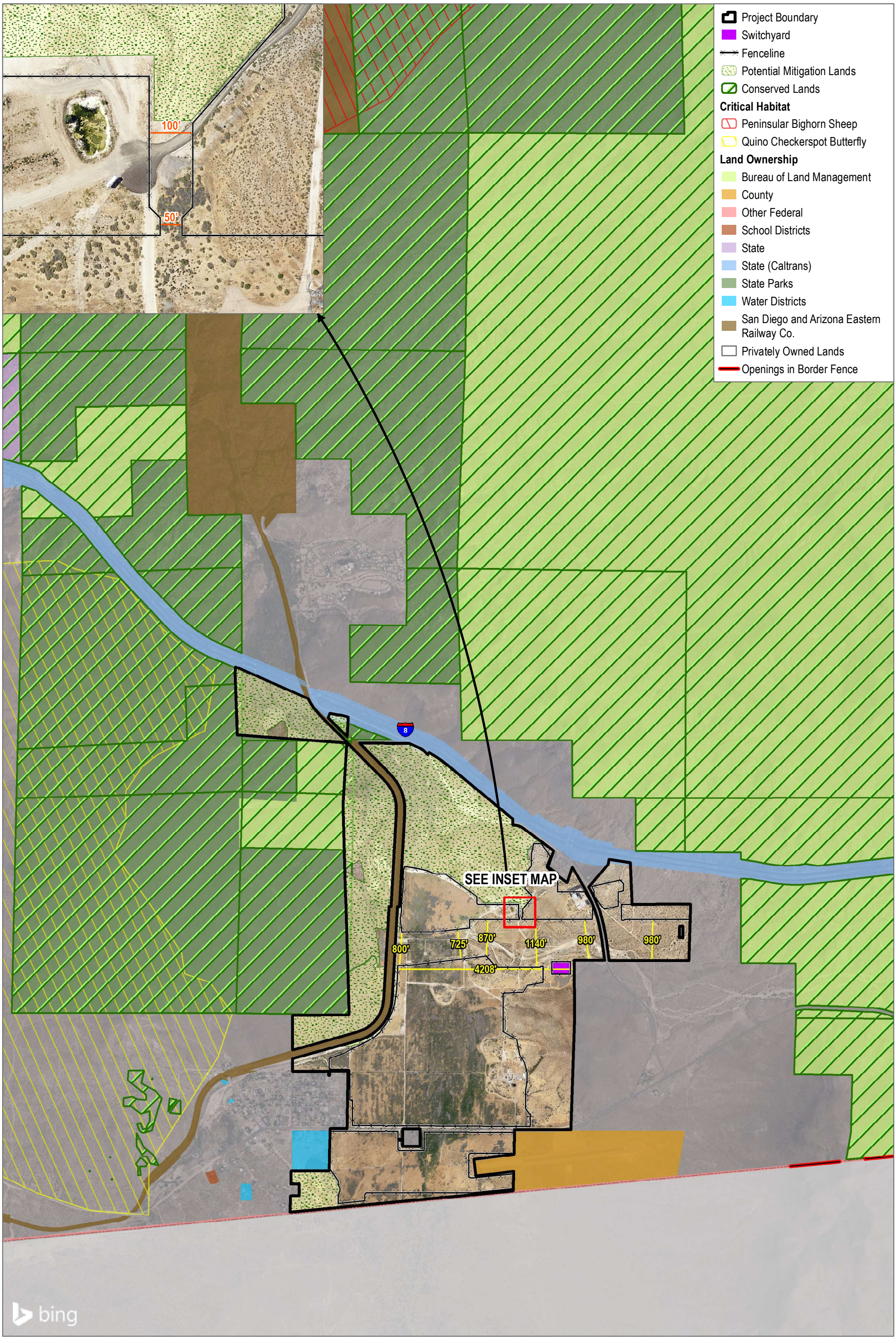

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

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FIGURE 2.3-4

Habitat Connectivity and Wildlife Movement

JVR Energy Park Project EIR

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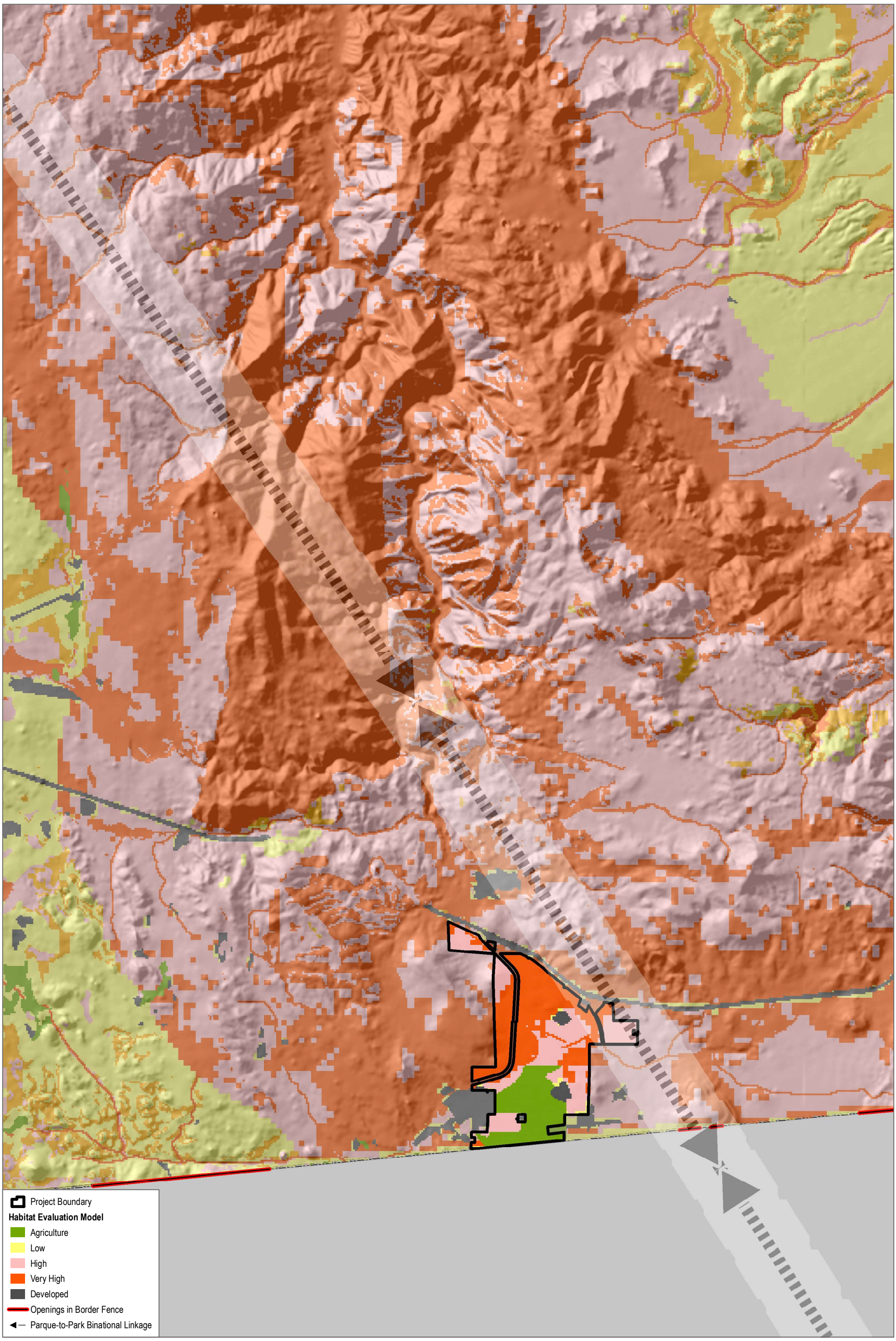

SOURCE: Stallcup et. al. 2015; SANGIS 2020

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0 0.5 1 Miles

FIGURE 2.3-5

Habitat Evaluation Model

JVR Energy Park Project EIR

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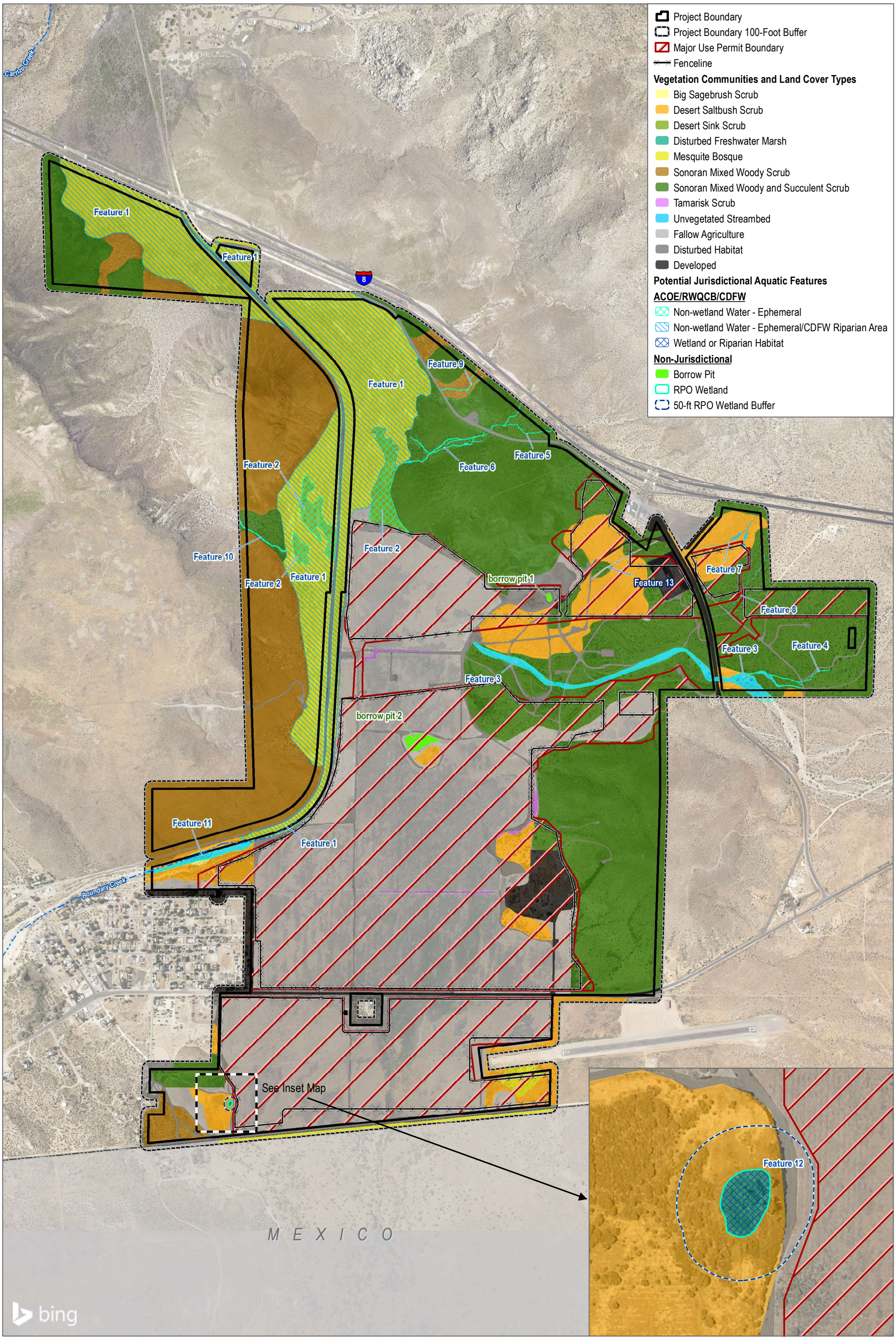

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

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0 500 1,000 Feet

FIGURE 2.3-6

Impacts to Vegetation Communities and Land Covers and Jurisdictional Delineation

JVR Energy Park Project EIR

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Project Boundary
Project Boundary 100-Foot Buffer
Major Use Permit Boundary
Fence

Observed Special-Status Plants

Acmispon haydonii - pygmy lotus
Berberis higginsiae - Higgins' barberry
Delphinium parishii ssp. subglobosum - Colorado Desert larkspur
Geraea viscida - sticky geraea
Harpagonella palmeri - Palmer's grapplinghook

Quino checkerspot host plant

Collinsia concolor

Observed Special-Status Wildlife

Accipiter cooperii - Cooper's hawk
Accipiter striatus - Sharp-shinned hawk
Agelaius tricolor - Tricolored Blackbird
Aquila chrysaetos - Golden eagle (flying overhead)
Aquila chrysaetos - Golden eagle (kettling)
Athene cunicularia - Burrowing owl (burrow)
Athene cunicularia - Burrowing owl (carcass)
Athene cunicularia - Burrowing owl (potential burrow)
Athene cunicularia - Burrowing owl (wintering)
Calypte costae - Costa's hummingbird
Cathartes aura - turkey vulture
Circus cyaneus - Northern harrier
Chaetura vauxi - Vaux's swift
Eremophila alpestris actia - California horned lark
Falco columbarius - Merlin
Lanius ludovicianus - Loggerhead shrike
Polioptila melanura - Black-tailed gnatcatcher
Spinus lawrencei - Lawrence's Goldfinch
Spizella breweri - Brewer's sparrow (winter/migration)
Xanthocephalus xanthocephalus - yellow-headed blackbird
Aspidoscelis tigris stejnegeri - San Diegan tiger whiptail
Lepus californicus bennettii - San Diego black-tailed jackrabbit
Neotoma lepida intermedia - San Diego desert woodrat (midden)
Odocoileus hemionus - Mule deer
Taxidea taxus - American badger (potential den)
Euphydryas editha quino - Quino checkerspot butterfly (4/10/19)
Corvus corax - Common Raven, Active Nest, 4/11/2018, 2/26/2019
Buteo jamaicensis - Red-tailed Hawk, Active Nest, 4/10/2018
Buteo jamaicensis - Red-tailed Hawk, Nest Building, 2/27/2019
Occupied Burrowing Owl Habitat

Carrizo Creek
Boundary Creek
8
See Inset Map
MEXICO
bing

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

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0 500 1,000 Feet

FIGURE 2.3-7

Impacts to Biological Resources

JVR Energy Park Project EIR

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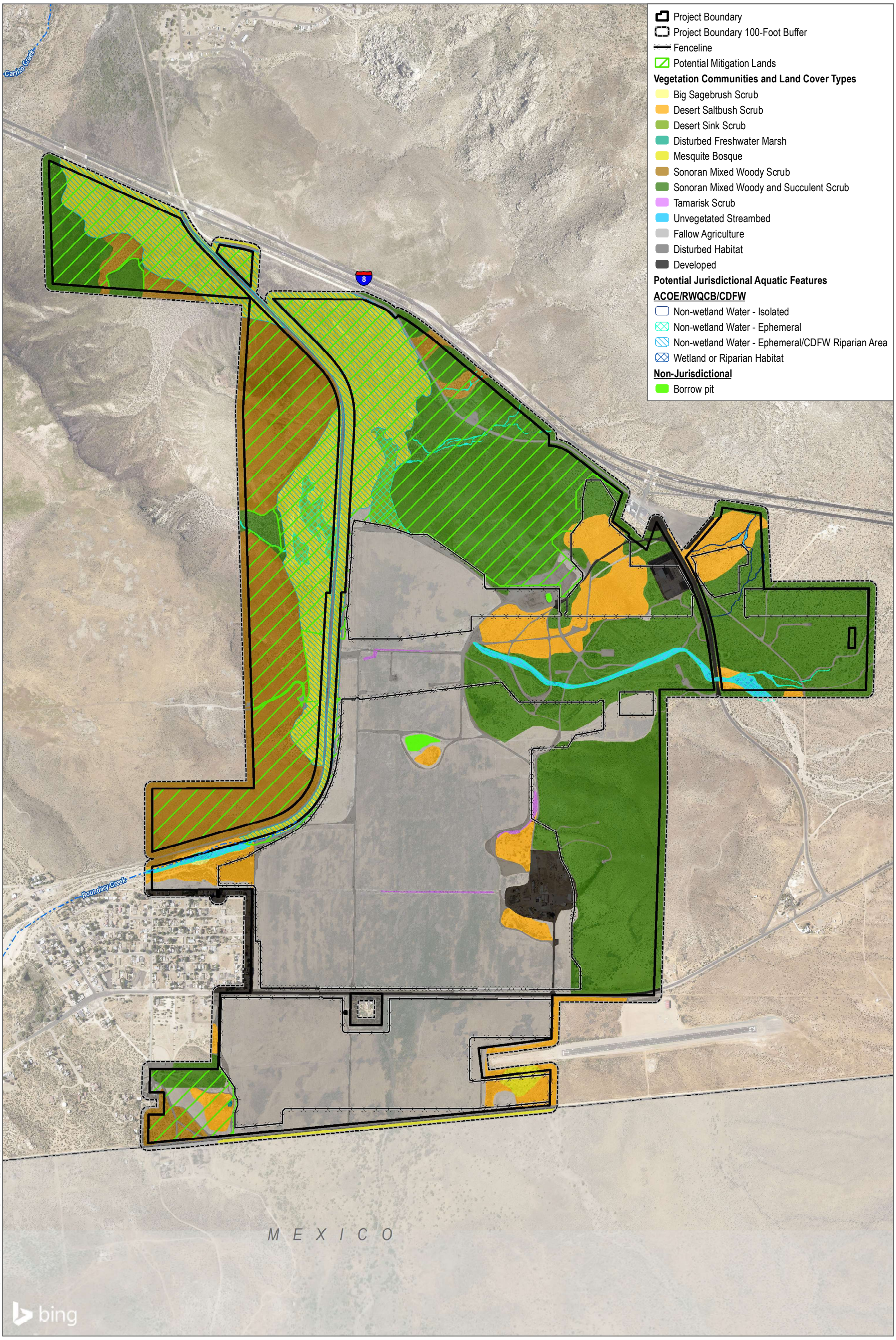

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

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FIGURE 2.3-8

Potential Mitigation Areas

JVR Energy Park Project EIR

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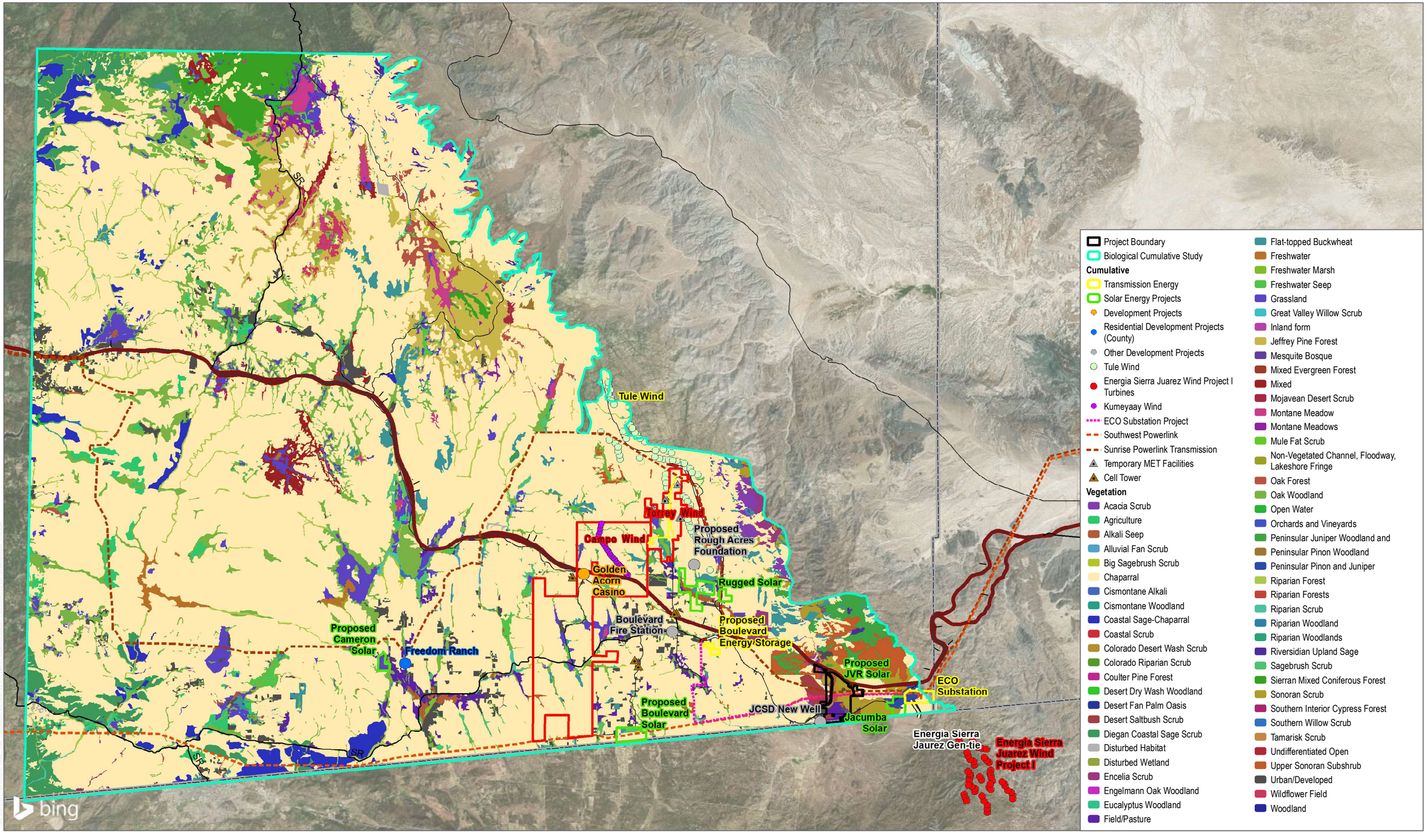

SOURCE: County of San Diego; Bing Maps

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0 9,500 19,000 Feet

FIGURE 2.3-9

Cumulative Impact Analysis

JVR Energy Park Project EIR

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2.4 Cultural Resources

The assessment of the potential of the proposed JVR Energy Park Project (Proposed Project) to impact historical and archaeological resources is presented below. Confidential records and maps are on file at the County of San Diego, Planning & Development Services and with the South Coastal Information Center (SCIC). The analysis was based on the following reports prepared for the Proposed Project:

- Cultural Resources Report for the JVR Energy Park Project (Appendix E)
- Historical Resources Technical Report for JVR Energy Park Project (Appendix D of Appendix E, Cultural Resources Report)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the proper consideration and evaluation of prehistoric archaeological resources, and proper evaluation of historic archaeological and built-environment resources. These concerns are addressed in Appendix E and are summarized in this section. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Environmental Impact Report (EIR).

2.4.1 Existing Conditions

Natural Setting

The Project site is located within the Jacumba Valley. The Proposed Project's area of direct impact (ADI) is largely confined to the valley floor, which has been altered by prior agricultural activity. A portion of the Project site to the west features steeper slopes and the eastern portion of Round Mountain. The valley floor on which the Proposed Project would be constructed is located at an elevation of approximately 2,800 feet above mean sea level.

The Project site is located in the eastern portion of the Peninsular Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is typified by northwest to southeast trending mountain ranges that parallel the trace of the San Andreas and related regional fault system. The Peninsular Ranges generally comprise the granitic of the Peninsular Ranges batholith and associated metamorphic rocks. West of the batholith, in the San Diego embayment, the Peninsular Range Geomorphic Province comprises sedimentary rocks ranging from Late Cretaceous to Pleistocene in age (Appendix F).

The climate is classified as Mediterranean Hot Summer. Rainfall is about 24 centimeters (9.5 inches) per year, based on rain gauge averages between 1963 and 2011, falling primarily between December and March. The average January daily minimum temperature is 4°C (39°F), and the

average July daily maximum is 32°C (90°F). The climate would have imposed few constraints on prehistoric hunter-gatherers in the region.

The Project area is generally an arid desert environment that supports a limited range of habitats and biological communities. These habitats and communities include mesquite bosque, desert scrub, and chaparral. Additionally, these habitats and communities may vary depending on the ecoregion, soils and substrate, and topography. The natural vegetation communities are described in Section 2.3, Biological Resources, of this EIR. Mammals, birds, and reptiles within these communities provided potential food resources to prehistoric inhabitants. Common animals within this area may include coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), cottontail (*Sylvilagus audubonit*), black-tailed jackrabbit (*Lepus californicus bennettii*), deer mouse (*Peromyscus maniculatus*), and song sparrow (*Melospiza melodia*), as well as a number of other species of birds, mammals, reptiles, and amphibians.

Cultural Setting

Evidence for continuous human occupation in southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. The prehistoric sequence within the general Jacumba region is particularly complicated by potential overlap with aboriginal groups traveling west from the Colorado Desert and Imperial Valley. To overcome potential issues in the application of disparate cultural sequences, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769). Descriptions of these chronological trends are outlined in detail within Section 1.2.1 of the Cultural Technical Report prepared for the Proposed Project (Appendix E).

Area of Direct Impact

The Project site includes 24 parcels of private land that encompass an area of 1,356 acres immediately east of the community of Jacumba Hot Springs. Located within the Project site is the 643-acre area of ADI (Figures 2.4-1A through 2.4-1C, ADI Map). The ADI includes all Proposed Project components, including access, fencing, and landscaping. The vertical ADI for the Proposed Project is the sediments disturbed during the Proposed Project construction. The amount of disturbed sediments varies according to topography and construction needs. The foundations for photovoltaic cells, which cover the extreme bulk of the ADI, consists of metal pipe or I-beams

driven 10 to 15 feet into the ground. Installation of the underground collection system would include trenches 3 to 4 feet in depth.

Disturbances to the ADI are greatly attributed to previous agricultural activity on the valley floor. A portion of the ADI has largely been leveled for agriculture and the soil repeatedly tilled. This has left an obvious impact to the archaeological deposits that previously rested on the surface of the valley floor. Artifacts are scattered throughout the fallow agricultural field with no dense concentrations or features. Surrounding infrastructural development such as highway development, commercial buildings, and previously constructed utilities have also greatly altered the periphery of the valley floor and the Project site.

2.4.1.1 Methodology

Prior to initiating fieldwork, pre-field research was completed consisting of a records search at the SCIC to obtain records for previously recorded cultural resources and any other relevant documentation including but not limited to previous cultural resources investigation reports and GIS data. A detailed description of methodology and techniques employed to identify and evaluate archaeological resources within the Proposed Project ADI is outlined in Section 4 of the Cultural Resources Technical Report (Appendix E).

Field Methods

Archaeological Inventory

Dudek conducted an initial intensive pedestrian survey of the ADI in July and August 2018. In spite of the much larger Project site, Dudek only surveyed within the Proposed Project ADI as areas outside of the ADI would be avoided. After the initial survey in the summer of 2018, the Proposed Project applicant refined the Proposed Project plot plans to avoid highly sensitive cultural and biological resources. This refinement excluded some lands previously surveyed by Dudek from the Proposed Project ADI and required Dudek to survey additional land in February and December 2019. As a result of the Proposed Project ADI refinement, this inventory includes site updates to previously identified resources and newly discovered resources that are not located within the Proposed Project ADI.

The pedestrian survey was conducted in less than 15-meter intervals; however, actual survey transect spacing depended on ground visibility. Areas with dense vegetation required shorter, 10-meter transect spacing and areas with excellent ground visibility at times allowed for a maximum transect width of 15 meters. All survey transects were oriented according to cardinal directions or to major topographic features. Transect spacing was kept using a compass but field tablets with a mobile ESRI GIS application with real-time locations plotted on aerials were used to help navigate the survey and ensure the entire Proposed Project ADI was covered. The crew moved together as

a team to ensure accurate transect spacing and to facilitate resource identification. Upon discovery of an artifact or feature, the entire crew stopped while the crew chief confirmed the identified resource. At the same time, all other crew members more closely inspected the area around their individual transects. All artifact concentrations and features were recorded during transect sweeps.

When recording an archaeological site, visible artifacts were marked with pin flags to delineate the size and boundaries of its surface deposit. Once artifacts and features were identified, crew members completed the following tasks: filled out field versions of Department of Parks and Recreation resource forms; produced a site sketch map; prepared a detailed surface artifact inventory; fully described any features; took high-resolution digital site photographs, including close-ups of important or prominent features and diagnostic artifacts; recorded UTM coordinates at the locations of formal artifacts, features, and the site boundary. Each new site was assigned a temporary resource identifier for tracking during post field data processing. No artifact collections were made during the initial inventory of the Proposed Project ADI.

Archaeological Evaluation

In February, March, and June 2019, and January 2020, Dudek conducted archaeological evaluations of any previously unevaluated resources located wholly or partially in the Proposed Project ADI. Dudek evaluated 17 resources or a portion of a resource located within the Proposed Project ADI. As described above, Dudek updated or identified resources located within previous plot plans but they have since been removed from the Proposed Project ADI. Since these resources would not be impacted by the Proposed Project, Dudek did not conduct archaeological evaluations of these sites. One exception is resource CA-SDI-21764, which was removed from the Proposed Project ADI only after it was evaluated. Furthermore, all testing efforts within each resource were conducted only within those portions of the archaeological site that fall within the Proposed Project ADI. Portions of cultural resources that fall outside of the Proposed Project ADI were not evaluated as a part of the current investigation.

During the archaeological evaluation, each site underwent an intensive surface survey with regular-interval sweeps of the site surface, and pin-flagging of artifacts, concentrations, and features to confirm the originally mapped items and site boundaries. Concentrations or areas where artifact density was relatively higher than other portions of the site were mapped and collected separately from any artifacts and materials collected at a non-specific site. Non-specific, site-wide surface collection was the minimal collection method conducted at every site where artifacts were still present. Some resources encountered had been previously collected but additional cultural materials were noted and collected. See Appendix E for details regarding the methodology used to evaluate resources.

Built-Environment Inventory

Included in the 1,356-acre Project site is a historic-era complex of dairy buildings located at 45346 Old Highway 80 (Assessor's Parcel Number [APN] 661-060-12). One previous study (Mooney and Associates 1991) reviewed the Mountain Meadow Dairy complex and determined that the site did not qualify as significant under the California Environmental Quality Act (CEQA), although there was not sufficient evidence to adequately support the rationale behind the findings. As such, the Mountain Meadow Dairy and Creamery complex (P-37-038938) was subject to updated survey and evaluation for historical significance and integrity as part of the Historical Resources Technical Report prepared for the Proposed Project (Appendix D of Appendix E).

A built environment survey was conducted by qualified architectural historians on August 9, 2018. The survey entailed walking all accessible portions of the exterior of the property and documenting the buildings with notes and photographs, specifically noting character-defining features, spatial relationships, observed alterations, and examining any historic landscape features on the property. Photographs of the subject property were taken using digital SLR cameras. The Mountain Meadow Dairy and Creamery complex contains a total of 20 extant buildings and structures constructed over 45 years ago, all of which were considered in the updated evaluation of the property.

As part of the built environment inventory, architectural historians also conducted all necessary background and archival research in order to develop a historic context for the property and better understand its potential historical associations. This included review of historical newspapers, Sanborn Fire Insurance Maps, and historic aerial photographs.

Native American Correspondence and Participation

Dudek contacted the Native American Heritage Commission (NAHC) on July 27, 2018, to request a search of its Sacred Lands Files (included as part of Appendix E). The NAHC responded indicating the presence of Native American cultural sites in the Jacumba Quad that may be impacted. Dudek sent outreach letters to all Native American contacts supplied by the NAHC requesting any information these representatives have concerning tribal cultural resources (TCRs) within the Project site. When mailing addresses were not available, Dudek attempted to contact Native American representatives by telephone. Dudek received four responses to these Native American outreach efforts. The response letters did not indicate knowledge of any specific TCRs that may be impacted by the Proposed Project but did comment on the sensitivity of the area and requested Native American monitoring.

Lacy Padilla of Agua Caliente Band of Cahuilla Indians and Chris Devers of Pauma Band of Luiseno Indians both responded via email and advised Dudek that the Proposed Project is outside

of their tribes' traditional area. Both deferred to Tribal entities more closely associated with the Project site.

Gwendolyn Parada, Chairwoman of La Posta Band of Mission Indians, responded via a letter dated August 21, 2018, stating that the Project site is located within the Diegueno traditional territory and that they would like to consult on the Proposed Project. Chairwoman Parada requested to be added to the distribution list for public notices and environmental review documents for the Proposed Project. La Posta tribe does not have knowledge of any specific TCR that may be impacted by the Proposed Project but requested that a Native monitor be present during survey and archaeological testing. La Posta tribe further requested to meet with Dudek to "consult" on the Proposed Project and to discuss their concerns and proposed mitigation. Dudek sent a response letter via email on October 2, 2018, letting Ms. Parada know that the County of San Diego was the lead agency overseeing the Proposed Project and that they would be leading Native American consultation. La Posta did not send any further communications to Dudek.

Carmen Lucas of the Kwaaymii Laguna Band of Mission Indians called Dudek archaeologist Matthew DeCarlo on September 10, 2018, in response to Dudek's outreach letter. Ms. Lucas did not have knowledge of any specific TCRs that may be impacted by the Proposed Project but she stated that Jacumba is a sacred area and recommended that a qualified Native American monitor be present during surveys for the Proposed Project. She also recommended that forensic dogs be used to identify human remains and that the dog analysis should dictate the design of the solar facility. Mr. DeCarlo notified Ms. Lucas that the County of San Diego was the lead agency overseeing the Proposed Project and that the County would be leading Native American consultation.

Red Tail Monitoring and Research provided Kumeyaay Native American monitors during all field studies, from survey to evaluation. Justin Linton, Tushon Phoenix, Shuuluk Linton, and Daniel "Bobo" Linton represented Red Tail during various sessions of fieldwork and presided over all archaeological findings.

San Diego County staff initiated formal Native American consultation as required by Assembly Bill 52 on January 31, 2019. Eight tribes (Barona, Campo, Jamul, Kwaaymii, Manzanita, Santa Ysabel, Sycuan, Viejas) who have requested to consult under Assembly Bill 52 were notified of the Proposed Project. Five tribes (Campo, Jamul, Manzanita, Santa Ysabel, Viejas) responded. Santa Ysabel deferred to the Campo tribe. The County has been consulting with Campo, Jamul, Manzanita and Viejas. Consultation is ongoing and will continue throughout the processing of the Proposed Project.

2.4.1.2 Records Search Results

Dudek conducted a records search of files obtained from the SCIC for the Project site and a 0.5-mile buffer surrounding the Project site in November 2017. SCIC records indicate that 35 previous cultural resources studies have been performed within 0.5 miles of the Project site; of these, 19 cover at least a portion of the Project site. The SCIC records search also identified 143 cultural resources previously recorded within 0.5 miles of the Project site. Of the 143 resources, 51 are located within the Project site, 24 of which are within the Project ADI. Prehistoric resources previously identified within the Project site include 33 artifact scatters, six temporary campsites, a village site, a bedrock milling station, and an isolated flake. There are also nine multicomponent artifact scatters, and one historic railroad track.

2.4.1.3 Survey and Evaluation Results

Archaeological Survey and Evaluation Results

The survey and evaluation program completed for the Proposed Project identified 37 archaeological sites and 26 archaeological isolates. Of the 37, five previously recorded archaeological sites (CA-SDI-4455, CA-SDI-4459, CA-SDI-11677, CA-SDI-11681, and CA-SDI-21764) and four newly recorded archaeological sites (CA-SDI-22728, CA-SDI-22730, CA-SDI-22731, and CA-SDI-22732) would be avoided as a result of refinements to the Proposed Project ADI, as previously described under Section 2.4.1.1, Methodology. With the refined plot plans, the Proposed Project would avoid sensitive cultural resources or significant portions of resources. Archival research revealed that six previously recorded sites or portions of sites located within the Proposed Project ADI were previously evaluated and found to have minimal or no subsurface components (CA-SDI-7054, CA-SDI-11675, CA-SDI-11682, CA-SDI-11684, CA-SDI-11686, and CA-SDI-11688).

The pedestrian survey revealed that five previously recorded sites located within the Proposed Project ADI were completely removed from the landscape by mass grading for an unrelated project (CA-SDI-11685, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI-19909). Dudek conducted archaeological testing of the remaining archaeological sites within the Proposed Project ADI (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11676, CA-SDI-11689, CA-SDI-19070,CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733). Dudek also conducted archaeological testing of CA-SDI-21764 prior to refinement of the Proposed Project design that removed the resource from the Proposed Project ADI. As described in detail in Section 5 of the Cultural Technical Report (Appendix E), Dudek did not identify any significant archaeological deposits within the Proposed Project ADI.

After the Proposed Project design was refined as previously described above under Field Methods, the Proposed Project ADI contains 28 archaeological sites and 20 isolated finds. The Cultural Technical Report (Appendix E) provides a description of the resources visited during the pedestrian survey, their proximity to the ADI, and whether they will be avoided through project design. The excavation results of those resources within the ADI are also described in Section 5.1 of the Cultural Technical Report.

Built Environment Survey and Evaluation Results

The Mountain Meadow Dairy and Creamery's Sunshine Ranch complex (P-37-038938) is comprised of one parcel (APN 661-060-12) and contains the remains of a dairy, creamery and ranch with a total of 20 existent buildings and structures constructed more than 45 years ago and in various states of disrepair. The following buildings and structures were included in recordation and evaluation of the complex:

- Building 1: Milking Barn
- Building 2: Tank Room
- Building 3: Silos
- Building 4: Dwelling A
- Building 5: Dwelling B
- Building 6: Dwelling C
- Building 7: Dwelling D
- Building 8: Reservoir
- Building 9: Barn A
- Building 10: Barn B
- Building 12: Cow Pens
- Building 13: Collapsed Shed
- Building 14: Collapsed Barn A
- Building 15: Barn Foundation A
- Building 16: Barn Foundation B
- Building 17: Barn Foundation C
- Building 18: Barn Foundation D
- Building 19: Office

- Building 20: Weigh Station

In consideration of the complex's lack of significant historical associations and compromised integrity, the Mountain Meadow Dairy and Creamery complex was found not eligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) based on a detailed significance evaluation and in consideration of national and state eligibility criteria and integrity requirements (see Section 5, Significance Evaluation, in Appendix D of Appendix E). The subject property is also not located within an established historic district.

2.4.2 Regulatory Setting

State Regulations

California Register of Historical Resources

California Public Resources Code Section 5024.1(a) establishes the CRHR. Section 5024.1(c–f) provides criteria for CRHR eligibility listing. The CRHR considers a resource as "historically significant" and qualifying as a historical resource if it:

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

These criteria do not preclude a lead agency from determining that a resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) and 5024.1.

California Environmental Quality Act

CEQA requires lead agencies to carefully consider the potential effects of a project on historical and unique archaeological resources. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant (California Public Resources Code, Section 5020.1[j]).

Section 15064.5 of the CEQA Guidelines specifies criteria for determining the significance of impacts to archaeological and historical resources. Section 15064.5 defines a "historical resource" as:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code 5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (14 CCR 4852) including the following:
    a. Is associated with events that have made a contribution to the broad patterns of California history and cultural heritage;
    b. Is associated with the lives of persons important in our past;
    c. Embodies the distinctive characteristics of a type, period, region or method construction, or represents the work of an important individual or possesses high artistic values; or
    d. Has yielded, or may be likely to yield, important information in prehistory or history.
4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1

If a cultural resource does not meet the definition of a "historic resource" under CEQA Guidelines Section 15164.5, it must be reviewed under CEQA Statutes Section 21083.2(g) that defines the significance of an archaeological site in terms of uniqueness. A unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one of the following criteria:

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

A non-unique archaeological resource indicates an archaeological artifact, object, or site that does not meet the previously listed criteria. Impacts to non-unique archaeological resources receive no further consideration under CEQA, other than the recording of its existence by the lead agency if it so elects.

Human remains require special handling and must be treated with dignity. Procedures are provided in Section 15064.5(e) of the CEQA Guidelines, Section 5097.98 of the Public Resources Code and Section 87.429 of the County's Grading Ordinance. In the event of the discovery of human remains and/or funerary items, the following procedures, as outlined by the above statutes, regulations, and ordinances, shall be followed:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. The County Coroner must be contacted to determine that no investigation of the cause of death is required, and
    b. If the Coroner determines that the remains are Native American:
        i. The Coroner shall contact the NAHC within 24 hours.
        ii. The NAHC shall identify the person or persons it believes to be the most likely descended (MLD) from the deceased Native American.
        iii. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code, Section 5097.98, or
2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
    a. The NAHC is unable to identify an MLD or the MLD failed to make a recommendation within 24 hours after being notified by the commission;
    b. The descendent identified fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Similarly, Public Resources Code Section 5097.98 states that whenever the NAHC receives notification of Native American human remains from a County Coroner, the NAHC shall immediately notify the MLD. The MLD may, with permission from the owner of the land in which the human remains were found, inspect the site and recommend to the owner or the responsible party conducting the excavation work a means for treating and/or disposing of the human remains and any associated grave goods. The MLD is required to complete their site inspection and make their recommendation within 48 hours of their notification from the NAHC.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code, Section 7050.5, requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County Coroner has examined the remains (Section 7050.5b). If the Coroner determines or has reason to believe the remains are those of a Native American, the Coroner must contact the NAHC within 24 hours (Section 7050.5c).

Local Regulations

County of San Diego Local Register of Historic Resources

The criteria for listing historical resources to the Local Register (Ordinance No. 9493) are consistent with those developed by the Office of Historic Preservation for listing resources to the CRHR, but have been modified for local use in order to include a range of historical resources which specifically reflect the history and prehistory of San Diego County. Only resources that meet the criteria set out below may be listed or formally determined eligible for listing to the Local Register.

1. Are associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
2. Are associated with the lives of persons important to the history of San Diego County or its communities;
3. Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

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

County of San Diego General Plan — Conservation and Open Space Element

The following goals and policies identified in the County of San Diego General Plan Conservation and Open Space Element are applicable to the Proposed Project (County of San Diego 2011):

1. **Goal COS-7: Protection and Preservation of Archaeological Resources.** Protection and preservation of the County's important archaeological resources for their cultural importance to local communities, as well as their research and educational potential.
    a. **Policy COS-7.1: Archaeological Protection.** Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
    b. **Policy COS-7.2: Open Space Easements.** Require development to avoid archaeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.
    c. **Policy COS-7.3: Archaeological Collections.** Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.
    d. **Policy COS-7.4: Consultation with Affected Communities.** Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.
    e. **Policy COS-7.5: Treatment of Human Remains.** Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State, and County Regulations.
    f. **Policy COS-7.6: Cultural Resource Data Management.** Coordinate with public agencies, tribes, and institutions in order to build and maintain a central database that includes a notation whether collections from each site are being curated, and if so, where, along with the nature and location of cultural resources throughout the County of San Diego.

2. **Goal COS-8: Protection and Conservation of the Historical Built Environment.** Protection, conservation, use, and enjoyment of the County's important historic resources.
    a. **Policy COS-8.1: Preservation and Adaptive Reuse.** Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources as part of the discretionary application process, and encourage the preservation of historic structures identified during the ministerial application process.

b. **Policy COS-8.2: Education and Interpretation.** Encourage and promote the development of educational and interpretive programs that focus on the rich multicultural heritage of the County of San Diego.

County of San Diego Resource Protection Ordinance

The Resource Protection Ordinance (RPO) requires that cultural resources be evaluated as part of the County's discretionary environmental review process for certain permit types. If cultural resources are found to be significant pursuant to the RPO, they must be preserved (County of San Diego 2012). The RPO prohibits development, trenching, grading, clearing, and grubbing, or any other activity or use that damages significant prehistoric or historic site lands (except for scientific investigations with an approved research design prepared by an archaeologist certified by the Register of Professional Archaeologists).

Pursuant to the RPO, significant prehistoric or historic sites are sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, state, or federal importance. Such locations include, but are not limited to the following (County of San Diego 2012):

1. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
    a. Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or
    b. To which the Historic Resource (H designator) Special Area Regulations have been applied; or
2. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
3. Any location of past or current sacred religious or ceremonial observances which is either:
    a. Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or
    b. Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

County of San Diego Grading Ordinance

The Grading Ordinance requires that projects involving grading, clearing, and/or removal of natural vegetation obtain a grading permit, unless the project meets one or more of the exemptions listed in Section 87.202 of the Grading Ordinance. The grading permit is discretionary and requires

compliance with CEQA. In the event that human remains or Native American artifacts are encountered, Section 87.429 requires that grading operations be suspended in the affected area and the operator is required to inform the County Official. The County's Grading Ordinance requires projects to comply with the requirements of Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.99.

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of a cultural resource has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the Proposed Project.

Also, potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include the following:

1. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
2. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
3. An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
4. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
5. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing

cultural identity of the community. Under County Guidelines, Traditional Cultural Properties may also be protected under the County's Resource Protection Ordinance.

2.4.3 Analysis of Project Effects and Determination of Significance

According to CEQA Guidelines Section 15126.4(b)(3), "Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature." According to CEQA Guidelines Section 15126.4(b)(3)(A), "Preservation in place is the preferred manner of mitigating impacts to archaeological sites."

The Proposed Project is a solar energy facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, of this EIR), is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

Direct, indirect, and cumulative impacts pertaining to cultural resources were evaluated based on specified thresholds identified in the CEQA Guidelines Appendix G, the County's RPO, and the County of San Diego Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources (County of San Diego 2007).

Guidelines for the Determination of Significance

For the purposes of this section, the County's Guidelines for Determining Significance – Cultural Resources provide that any of the following will be considered a significant impact to cultural resources (County of San Diego 2007):

1. The project, as designed, causes a substantial adverse change in the significance of a historical resource, pursuant to Section 15064.5 of the CEQA Guidelines. This shall include the destruction, disturbance, or alteration of characteristics or elements of a resource that causes it to be significant in a manner not consistent with the Secretary of Interior Standards.
2. The project, as designed, causes a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
3. Activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance are proposed and the proposed project fails to preserve those resources.

4. The project disturbs any human remains, including those interred outside of formal cemeteries.

The significance guidelines listed above have been selected for the following reasons:

- Guideline 1 and 2 are derived directly from CEQA, as well as the County of San Diego Guidelines for Determining Significance for Cultural Resources. Sections 21083.2 of the Public Resources Code and 15064.5 of the CEQA Guidelines recommend evaluating archaeological and historical resources to determine whether or not a proposed action would have a significant effect on unique archaeological or historical resources. Any project that would have an adverse impact (direct, indirect, cumulative) on significant prehistoric or historic resources as defined by these guidelines would be considered a significant impact.
- Guideline 3 was selected because cultural resources are protected under the RPO. The County RPO does not allow non-exempt activities or uses damaging to significant prehistoric lands on properties under County jurisdiction. The only exempt activity is scientific investigation. The project is required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria for prehistoric sites. Non-compliance would result in a project that is inconsistent with County standards.
- Guideline 4 is included because human remains must be treated with dignity and respect, and CEQA required consultation with the MLD as identified by the NAHC for any project in which human remains have been identified.

2.4.3.1 *Analysis*

Archaeological Resources

In July and August 2018; February, March, June, and December 2019; and January 2020, Dudek performed a surface inventory and conducted subsurface excavations of archaeological resources. Previously unidentified prehistoric and historic artifacts were recorded and collected. The pedestrian survey identified nine newly identified archaeological resources and 25 new isolates. The survey also revisited 28 previously recorded archaeological sites and one isolate. After design modifications, the Proposed Project ADI contains 28 archaeological sites and 20 isolated finds. (Appendix E). Considering a variety of reasons, including but not limited to, the history of surface disturbance by agricultural activities, the mixed subsurface stratigraphy or homogenous stratigraphy, shallow soil deposit, high bedrock exposure, the lack of significant and surface artifacts, previous testing on site, the negative subsurface testing results by Dudek, and/or the few subsurface artifacts, the archaeological sites within the Proposed Project ADI were determined to have a low potential for significant buried deposits or culturally sensitive materials. Those

resources within the Project site but outside of the Proposed Project ADI will be avoided and will not be impacted.

Built Environment Resources

In consideration of the resource's lack of significant historical associations and compromised integrity, the Mountain Meadow Dairy and Creamery complex (P-37-038938) located at 45346 Old Highway 80 (APN 661-060-12) is not eligible for listing in the NRHP, CRHR, or County register. The subject property is also not located within an established historic district. This finding is based on the detailed significance evaluation provided in the Historic Resources Technical Report in Appendix D of Appendix E, and significance discussion below. For the discussion of integrity see Section 5.3, Significance Evaluation, Integrity Discussion, of Appendix D of Appendix E.

NRHP/CRHR Statement of Significance

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of local or regional history. Research indicates that the subject property site was purchased in 1927 for the use of dairy farming and stock raising by the Keller Milling Company. By 1928, the company constructed several of the present structures, including barns, housing, and other facilities, on the property. In May 1930, the Mountain Meadow Creameries Ltd. incorporated and 2 years later took over control of the Keller Milling Company's Jacumba land. The dairy facility was named Sunshine Ranch, totaling 750 acres in size and was one of the only large dairy product organizations in San Diego's southwest region that both produced its own milk and then distributed it. Sunshine Ranch in Jacumba and their San Diego dairy closed in 1945 because of Edwin Oscar Adam's retirement, the owner and manager of the company. The ranch remained open as a dairy until the 1960s. Although the property was associated with one of the largest producers of milk in San Diego County from 1930 until 1945, there is no indication that this had any large-scale effect on the broad patterns of history. The production and delivery of milk during this period of time was part of the population growth of the area and is not associated with a historic event of importance. Furthermore, the property lacks integrity that would accurately identify the resource as being a 1930s and 1940s dairy facility. The majority of the buildings and structures having undergone large-scale alterations, additions, and/or collapse. Therefore, the Mountain Meadow Dairy and Creamery complex (P-37-038938) is recommended not eligible for NRHP or CRHP under Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research did not indicate any associations with persons important to the nation's or state's past. None of the current or former property owners or tenants were identified as significant individuals as a result of archival research. Research also indicated that the Mountain Meadow Dairy and Creamery's original owner, Edwin Oscar Adam, did not have importance to the broad patterns of history. Due to a lack of identified significant associations with important persons in history, the subject property is not eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Mountain Meadow Dairy and Creamery complex buildings are not important for their design or construction value. The architects of the fourteen buildings and structures still extant are unknown, as are the architects for the six collapsed and nonexistent buildings. However, it is unlikely that they would be associated with the work of a master architect due to their ubiquitous and utilitarian nature as a complex.

The Mountain Meadow Dairy and Creamery complex does not possess characteristics that suggest that it is an important example of the variation, evolution, or transition of vernacular construction of dairy and ranch buildings in the Jacumba area or San Diego County.

Dwellings A, B, and C on the subject property are united stylistically by their common rural vernacular and Craftsman style aesthetics and construction methods, as well as their original use as housing for workers of the Mountain Meadow Dairy and Creamery. Craftsman style details are seen in the low-pitched gabled roofs, exposed rafter tails, one-over-one double-hung windows, and one-half-story height. Each of these buildings over time have undergone a series of large-scale alterations, including replacement of windows and doors, removal of original siding, and additions. Dwelling D no longer displays any stylistic components that would indicate a style due to the removal of original materials.

The Milking Barn and Barns A, B, and C are ubiquitous examples of monitor, shed, and front-gable barns from the late 1920s and 1930s. They do not possess high artistic value or individual distinction. These barns have also undergone multiple large-scale alterations, including the removal of original materials and non-combatable additions.

The remaining buildings and structures of the Tank Room, Silos, Reservoir, Cow Pens, Office, and Weigh Station do not embody distinctive characteristics of a type, period, or method of construction. The Tank Room is very simplistic in design, constructed out of CMUs, and displays

a lack of overall integrity. The Silos are a ubiquitous concrete stave type with metal turnbuckles, which can be found throughout the United States. The Reservoir does not display high artistic value and is a pervasive type of small-scale reservoir. The Cow Pens display a low level of integrity and are not a unique example of livestock fencing. The Office has undergone several alterations; including the replacement of original materials, windows, and doors, therefore it lacks integrity. The Weigh Station is a common utilitarian building, lacking a high level of artistic value to make it distinctive. The remaining structures have all collapsed and no longer retain integrity. As such, the Mountain Meadow Dairy Complex is not eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that the Mountain Meadow Dairy and Creamery complex has the potential to yield information important to state or local prehistory or history. Therefore, the property is not eligible under NRHP/CRHR Criterion D/4.

County of San Diego Statement of Significance

Based on the following significance evaluation, the Mountain Meadow Dairy and Creamery complex located at 45346 Old Highway 80 (APN 661-060) does not meet any of the County of San Diego designation criteria or any criteria detailed in the County RPO. The subject property is also not located within an established local historic district.

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of San Diego's history and cultural heritage. The Mountain Meadow Dairy and Creamery's Sunshine Ranch located in Jacumba Hot Springs was part of the increasing demand for dairy farms in San Diego in the 1920s. With the population increasing and the American public accepting the automobile as a viable form of transportation, it was possible to establish a dairy far away from Mission Valley, the location of the urban creamery, as Sunshine Ranch. However, the establishment of Sunshine Ranch was not a major event in the history of San Diego and did not dramatically affect the County.

The major development made by the Mountain Meadow Dairy and Creamery was the invention of a more sanitary milk bottle top in 1933. There is no evidence to suggest that this invention was made at Sunshine Ranch, rather it was more likely to have occurred at the urban creamery located on the Sixth Street extension constructed in 1933, which focused on the latest technologies in pasteurizing, cooling, testing, and bottling milk under sanitary conditions. Furthermore, the

property lacks overall integrity. Therefore, the Mountain Meadow Dairy and Creamery complex is not eligible for County of San Diego Criterion 1.

Criterion 2: Is associated with the lives of persons important to the history of San Diego County or its communities

Archival research did not indicate any associations with persons important to the local, state, or national culture and history. None of the current or former property owners or tenants were identified as significant individuals as a result of archival research. The Mountain Meadow Dairy and Creamery's original owner, Edwin Oscar Adam, did not have importance to the broad patterns of history. Due to a lack of identified significant associations with important persons in history, the subject property is not eligible under County of San Diego Criterion 2.

Criterion 3: Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value

Six of the twenty buildings and structures located on the Mountain Meadow Dairy and Creamery's Sunshine Ranch in Jacumba Hot Springs have lost integrity due to their subsequent collapse. The remaining fourteen buildings, including Dwellings A, B, C, and D, the Milking Barn, and Barns A, B, and C, and Tank Room, Silos, Reservoir, Cow Pens, Office, and Weigh Station, do not embody distinctive characteristics of a type, period, San Diego County region, or method of construction. The buildings that comprise the dairy complex are simple utilitarian type structures that are commonly found throughout San Diego County, California, and the nation in agricultural areas and were constructed as early as the 1910s up until today.

Additionally, it is unlikely that they would be associated with the work of an important creative individual due to their ubiquitous and utilitarian nature as a complex. Overall, the buildings located on the property are not distinctive architecturally. As such, the subject property is not eligible under County of San Diego Criterion 3.

Criterion 4: Has yielded, or may likely yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield or may likely yield information important to state or local history. Therefore, the Mountain Meadow Dairy and Creamery's Sunshine Ranch is not eligible under County of San Diego Criterion 4.

County of San Diego Resource Protection Ordinance

In addition to the County's significance criteria, the RPO stipulates three types of sites that may be considered significant for providing information related to important scientific questions about

prehistoric or historic activities. When analyzed with regard to the RPO, the Mountain Meadow Dairy and Creamery complex is neither formally determined eligible or listed in the NRHP, nor has it been assigned as Historic Resource ("H" Designator) Area Regulations. Additionally, the complex is not a one-of-a-kind, locally unique, or regionally unique cultural resource containing a significant volume of data or materials. Furthermore, there is no indication that the complex is a site of past or current religious or ceremonial observances that would be protected under Public Law 95-341 or under Public Resources Code Section 5097.9, nor is it a formally designated or recognized site of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group. As such, the Mountain Meadow Dairy and Creamery complex is not considered a significant prehistoric or historic site under the County RPO.

Historical Resources (Guidelines 1 and 3)

The Proposed Project development includes the removal of the Mountain Meadow Dairy and Creamery's Sunrise Ranch Complex (P-37-038938). A Historical Resources Technical Report (Appendix D of Appendix E) was prepared by Dudek in 2020 for the parcel (APN 661-060-12) containing the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex (Appendix D of Appendix E).

The site was evaluated for NRHP, CRHR, the County of San Diego designation criteria, and the County's RPO, and was assessed for integrity. As a result, the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex was found not eligible for listing under any designation criteria due to a lack of significant historical associations and compromised integrity. As such, the Mountain Meadow Dairy complex is not considered a historical resource under CEQA. For these reasons, construction and operational impacts to historical resources as a result of Proposed Project construction and operation would be **less than significant**.

Decommissioning activities would be performed within the Proposed Project ADI. No ground-disturbing activities would occur outside the Proposed Project ADI. All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line which would be transferred to and operated by SDG&E. The activities associated with decommissioning would not include grading. Implementation of a final decommissioning plan(s) would be required, and would be provided within one year of issuance of the building permits for the Proposed Project to ensure compliance with Section 6954.b.3(d) of the County of San Diego Zoning Ordinance for removal surety as described in Chapter 1, Project Description, of this EIR. Considering the lack of historical resources in the Proposed Project ADI after the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex is removed, implementation of the final decommissioning plan impacts to historical resources during decommissioning of the Proposed Project would be **less than significant**.

Switchyard

The Proposed Project would include a 138-kilovolt (kV) switchyard located adjacent to the proposed collector substation. The size of the switchyard would be approximately 140,000 square feet. Within this area would be 8-foot-high security fence (445 feet by 300 feet) surrounded by a 5-foot shoulder for grounding protection inside the fence. After completion of construction of the switchyard, operation of the switchyard facility would be transferred to SDG&E as described in Chapter 1 of this EIR. The switchyard would be un-staffed during operation. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Operational activities will not disturb historical resources because no historical resources are located within the boundary of the switchyard as described in Appendix E and in Appendix D of Appendix E. Therefore, switchyard operation and maintenance impacts related to historical resources would be **less than significant**. The switchyard and connection to the SDG&E transmission line, which would be owned and operated by SDG&E, would not be decommissioned at the life span of the solar facility.

Archaeological Resources (Guidelines 2 and 3)

The Proposed Project development could adversely affect archaeological resources through construction ground-disturbing activities, such as excavation, grading, and vegetation removal, which have the potential to damage or destroy known and unknown cultural resources that may be present on or below the ground surface, particularly in undeveloped areas. The Proposed Project would grade the ground surface and trench to install buried utilities and conduit, in addition to installation of the photovoltaic modules, battery energy storage system, collector substation, switchyard, and other associated facilities.

There are 31 archaeological sites (CA-SDI-4455, CA-SDI-4459, CA-SDI-7036, CA-SDI-7040, CA-SDI-7041, CA-SDI-7043, CA-SDI-7917, CA-SDI-11677, CA-SDI-11678, CA-SDI-11679, CA-SDI-11681, CA-SDI-11682, CA-SDI-11690, CA-SDI-11691, CA-SDI-11692, CA-SDI-11693, CA-SDI-11694, CA-SDI-19066, CA-SDI-19067, CA-SDI-19068, CA-SDI-19069, CA-SDI-19887, CA-SDI-20985, CA-SDI-21757, CA-SDI-21766, CA-SDI-22728, CA-SDI-22729, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, P-37-025680) that are located within the Project site but are outside of the Proposed Project ADI (Appendix E). These archaeological sites would not be impacted by implementation of the Proposed Project. Avoided sites (CA-SDI-11682, CA-SDI-20985, CA-SDI-21757) within 50 feet of the ADI, or according to resource specific,

predetermined buffers, would be protected by the establishment of an environmentally sensitive area boundary and exclusionary fencing (orange construction fencing). Eight sites (CA-SDI-4457H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910) are located within and outside the ADI. The portion of the cultural site outside of the ADI will also be protected by the establishment of an environmentally sensitive area boundary and exclusionary fencing (orange construction fencing). Other sites (CA-SDI-4455, CA-SDI-7036, CA-SDI-7040, CA-SDI-7041, CA-SDI-7043, CA-SDI-7917, CA-SDI-11677, CA-SDI-11678, CA-SDI-11679, CA-SDI-11681, CA-SDI-11690, CA-SDI-11691, CA-SDI-11692, CA-SDI-11693, CA-SDI-11694, CA-SDI-19066, CA-SDI-19067, CA-SDI-19068, CA-SDI-19069, CA-SDI-19887, CA-SDI-21764, CA-SDI-21766, CA-SDI-22728, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, P-37-025680), located farther outside of the ADI (more than 50 feet), would be avoided through established work boundaries. Therefore, no direct or indirect impacts would occur to avoided archaeological sites.

The 20 isolates identified within the Proposed Project ADI required no evaluation or avoidance measures as isolates are by definition not significant (Appendix E). The seven additional isolates located within the Project site but outside of the ADI would be avoided through established work boundaries.

In addition to the archaeological isolates, implementation of the Proposed Project would directly impact 28 archaeological sites (including portions of sites): CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733. All archaeological sites or portions of sites located within the Proposed Project ADI would be subject to grading and leveling and the surface of the sites will be completely destroyed. However, all extant sites or portions of archaeological sites that would be impacted were evaluated and are considered not significant and not eligible for listing in the CRHR or local register, nor are any of them considered a significant resource under CEQA or under the County RPO. None of the evaluated sites contained substantial or diverse archaeological deposits that could be used to develop or refine local or regional culture histories. Instead, the two evaluated historic components of multicomponent resources within the Proposed Project APE, CA-SDI-7056 and CA-SDI-22725, consist of refuse deposits containing a low diversity of food cans and glass bottle fragments from common household consumables. Though associated with the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex, none of the refuse contributes more or varied information about historic period occupation, but instead points to common household and industrial refuse dumped away from the place of residence. Likewise, the evaluated prehistoric sites produced low quantities of limited diversity chipped stone assemblages, primarily consisting of cortical and interior flakes, and rock shatter

representing incipient tool production. Minor amounts of brownware aboriginal ceramic sherds indicate some transient occupation possibly taking advantage of seasonally available resources, but no evidence of longer term or more residentially stable occupation was identified in the Proposed Project ADI. Despite the recordation of the village of Hakum (avoided, outside ADI) by Malcom Rogers (Appendix E), nothing was found at evaluated archaeological sites in the Proposed Project ADI that could link them to this village, or indicate that they were chronologically contemporaries with the village of Hakum. Evaluated historical and prehistoric archaeological sites within the Proposed Project ADI are considered to have low information potential pursuant to significance under CEQA Criterion 4. No information exists to link evaluated archaeological sites within the Proposed Project ADI with significance under any of the other CEQA significance criteria (1 through 3).

Additionally, individual sites or portions of larger sites included in the Jacumba Valley Archaeological District (JVAD) that overlap the current Proposed Project ADI were subject to archaeological test excavations. However, no significant archaeological deposits were identified. Specifically, only small quantities of debitage and aboriginal ceramics were recovered with no midden soils or other evidence of habitation, or any organic datable materials. As a result, these evaluated sites or portions of sites are determined not significant under CEQA and not eligible for listing in the CRHR or Local Register, are not considered contributors to the significance of the JVAD. Under Section 106 of the National Historic Preservation Act, the Proposed Project would have no adverse effect on historic properties individually, or to the JVAD because none of the character defining elements of the JVAD are adversely affected.

Possible impacts to the setting of cultural resources located within the Jacumba Valley but not within the ADI were also considered. As setting is an aspect of site integrity, drastically changing the setting of resources within the Jacumba Valley could impact their eligibility for listing on the CRHR or the NRHP. The floor of the Jacumba Valley has been largely disturbed by prior agricultural use, in addition to other landmark features, including a utility corridor that transects the northern portion of the Project site, Interstate 8 located to the north of the Project site, Old Highway 80 traverses the southern portion of the Project site, the Jacumba Airport is located immediately to the east of the southern portion of the Project site, and the Project site includes an easement for the San Diego and Arizona Eastern Railway. Additionally, the unincorporated community of Jacumba Hot Springs is located adjacent to the southwest portion of the Project site.

The Proposed Project ADI is contained largely within the footprint of previous agricultural activity. Dudek also reviewed the site records for all resources located along the foothills of the Jacumba Valley. If the viewshed from these archaeological sites contributed to their significance, the Proposed Project might have an impact on the resource. However, the site records showed that these resources largely consist of artifact scatters with only one feature, a trail segment.

All 28 archaeological sites (or portions of sites) identified within the Proposed Project ADI during the current investigation are either no longer extant (CA-SDI-11685, CA-SDI-19906, CA-SDI-

19907, CA-SDI-19908, and CA-SDI-19909) or have been evaluated and are determined as not significant under CEQA, not eligible for listing in the CRHR or the local register, and as not significant under the County RPO (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11682, CA-SDI-11684, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733) (County of San Diego 2012) (Appendix E). However, under County guidelines, all archaeological sites are considered important. Although it has been determined that the Proposed Project would not impact archaeological deposits that convey the significance of the JVAD, Proposed Project construction activities have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Proposed Project ADI (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757), or known cultural resources within resource-specific predetermined buffers, that may qualify as significant under the County Guidelines (**Impact CR-1**). Therefore, impacts to archaeological resources as a result of construction of the Proposed Project would be **potentially significant**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential archaeological resources within the Proposed Project APE. Therefore, impacts during operation would be **less than significant**.

Decommissioning activities would be performed within the Proposed Project ADI. No ground-disturbing activities would occur outside the Proposed Project ADI and the activities associated with decommissioning would not include grading. All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E. Implementation of a final decommissioning plan(s) would be required, and would be provided within one year of issuance of the building permits for the Proposed Project to ensure compliance with Section 6954.b.3(d) of the County of San Diego Zoning Ordinance for removal surety as described in Chapter 1 of this EIR. Although it has been determined that the Proposed Project would not impact archaeological deposits that convey the significance of the JVAD, similar to Proposed Project construction, decommissioning activities have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Proposed Project ADI (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757), or known cultural resources within resource-specific predetermined buffers, that may qualify as significant under the County Guidelines (**Impact CR-1**). Therefore, impacts to archaeological resources as a result of Proposed Project decommissioning would be **potentially significant**.

Switchyard

As previously described, the Proposed Project would include a 138 kV switchyard located adjacent to the proposed collector substation. After completion of construction of the switchyard, the

switchyard would be un-staffed during operation, and monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Operational activities are unlikely to disturb archaeological resources because they would affect surface soil horizons only, which do not contain significant archaeological resources as previously analyzed and as described in Appendix E. However, similar to the Proposed Project analysis above, switchyard related construction activities have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Proposed Project ADI (CA-SDI-11682, CA-SDI-20985, CA-SDI-21757), or known cultural resources within resource-specific predetermined buffers, that may qualify as significant under the County Guidelines (**Impact CR-1**). Therefore, impacts to archaeological resources as a result of switchyard construction would be **potentially significant**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential archaeological resources within the Proposed Project APE. Therefore, impacts during operation would be **less than significant**. The switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E would not be decommissioned at the life span of the solar facility.

Human Remains (Guidelines 3 and 4)

No human remains were discovered during the intensive pedestrian survey of the Proposed Project ADI. As previously described, all 28 archaeological resource sites (or portions of sites) identified within the Proposed Project ADI during the current investigation are either no longer extant or have been evaluated and are determined as not significant under CEQA, not eligible for listing in the CRHR or the local register, and not significant under the County RPO.

The Proposed Project would be required to comply with Public Resources Code Section 5097.98 and CEQA Section 15064.5 should any unknown human remains be discovered during site disturbance. However, absent archaeological monitoring, there remains the potential for Proposed Project construction to result in impacts to undiscovered human remains through pre-construction and ground-disturbing activities (**Impact CR-2**). Therefore, impacts to human remains would be **potentially significant**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential human remains within the Proposed Project APE. Therefore, impacts during operation would be **less than significant**.

As previously described, decommissioning activities would be performed within the Proposed Project ADI. No ground-disturbing activities would occur outside the Proposed Project ADI and the activities associated with decommissioning would not include grading. All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E. Implementation of a final decommissioning plan(s) would be required, and would be provided within one year of issuance of the building permits for the Proposed Project to ensure compliance with Section 6954.b.3(d) of the County of San Diego Zoning Ordinance for removal surety as described in Chapter 1 of this EIR. Although it has been determined that the Proposed Project would not impact archaeological deposits that convey the significance of the JVAD, similar to Proposed Project construction, decommissioning activities have the potential to affect undiscovered human remains through ground-disturbing activities (**Impact CR-2**). Therefore, impacts to human remains would be **potentially significant**.

Switchyard

As previously described, the Proposed Project would include a 138 kV switchyard located adjacent to the proposed collector substation After completion of construction of the switchyard, the switchyard would be un-staffed during operation, and monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Operational activities are unlikely to disturb historical resources because they would affect surface soil horizons only, which do not contain significant historical resources as previously analyzed and as described in Appendix E. However, similar to the Proposed Project analysis above, switchyard related construction activities have the potential to affect undiscovered human remains through pre-construction and ground-disturbing activities (**Impact CR-2**). Therefore, impacts to human remains would be **potentially significant**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential human remains within the Proposed Project APE. Therefore, impacts during operation would be **less than significant**. The switchyard and connection to the SDG&E

transmission line, which would be owned and operated by SDG&E, would not be decommissioned at the life span of the solar facility.

2.4.4 Cumulative Impact Analysis

According to CEQA, the importance of cultural resources comes from the research value and the information they contain. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of that information. For sites that are less than significant, the information is preserved through recordation and test excavations. Significant sites that are placed in open space easements avoid impacts to cultural resources and preserve the data. Significant sites that are not placed within open space easements preserve the information through recordation, test excavations, and data recovery programs that would be presented in reports and filed with the County and SCIC. The artifact collections from any potentially significant site would also be curated at a facility within the County or with an affiliated tribal curation facility. Alternatively, the collections may be repatriated to a tribe of appropriate affiliation.

The cumulative study area includes southeastern San Diego County and southwestern Imperial County and was selected because these areas include the relatively undeveloped portions of the ancestral Kumeyaay territory, and those rural areas outside of the historically developed urban population centers in San Diego and southwestern Imperial County. These cumulative projects are summarized in Chapter 1 of this EIR. Related projects within this geographic extent are capable of collectively contributing, along with the Proposed Project, to impacts on prehistoric resources associated with ancestral Kumeyaay lifestyles.

Prehistoric site types identified in the cumulative project area include small artifact scatters, bedrock milling features, temporary camps, rock shelters, roasting pits and habitation sites. Dated prehistoric sites predominantly fall into the Late Prehistoric Period, with a limited number of sites having Archaic Period components. Prehistoric sites which have been determined to be significant are all habitation sites and/or sites with human remains. Historic period sites are predominantly refuse deposits consisting of food and beverage containers; building and/or structure foundations; buildings; mining related features (e.g., pits, adits); and ranching related features (e.g., fences) and transportation corridors (roads, railroads).

As described in Section 2.4.3, Analysis of Project Effects and Determination of Significance, all extant sites or portions of sites that would be impacted as a result of Proposed Project implementation were evaluated and are considered not significant and not eligible for listing in the CRHR or local register, nor are any of them considered a significant resource under CEQA or under the County RPO. Additionally, no human remains were discovered during the intensive pedestrian survey for the Proposed Project. However, there remains the potential for impacts to undiscovered cultural resources or human remains as a result of Proposed Project construction activities. These potential impacts to

undiscovered cultural resources or human remains would be reduced to less than significant through the mitigation measures (**M-CR-1** and **M-CR-2**) outlined in Section 2.4.6. Because the Proposed Project and those projects identified within the cumulative impact study area are mitigated by the collection of information, construction monitoring, and the preservation of the most important resources, adequate mitigation has occurred for in situ appreciation of and access to information regarding those sites. Furthermore, the Proposed Project and cumulative projects would be required to comply with Public Resources Code Section 5097.98 and CEQA Section 15064.5 should any unknown human remains be discovered during site disturbance. These measures reduce the potential for cumulative impacts and therefore, the Proposed Project **would not contribute to a significant cumulative impact** to archaeological resources.

The Project site is located in a rural portion of San Diego County where the built environment is thinly spread throughout. The region has historically been used for agriculture and presents as a vast, largely undeveloped portion of the County with sparse pockets of residential to the west near Jacumba Hot Springs, the Jacumba Airport to the south, and energy development to the east. There is no indication that the Mountain Meadow Dairy and Creamery complex (P-37-038938) is connected to a larger pattern of ranching or dairy farming in the Jacumba Valley such that the loss of this complex would negatively impact other potential resources. The only resource identified in within 0.5 miles of the Project site is the San Diego and Arizona Easter Railway tracks/depot, which has a California Historic Resources Status Code of 6Z. As such, the Proposed Project **would not contribute to a significant cumulative impact** to historical resources**.**

2.4.5 Significance of Impacts Prior to Mitigation

Historical Resources

The Mountain Meadow Dairy complex is not considered a historical resource under CEQA. Therefore, during the Proposed Project's construction, operation, and decommissioning impacts to historical resources would be **less than significant**.

Archaeological Resources

The Proposed Project's construction and decommissioning have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Proposed Project ADI (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757), or known cultural resources within resource-specific predetermined buffers, that may qualify as significant under the County Guidelines. This impact would be **potentially significant** (**Impact CR-1**).

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential archaeological resources within the Proposed Project ADI. Therefore, impacts during operation **would be less than significant**.

Human Remains

The Proposed Project has the potential to affect undiscovered human remains during construction and decommissioning activities. The impacts would be **potentially significant** (**Impact CR-2**).

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential human remains within the Proposed Project ADI. Therefore, impacts during operation would be **less than significant**.

Cumulative Impacts

The Proposed Project would not contribute to a cumulative impact to historic resources. Impacts to archaeological resources or human remains **would not be cumulatively considerable**.

2.4.6 Mitigation Measures

M-CR-1 **Temporary Fencing.** To prevent inadvertent disturbance of archaeological sites within the avoidance areas and to the unimpacted portions of the site outside of the ADI, temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements:

1. Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect from inadvertent disturbance archaeological sites or portions of sites (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910) adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances and shall remain for the duration of earth-disturbing activities
    - Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI (CA-SDI-11682, and CA-SDI-20985).
    - The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.
    - Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to MM-CR-2.

- A signed and stamped statement from a California Registered Engineer, or licensed surveyor shall be submitted to Planning & Development Services for approval. The statement shall identify that temporary fencing has been installed in all required locations where grading or clearing is within 50 feet of an archaeological site outside of the Project ADI.

M-CR-2 **Archaeological Monitoring.** To mitigate for potential impacts to undiscovered, buried archaeological resources within the Project ADI and to mitigate the additional impacts to known archaeological resources, an archaeological monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements:

- Pre-Construction
  - The applicant shall contract with a County-approved archaeologist to perform archaeological monitoring. The project archaeologist shall contract with a Kumeyaay monitor to conduct Native American monitoring for the Proposed Project.
  - Pre-construction meeting to be attended by the Project Archaeologist and Kumeyaay Native American monitor(s) to explain the monitoring requirements.
- Construction
  - Temporary Fencing. Temporary orange construction fencing shall be installed around unimpacted portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910 and along the MUP boundaries where cultural resources (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757) are within 50 feet of the Project ADI. An archaeological monitor and Kumeyaay Native American monitor shall be present to assure proper placement of construction fencing and to prevent impacts to cultural resources.
  - Monitoring. Both the archaeological and Kumeyaay Native American monitor(s) are to be on site during earth disturbing activities. The frequency and location of monitoring of native soils will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s). Both the archaeological and Kumeyaay Native American monitor(s) shall evaluate fill soils to ensure that they are negative for cultural resources

- If cultural resources are identified:
  - Both the archaeological and Kumeyaay Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
  - The archaeological monitor shall contact the Project Archaeologist.
  - The Project Archaeologist shall contact the County Archaeologist.
  - The Project Archaeologist in consultation with the County Archaeologist and Kumeyaay Native American monitor(s) shall determine the significance of discovered resources.
  - Construction activities will be allowed to resume after the County Archaeologist has concurred with the significance evaluation.
  - Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the archaeological monitor, the Kumeyaay Native American monitor(s) may collect the cultural material for transfer to a Tribal curation facility or repatriation program.
  - If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s) and approved by the County Archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources of Sacred Sites; the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).
- Human Remains.
  - The Property Owner or their representative shall contact the County Coroner and the County Planning & Development Services (PDS) Staff Archaeologist.
  - Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. Should the human remains need to be taken off site for evaluation, they shall be accompanied by a Kumeyaay Native American monitor.

- If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the Property Owner or their representative in order to determine proper treatment and disposition of the remains.
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- Public Resources Code §5097.98, CEQA §15064.5 and Health & Safety Code §7050.5 shall be followed in the event that human remains are discovered.

- Rough Grading
  - Upon completion of Rough Grading, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring report shall be provided to any culturally affiliated tribe who requests a copy.
- Final Grading
  - A final report shall be prepared substantiating that earth-disturbing activities are completed and whether cultural resources were encountered. A copy of the final report shall be submitted to the South Coastal Information Center, and any culturally affiliated tribe who requests a copy.
  - Cultural Material Conveyance
    - The final report shall include evidence that all prehistoric materials have been curated at a San Diego curation facility or Tribal curation facility that meets federal standards per 36 CFR Part 79, or alternatively have been repatriated to a culturally affiliated tribe.
    - The final report shall include evidence that all historic materials have been curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79.

M-CR-3 Cultural Resources Treatment Agreement and Preservation Plan

Prior to the approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the Cultural Resources Treatment Agreement and Preservation Plan shall be submitted to County of San Diego Director of

Planning & Development Services for review and approval. The Plan shall be prepared by the Project archaeologist and the Kumeyaay Native American Monitor and shall include but not be limited to the following:

- Parties entering into the agreement and contact information.
- Responsibilities of the Property Owner or their representative, Principal Investigator, archaeological monitors, Kumeyaay Native American monitors, and the Tribe.
- Requirements of the Archaeological Monitoring Program including unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural materials (both in the field and lab settings), and on-site storage of cultural materials, as necessary and if required.
- Treatment of identified Native American cultural materials.
- Treatment of Native American human remains and associated grave goods.
- Requirements for Temporary Fencing for 10 sites that partially intersect or are within 50 feet of the Project ADI (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11682, CA-SDI-11686, and CA-SDI-19910, and CA-SDI-20985).
- Confidentiality of cultural information including location and data.
- Negotiation of disagreements should they arise during the implementation of the Agreement and Preservation Plan.
- Regulations that apply to cultural resources that have been identified or may be identified during project construction.

M-CR-4 Long-Term Preservation of Resources

All O&M and decommissioning activities will be performed within the Proposed Project ADI – no ground-disturbing activities shall occur outside the Proposed Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project site to ensure no inadvertent impacts occur to the 10 potentially significant sites (or portions thereof) that are adjacent to the Proposed Project ADI. These include the eight sites that were fully or partially tested because they intersect the Proposed Project ADI and the three sites that were not evaluated because they are outside of the Proposed Project ADI but require protection because

they are within 50 feet of the Proposed Project ADI. Temporary fencing shall be installed during decommissioning activities to delineate the ADI. Temporary fencing requirements are provided in **M-CR-1**.

2.4.7 Conclusion

The Proposed Project's construction and decommissioning have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Proposed Project ADI, or known cultural resources within resource-specific predetermined buffers, that may qualify as significant under the County Guidelines (**Impact CR-1**). This impact would be mitigated to **less than significant** with implementation of mitigation measures **M-CR-1**, **M-CR-2**, **M-CR-3**, and **M-CR-4**.

The Proposed Project has the potential to affect undiscovered human remains during construction and decommissioning activities **(Impact CR-2).** This impact would be mitigated to **less than significant** with implementation of mitigation measures **M-CR-2** and **M-CR-3**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential cultural resources within the Proposed Project ADI. Therefore, impacts during operation would be **less than significant**.

Impacts to historical resources would be **less than significant**. Impacts to archaeological resources or human remains **would not be cumulatively considerable**.



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.4-1A

ADI Map

JVR Energy Park Project

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SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

FIGURE 2.4-1B

ADI Map

JVR Energy Park Project

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SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.4-1C

ADI Map

JVR Energy Park Project

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2.5 Geology, Soils, and Seismicity

This section discusses potential impacts to existing geology and soils conditions, as well as potential exposure to risks associated with those conditions that may result from implementation of the proposed JVR Energy Park Project (Proposed Project). The analysis is based on review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical report prepared for the Proposed Project:

- Preliminary Geotechnical Evaluation: JVR Energy Park Project (Appendix F)

The comments received in response to the Notice of Preparation (NOP) did not include concerns specifically regarding geology and soils. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this Environmental Impact Report (EIR).

2.5.1 Existing Conditions

Geologic Setting

The Project site is located on the eastern portion of the Peninsular Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is typified by northwest to southeast trending mountain ranges extending approximately 900 miles from the Transverse Ranges and the Los Angeles Basin to the southern tip of Baja California. The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the Southern California batholith (Appendix F). The portion of the province in San Diego County that includes the Project site generally consists of uplifted granitic mountains and alluvial valleys. Portions of the Project site are also underlain by Miocene-age volcanic and sedimentary rocks.

Soils and Geologic Units

A variety of soil types typical of those found in the surrounding geologic region occur within the Project site (Appendix F, Figure 4, Geology within the Proposed Project Site). The Preliminary Geotechnical Evaluation (Appendix F) found that the geologic units encountered within the Project site during subsurface exploration included primarily fill, alluvium, and terrace deposits. Additional descriptions of the subsurface units and soils found within the Project site are provided below.

Fill

Fill soils were encountered on the Project site from the ground surface to depths of up to five feet. As encountered, the fill generally consisted of various shades of brown, moist, loose to medium dense, silty sand, along with scattered gravel. Additionally, gravel, cobbles, and boulders were

observed on the ground surface within the Project site, and stockpiled material was observed in some areas of the site.

Alluvium

Quaternary-age alluvium underlies the majority of the Project site. Alluvium was encountered in borings underlying fill materials up to the maximum boring depth of approximately 41.5 feet. As encountered, the alluvium generally consisted of various shades of brown, moist to wet, stiff to very stiff, clayey silt and sandy clay, and loose to dense, silty sand. Scattered gravel layers were also encountered in the alluvium. Where located adjacent to outcrops of bedrock, the alluvium appeared to be relatively shallow (i.e., less than five feet in thickness).

Terrace Deposits

Quaternary-age terrace deposits were mapped in the eastern portions of the Project site and were encountered in borings from the ground surface to a depth of approximately 20 feet. As encountered, the terrace deposits generally consisted of light brown and reddish brown, dry to moist, medium dense to very dense, silty sand. Scattered gravel was also encountered in the terrace deposits, and gravel and cobbles were observed on the ground surface in areas mapped as being underlain by terrace deposits.

Anza Formation

Although not encountered during subsurface exploration, materials of the Miocene-age Anza Formation have been mapped in portions of the Project site (Appendix F). The Anza Formation consists of reddish-brown sandstone and conglomerate. Gravel to boulder-sized clasts are anticipated in the conglomerate portion of the Anza Formation.

Jacumba Volcanics

Although not encountered during subsurface exploration, Miocene-age Jacumba Volcanics have been mapped in several areas of the Project site and are anticipated to underlie portions of the alluvium in much of the Project site (Appendix F). The Jacumba Volcanics are a mix of basalt flows, breccias, and pyroclastic rocks.

Metamorphic Rock and Granitic Bedrock

Metamorphic rock has been mapped in the southwest and northwest portions of the Project site and granitic rock has been mapped along the northeast margin of the site. The metamorphic rock consists of the Jurassic-age Migmatitic Schist and Gneiss of Stephenson Peak, while the granitic bedrock consists of the Cretaceous-age Tonalite of La Posta.

Soils

According to the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA 2019) database, 12 soil types are mapped within the Project site:

1. Acid Igneous Rock Land (AcG)
2. Carrizo Very Gravelly Sand, 0% to 9% slopes (CeC)
3. Indio Silt Loam, 0% to 2% slopes (InA)
4. Indio Silt Loam, 2% to 5% slopes (InB)
5. Indio Silt Loam, Saline, 0% to 2% slopes (IoA)
6. La Posta Rocky Loamy Coarse Sand, 5% to 30% slopes, eroded (LcE2)
7. Ramona Sandy Loam, 5% to 9% slopes (RaC)
8. Ramona Sandy Loam, 9% to 15% slopes, eroded (RaD2)
9. Reiff Fine Sandy Loam, 0% to 2% percent slopes (RkA)
10. Rositas Loamy Coarse Sand, 2% to 9% slopes (RsC)
11. Sloping Gullied Land (SrD)
12. Stony Land (SvE)

Additional information on these soil types found within the Project site can be found in Table 2.5-1 (USDA NRCS 2014) and in Section 3.1.1, Agriculture and Soils, of this EIR.

Topography

The Project site varies from relatively level land in the central and southern portions of the site to moderately to steeply sloping hillsides along the western and eastern margins. Elevations range from approximately 2,745 feet above mean sea level in the lower, northern portion of the Project site to 3,365 feet above mean sea level at the top of Round Mountain in the northwestern portion of the Project site. The Project site is sparsely developed with structures located in the southeast associated with prior dairy and ranching operations, transmission lines, and unpaved roads. A section of the San Diego and Arizona Eastern Railway that is no longer in service and a tributary to Carrizo Creek are present along the west portion of the Project site.

Faults and Seismicity

The Project site is not located within a State of California Earthquake Fault Zone (formerly known as Alquist-Priolo Special Studies Zone), nor is it located in a County of San Diego Special Study

Zone (County of San Diego 2007a). The closest mapped faults to the Project site are pre-Quaternary in age and are generally considered to have little to no potential to generate an earthquake. The closest active fault is the Holocene-active Coyote Mountain segment of the Elsinore Fault Zone, located approximately 14 miles northeast. Based on a review of geologic maps and site reconnaissance, the Project site is not underlain by known active or potentially active faults (see Figure 3, Fault Locations, in Appendix F).

Ground Shaking

The Project site is not located within a Near-Source Shaking Zone as identified in Figure 3 of the County's Geologic Hazards Guidelines (County of San Diego 2007a). The Project site, like most of Southern California and all of San Diego County, is located within Seismic Zone 4, which is the highest Seismic Zone. The most recent large seismic event to affect the Proposed Project vicinity was on April 4, 2010, when a magnitude 7.2 earthquake struck an area approximately 30 miles south of Mexicali (Sierra El Mayor Earthquake). The epicenter of the earthquake was well south of the international border, but resulted in observable surface slip on several faults, or portions of faults, in the southwestern part of the Salton Trough, near Ocotillo (approximately 13 miles northeast of the Project site). Most fault offsets were minor in magnitude—less than 20 millimeters (about 0.8 inches)—but offsets observed on the Yuha, Pinto Wash, and Ocotillo Faults were 50 to 60 millimeters (about 2 inches), 40 millimeters (1.5 inches), and 85 millimeters (3.3 inches), respectively (USGS and CGS 2011). These faults, occurring in a broad area of the Yuha Desert, were not previously zoned under the Alquist–Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) because it was the first time that surface fractures had been observed in the southwestern Salton Trough. Consequently, in 2012, the California Geological Survey (CGS, formerly California Division of Mines and Geology) updated its Alquist-Priolo maps to identify portions of the Laguna Salada Section of the Elsinore Fault, the Yuha Wells Fault, and other unnamed faults in the vicinity of Ocotillo as active earthquake fault zones under the Alquist-Priolo Act.

The Sierra El Mayor Earthquake is estimated to have resulted in a Modified Mercalli Intensity of VI (strong) to VII (very strong) in the vicinity of the Project site (USGS 2010). Typically, ground shaking associated with an intensity of VII is associated with negligible damage in buildings of good design and construction, slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built or badly designed structures (e.g., brick and unreinforced masonry) (USGS 2012). These are only estimates based on correlations between average peak ground accelerations (PGA) and the observed level of damage in past earthquakes—the actual level of shaking experienced and the level of damage caused in any one place is highly site- and earthquake-specific.

The primary tool that seismologists use to describe potential for future ground shaking hazards is a probabilistic seismic hazard assessment. The probabilistic seismic hazard assessment for the

State of California takes into consideration the range of possible earthquake sources (including worst-case scenarios) and estimates their characteristic magnitudes to generate a probability map for ground shaking. The probabilistic seismic hazard assessment maps depict values of PGA with a 10% probability of being exceeded in 50 years (i.e., a 1 in 475 annual chance). Use of this probability level allows engineers to design structures to withstand ground motions with a 90% chance of not occurring in the next 50 years, making buildings safer than if they were merely designed for the most probable events.

The probabilistic seismic hazard assessment for the State of California indicates that the Project site is unlikely to experience severe or highly destructive levels of ground shaking, primarily as a result of its distance from historically active faults. In the Project area, there is only a 10% chance of exceeding PGA values of 0.27–0.33 acceleration due to gravity (g) over the next 50 years, with the lower values corresponding to areas over bedrock, and the higher values corresponding to areas over unconsolidated alluvium (CGS 2003). Values exceeding PGA 0.27–0.33 g are typically associated with an earthquake with a Modified Mercalli Intensity of VIII, which would likely cause substantial damage in buildings not constructed according to modern building standards, with older brick or unreinforced masonry buildings prone to collapse. Structures adequately designed to current standards could also suffer cosmetic or utility damage, but would be unlikely to experience either full or partial structural collapse.

When compared to other areas of California, particularly the urban areas of Southern California and the San Francisco Bay Area in Northern California, which are close to historically active faults, these levels of PGA are relatively low. This information is consistent with the County's Geologic Hazards Guidelines, which do not identify any of the Project site as being within a near-source shaking zone (see Figure 3 in County of San Diego 2007a). In addition, based on the review of the geologic maps as well as site reconnaissance, the Project site is not underlain by known active faults and is not within a State of California Earthquake Fault Zone (Appendix F), and the active Coyote Mountain segment of the Elsinore Fault Zone is located approximately 14 miles to the northeast of the site and no active faults are known to cross the Project site.

Liquefaction

Liquefaction occurs primarily in saturated, loose, fine- to medium-grained soils in areas where the groundwater table is generally 50 feet or less below the surface. The primary areas of potential liquefaction hazard in San Diego County are Jacumba; the lower San Dieguito, Sweetwater, and San Luis Rey River Valleys; Borrego Valley near the Borrego Sink; and parts of Ramona (County of San Diego 2007a). Liquefaction of saturated, cohesionless soils can be caused by strong vibratory motion due to earthquakes. Loose granular soils and non-plastic silts saturated by a relatively shallow groundwater table are susceptible to liquefaction. Although shallow groundwater was not encountered during the preliminary geotechnical evaluation (Appendix F) of

the Project site, loose and medium dense, granular, alluvial soils situated below the groundwater table may be subject to liquefaction. In addition, the Project site is identified as having a high risk for liquefaction in Figure 4.3.6 of the County's Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2017).

Landslides

Landslides have not been mapped on or adjacent to the Project site, and evidence of landsliding was not observed during review of aerial photographs or during the site reconnaissance (Appendix F). In addition, the Project site is not within a Landslide Susceptibility Area as mapped in the County's General Plan (County of San Diego 2011a) and Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2017). Rockfall hazards are possible in the more steeply sloping portions of the Project site, such as at Round Mountain, where Proposed Project development would not occur.

Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to slabs, foundations, and other engineered structures, including tilting and cracking. The Project site is not identified as having expansive soils according to the County's Geologic Hazards Guidelines (see Figure 6 in County of San Diego 2007a).

2.5.2 Regulatory Setting

Federal Regulations

The following federal regulations pertaining to geologic hazards would apply to the Proposed Project.

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction operations. The Occupational Safety and Health Administration's (OSHA) Excavation and Trenching Standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. In California, the California Occupational Safety and Health Administration (Cal/OSHA) has responsibility for implementing federal rules relevant to worker safety, including slope protection during construction excavations. Cal/OSHA's requirements are more restrictive and protective than federal OSHA standards.

U.S. Geological Survey Landslide Hazard Program

In fulfillment of the requirements of Public Law 106-113, the U.S. Geological Survey created the Landslide Hazard Program in the mid-1970s. According to U.S. Geological Survey, the primary objective of the National Landslide Hazards Program is to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies. The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility. In San Diego County, the Unified Disaster Council is the governing body of the Unified San Diego County Emergency Services Organization. The primary purpose of the Unified Disaster Council and the Emergency Services Organization is to provide for the coordination of plans and programs designed for the protection of life and property in San Diego County (County of San Diego 2011b).

State Regulations

The following state regulations pertaining to geologic hazards would apply to the Proposed Project.

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code (CBC), Alquist–Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy,[1] but in most cases, is not required to prevent or avoid the ground failure itself. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an "acceptable level" of risk as that which provides reasonable protection of the public safety, although it does not necessarily ensure continued structural integrity and functionality of a project (14 CCR 3721[a]). Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring a higher level of performance, or applying these requirements to developments other than those that meet the acts' definitions of "project."

Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults, and published maps showing these zones. Earthquake fault zones are designated by the CGS and are delineated along traces of faults where mapping demonstrates surface fault rupture has occurred within the past 11,000 years. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy

[1] A "structure for human occupancy" is any structure used or intended for supporting or sheltering any use or occupancy that is expected to have a human occupancy rate of more than 2,000 person-hours per year.

would not be constructed across an active fault. These types of site evaluations address the precise location and recency of rupture along traces of the faults, and are typically based on observations made in trenches excavated across fault traces.

The Project site is not within an Alquist-Priolo earthquake fault zone, and, therefore, is not subject to the requirements of this act (Appendix F).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, Section 2690 et seq.) directs the CGS to protect the public from earthquake-induced liquefaction and landslide hazards (these hazards are distinct from fault surface rupture hazard regulated by the Alquist–Priolo Act). This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with the CGS Special Publication 117A, adopted March 13, 1997, updated in 2008, by the State Mining and Geology Board (CGS 2008).

Seismic Hazard Zone Maps have been prepared for portions of populated areas of Southern California and the San Francisco Bay Area; however, no seismic hazard zones have yet been delineated for the Project site. As a result, the provisions of the Seismic Hazards Mapping Act would not apply to the Proposed Project.

California Building Code

The CBC has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code published by the International Code Conference. The CBC contains California amendments based on the ASCE Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads and other loads (such as wind loads) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration,

movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

Local Regulations

The following local/regional regulations pertaining to geology, soils, and seismicity would apply to the Proposed Project.

San Diego County Special Studies Zones

The Alquist–Priolo Act provides that a city or county may establish more restrictive policies than those within the Alquist–Priolo Act, if desired. The County established Special Study Zones that include late-Quaternary faults mapped by the CGS. Late-Quaternary faults (movement during the past 700,000 years) were mapped for the County based on geomorphic evidence similar to that of Holocene faults except that tectonic features are less distinct. As indicated by the CGS, these faults may be younger, but the lack of younger overlying deposits precludes more accurate age classification. Traces of faults within "Special Study Zones" are treated by the County as active unless a fault investigation can prove otherwise. Before any construction is allowed, a geologic study must be conducted to determine if any active fault lines are located on or within the vicinity of a project site. For areas where active faulting is identified, the County's Fault Displacement Area regulations regulate new development in areas subject to potential loss of life and property from earthquake fault displacement in order to mitigate such losses (County of San Diego 2007a). The Proposed Project would not be located in a County Special Study Fault Zone or a fault rupture hazard zone as identified by the Alquist–Priolo Act.

San Diego County General Plan

The 2011 County General Plan guides future growth in the unincorporated areas of the County and considers projected growth anticipated to occur within various communities. The following goals and policies of the County General Plan Safety Element are applicable to the Proposed Project (County of San Diego 2011a):

Goal S-7: Reduced Seismic Hazards. Minimize personal injury and property damage resulting from seismic hazards.

- **Policy S-7.1: Development Location.** Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

- **Policy S-7.2: Engineering Measures to Reduce Risk.** Require all development to include engineering measures to reduce risk in accordance with the CBC, Uniform Building Code, and other seismic and geologic hazard safety standards, including design and construction standards, that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.
- **Policy S-7.3: Land Use Location.** Prohibit high occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials within Alquist– Priolo and County special studies zones.

Goal S-8: Reduced Landslide, Mudslide, and Rock Fall Hazards. Minimized personal injury and property damage caused by mudslides, landslides, or rock falls.

- **Policy S-8.1: Landslide Risks.** Direct development away from areas with high landslide, mudslide, or rock fall potential when engineering solutions have been determined by the County to be infeasible.
- **Policy S-8.2: Risk of Slope Instability.** Prohibit development from causing or contributing to slope instability.

San Diego County Code

Grading Ordinance

Division 7 of Title 8 of the San Diego County Code (County of San Diego 2011c), Grading Ordinance, establishes the requirement to obtain a grading permit prior to grading operations. The Grading Ordinance requires the submittal of Grading Plans or improvement plans for review by the County Official (Director of Public Works or Director of Planning & Development Services, or her/his authorized representative) prior to issuance of a grading permit. The Grading Ordinance contains design standards and performance requirements that must be met to avoid or reduce to an acceptable level the potential for slope instabilities, expansive soils, excessive erosion, and sedimentation to adversely affect a proposed development (Chapter 4 of the Grading Ordinance). The ordinance sets forth the maximum slope allowed for cut and fill slopes; the requirement for drainage terraces on cut or fill slopes exceeding 40 feet in height; expansive soil requirements for cuts and fills; minimum setback requirements for buildings from cut or fill slopes; and reporting requirements, including a soil engineer's report and a final engineering geology report by a California Certified Engineering Geologist that includes specific approval of the grading as affected by geological factors. The Grading Ordinance also contains requirements to reduce effects on air quality (Section 87.428, Dust Control), native habitat (Section 87.503), cultural and paleontological resources (Sections 87.429 and 87.430), and watercourses (Chapter 6 of the

Grading Ordinance). Upon review of Grading Plans, the County Official has the authority to approve, attach conditions of approval, or deny the permit application.

On-Site Wastewater Treatment System Ordinance

Chapter 3, Division 8, of Title 6 of the San Diego County Code, On-Site Wastewater Treatment System Ordinance (County of San Diego 2011d), establishes the requirements for on-site wastewater treatment systems in the County. The purpose of this ordinance is to implement state laws and regulations associated with waste discharge requirements (State Water Resources Control Board and the California Regional Water Quality Control Board for the San Diego Region), and to implement additional standards for septic systems and graywater systems that are necessary to protect the health and safety of the community. It also makes it unlawful for any person to cause, suffer, or permit the disposal of sewage, human excrement, or other liquid wastes in any place or manner except through and by means of an approved plumbing and drainage system and an approved sewage disposal system. If no public sanitary sewer system is available, the ordinance allows for installation of on-site wastewater treatment systems, provided that the requirements and standards of the ordinance are complied with and a permit issued by the Department of Environmental Health is obtained. Standards and requirements include soil percolation tests to determine soil suitability, the selection of a treatment system appropriate for site conditions, and specific setback requirements from lakes, streams, ponds, slopes, and other utilities and structures. Chapter 6, Division 8, of Title 6 of the County Code pertains to Septic Tank and Cesspool Cleaners, which establishes processes, fees, and requirements for the examination, cleaning, and collection of sewage from septic tanks and cesspools. The Proposed Project does not include any septic or on-site wastewater systems. As such, this ordinance does not apply to the Proposed Project.

2.5.3 Analysis of Proposed Project Effects and Determination as to Significance

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, of this EIR) is a component of the Proposed Project and has been analyzed as a part of the whole of the action. However, this EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have California Environmental Quality Act (CEQA) obligations related to the switchyard.

This section characterizes the geologic and seismic hazards of the Project site to evaluate their potential adverse effects on the Proposed Project as well as the potential for the Proposed Project to create or worsen such hazards for the public and/or surrounding properties. For geology and soil conditions, the study area is typically limited to the development footprint of the Proposed Project,

whereas for seismic hazards, the study area is regional, because earthquakes on distant faults can produce ground shaking on the Project site.

The scope of the impact analysis reflects the significance thresholds contained in the County's Geologic Hazards Guidelines (County of San Diego 2007a), which address fault rupture, ground shaking, liquefaction, landslides, and expansive soils. Baseline information against which potential impacts of the Proposed Project are compared is derived from a variety of sources, including maps and surveys from the U.S. Geological Survey, the U.S. Department of Agriculture, the CGS, and the County General Plan. The impact analysis is based in large part on the Preliminary Geotechnical Evaluation completed by Ninyo & Moore (see Appendix F) in March 2020, and the County Geologic Hazards Guidelines.

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted, or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

2.5.3.1 Fault Rupture

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Geologic Hazards Guidelines (County of San Diego 2007a) apply to both the direct impact analysis and the cumulative impact analysis. These significance guidelines have been developed by the County to address question VI a) i) in the CEQA Guidelines, Appendix G (14 CCR 15000 et seq.), and to ensure compliance with Fault Displacement Area regulations within the County Zoning Ordinance.

A significant impact would result if:

- The project would propose any building or structure to be used for human occupancy over or within 50 feet of the trace of an Alquist–Priolo fault or County Special Study Zone fault.
- The project proposes the following uses within an Alquist-Priolo Zone which are prohibited by the County: i) uses containing structures with a capacity of 300 people or

more; ii) uses with the potential to severely damage the environment or cause major loss of life; iii) specific civic uses including police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities.

Analysis

As discussed in Section 2.5.1, Existing Conditions, the Proposed Project would not be located in a County Special Study Fault Zone or a fault rupture hazard zone as identified by the Alquist–Priolo Act, nor would it be underlain by an active or potentially active fault. The closest mapped faults to the Project site are pre-Quaternary in age, and are generally considered to have little to no potential to generate an earthquake. The closest active fault to the Project site is the Holocene-active Coyote Mountain segment of the Elsinore Fault Zone, located approximately 14 miles northeast of the Project site.

In addition, none of the proposed structures would be constructed for human occupancy. Once operational, the Proposed Project would be an un-staffed facility that would be monitored remotely, and no on-site personnel would regularly occupy the site. Humans would only occupy the site periodically for routine panel cleaning, inspections and maintenance. Therefore, the Proposed Project would have a **less than significant** impact from the exposure of people or structures to adverse effects from a known fault-rupture hazard zone.

Switchyard

Construction of the switchyard would not be located in a County Special Study Fault Zone or a fault rupture hazard zone as identified by the Alquist-Priolo Act, nor would it be underlain by an active or potentially active fault. The switchyard would also not be constructed for human occupancy. Therefore, this Proposed Project component would have a **less than significant** impact from the exposure of people or structures to adverse effects from a known fault-rupture hazard zone.

2.5.3.2 Ground Shaking

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Geologic Hazards Guidelines (County of San Diego 2007a) applies to both the direct impact analysis and the cumulative impact analysis. These significance guidelines have been developed by the County to address question VI a) ii) in the CEQA Guidelines, Appendix G. A significant impact would result if:

> The project would be located within a County Near-Source Shaking Zone or within Seismic Zone 4 and the project does not conform to the Uniform Building Code (UBC).

Analysis

As discussed in Section 2.5.1, Existing Conditions, the Project site is not located within a Near-Source Shaking Zone as identified in Figure 3 of the County's Geologic Hazards Guidelines (County of San Diego 2007a). However, the Project site is within Seismic Zone 4, as is all of San Diego County, and is subject to ground shaking.

The Project site could be subject to strong ground shaking in the event of a large earthquake on any of the active or potentially active faults in the greater Southern California region. The Project site is not within a near-source shaking zone identified on the county hazard maps (see Figure 4 in County of San Diego 2007a), and the PGA with a 2% chance of occurring in the next 50 years (i.e., equivalent to a 1 in 2,475 annual chance) is estimated to be approximately 0.526 g. Such levels of ground shaking have in the past been associated with a Modified Mercalli Intensity of VI (strong), which can cause substantial damage and possible collapse in old brick and unreinforced-masonry-type structures, but only minor damage to newer buildings constructed in accordance with modern building standards. Building codes currently in effect are intended to prevent substantial damage and structural collapse of buildings in "design earthquakes," which are usually equivalent to earthquakes with a 10% chance of occurring in the next 50 years.

The Proposed Project consists of PV modules, a solar energy battery storage system, switchyard and collector substation, and associated infrastructure. The closest distance between an occupied residence and a proposed component of the Proposed Project would be approximately 110 feet in the town of Jacumba Hot Springs. The maximum height of the solar facilities that would be constructed would be up to four 80-foot tall poles located in the switchyard, which would be located in the center of the Project site, approximately 4,500 feet from the occupied residences. Thus, the tallest structures would not be in the proximity of the residences. The solar facilities that would be located near the occupied residences would be a maximum of 12 feet tall. Therefore, the public safety implications of damage or collapse of these structures would be negligible, as the surrounding properties are beyond the range of impact from structural toppling of the solar modules (which would be highly improbable for properly designed, seismically compliant structures). The Proposed Project would not be located in a densely populated area, nor would the Proposed Project include structures for human occupancy. The Proposed Project would be an unmanned facility that is operated remotely, and would only have workers occupying the site periodically for routine panel cleaning, inspections, and maintenance. The entire solar facility would be fenced and would be off limits to the public. The fencing would meet National Electrical Safety Code requirements for protective arrangements in electric supply stations. The fencing would be seven feet in height total, with a six-foot-high chain-link perimeter fence and one foot of three strands of barbed wire along the top, and would be constructed with anti-climbing material(s), such as small-ring chain-link fencing. Signage in Spanish and English for electrical

safety would also be placed along the perimeter of the solar facility, warning the public of the need to keep out.

To ensure the structural integrity of all structures, the Proposed Project components would conform to the seismic design requirements that are outlined within the CBC, which contains universal standards for proper site preparation and grading practices, adequate design of foundations, and guidelines for the appropriate selection and use of construction materials. The local agency that enforces the CBC is the County Department of Planning & Development Services, which reviews applications for building permits for compliance with the CBC, local amendments to the CBC, and County Zoning Ordinance Section 87.209. Grading Plans would also be reviewed for compliance with state and local standards (as discussed in Section 2.5.2, Regulatory Setting). As part of the development review process, the County requires a Soil Investigation Report that includes data regarding the nature, distribution, and strength of existing soils and rock on the site; the soil engineer's conclusions and recommendations for grading requirements, including the correction of weak or unstable soil conditions and treatment of any expansive soils that may be present; and the soil engineer's opinions as to the adequacy of building sites to be developed. The recommendations contained therein will be refined as necessary based on final designs and incorporated into the Proposed Project's plans and specifications as a condition of final Proposed Project approval. Further detail regarding soils will be included in the final Soil Investigation Report that will be prepared as site and facility design advances, and must be approved by a County official as part of the grading permit process (County Ordinance No. 9634 [N.S.]).

Because site design would be required to comply with state and local building and grading standards, substantial adverse effects from strong seismic ground shaking would be avoided or reduced to acceptable levels. Potential adverse effects from strong seismic ground shaking would, therefore, be **less than significant**.

Switchyard

Construction of the switchyard could be subject to strong ground shaking if a large earthquake on any of the active or potentially active faults in the greater Southern California region. The switchyard would include the construction of up to four 80-foot-high poles to support the 138-kilovolt overhead transmission line; however, since the switchyard would consist of a stand-alone facility that would not house operational employees, the public safety implications of damage or collapse of this facility would be negligible. Additionally, the switchyard would not be located in a densely populated area and would not include structures for long-term human occupancy. Moreover, the switchyard would be off limits to the public, with a seven-foot-high security fence surrounding the entire facility. Lastly, the switchyard would only require periodic maintenance that would be conducted on an as-needed basis; therefore, employees would not frequent this portion of the site.

To ensure the structural integrity of the switchyard, construction of the facility would conform to the seismic design requirements outline within the CBC, which contains universal standards for the appropriate selection and use of construction materials.

Because the switchyard site design would be required to comply with state-mandated building and grading standards, substantial adverse effects from strong seismic ground shaking would be avoided or reduced to acceptable levels. Potential adverse effects from strong ground shaking would, therefore, be **less than significant**.

2.5.3.3 Liquefaction

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Geologic Hazards Guidelines (County of San Diego 2007a) apply to both the Proposed Project impact analysis and the cumulative impact analysis. The following significance guidelines have been developed by the County to address question a) iii) and the portion of question c) that addresses on-site and off-site lateral spreading or liquefaction in the CEQA Guidelines, Appendix G. A significant impact would result if:

- The project site has potential to directly or indirectly cause potential substantial adverse effects because i) the project site has potentially liquefiable soils, ii) the potentially liquefiable soils are saturated or have the potential to become saturated, and iii) in-situ soil densities are not sufficiently high to preclude liquefaction.

Analysis

Liquefaction is a phenomenon that can occur under a specific set of circumstances that can substantially amplify the normally expected magnitude of shaking and can lead to loss of bearing pressure in normally competent soils. As indicated in the significance criteria, an area that has low in-situ soil densities (which typically include loose sandy soils) and a shallow or perched groundwater table has the potential to liquefy if subject to a strong earthquake. The most severe liquefaction effects occur when the thickness of loose sandy soils is high and when those soils are saturated close to the ground surface; however, the potential for liquefaction to occur in any given area is highly dependent on site-specific conditions. Typical effects of liquefaction include sinking foundations, tilting structures, and rupture and/or substantial damage to underground utility lines.

Although historically groundwater has been encountered in wells in the Jacumba Valley area at depths ranging from approximately 50 to 75 feet (SCS Engineers 2011; Stantec 2016), during preparation of the Groundwater Resources Investigation Report for the Proposed Project in 2020 (Appendix O), groundwater was encountered at depths ranging from 34.14 to 59.74 feet below the ground's surface. This shallow groundwater was likely due to a high amount of rainfall in 2018

and 2019 making it possible for locally perched groundwater to be encountered. The shallow groundwater coupled with the loose and medium dense, granular, alluvial soils situated above and below the groundwater table may make the Project site subject to liquefaction. This site is also identified as having a high risk for liquefaction in Figure 4.3.6 of the County's Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2017).

Although the factors for liquefaction are present, the Proposed Project will be designed in accordance with the seismic design requirements of the CBC, which contains universal standards for seismically sound site preparation and grading practices, foundations design, and guidelines for the appropriate selection and use of construction materials. County Planning & Development Services also reviews applications for building permits for compliance with the CBC, local amendments to the CBC, and County Zoning Ordinance Section 87.209. Grading Plans would also be reviewed for compliance with state and local standards (as discussed above in Section 2.5.2, Regulatory Setting). However, the Proposed Project may still create a potentially significant impact associated with ground failure due to liquefaction, seismically induced settlement, and/or lateral ground spread that could result in the collapse of a structure; therefore, impacts would be **potentially significant (Impact GEO-1)**.

Switchyard

As explained above and in the Groundwater Resources Investigation Report for the Proposed Project (Appendix O), groundwater was encountered at depths ranging from 34.14 to 59.74 feet at the site. The shallow groundwater coupled with loose and medium dense, granular, alluvial soils situated above and below the groundwater table may make the site subject to liquefaction. In addition, the site is identified as having a high risk for liquefaction in Figure 4.3.6 of the County's Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2017).

The switchyard would be designed in accordance with the seismic design requirements of the CBC, which contains universal standards for seismically sound site preparation and grading practices, foundations design, and guidelines for the appropriate selection and use of construction materials. County Planning & Development Services also reviews applications for building permits for compliance with the CBC, local amendments to the CBC, and County Zoning Ordinance Section 87.209. Grading Plans would also be reviewed for compliance with state and local standards (as discussed above in Section 2.5.2, Regulatory Setting). However, the switchyard may still create a potentially significant impact associated with ground failure due to liquefaction, seismically induced settlement, and/or lateral ground spread that could result in the collapse of a structure; therefore, impacts would be **potentially significant (Impact GEO-1)**.

2.5.3.4 Landslides

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Geologic Hazards Guidelines (County of San Diego 2007a) apply to both the direct impact analysis and the cumulative impact analysis. The following significance guidelines have been developed by the County to address question VI a) iv) and the portion of question c) that relates to on-site or off-site landslide or collapse in the CEQA Guidelines, Appendix G. A significant impact would result if:

- The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.
- The project is located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, potentially resulting in an on-site or off-site landslide.
- The project site lies directly below or on a known area subject to rockfall which could result in collapse of structures.

Analysis

The Project site is not within a landslide susceptibility area as identified in the County's Geologic Hazards Guidelines (County of San Diego 2007a). Landslides have not been mapped on or adjacent to the site and evidence of landsliding was not observed during review of aerial photographs or during site reconnaissance (Appendix F). Rockfall hazards are possible in the more steeply sloping portions of the Project site, such as at Round Mountain. However, the proposed development would generally be limited to the relatively flat, low-lying areas of Jacumba Valley. Therefore, because the Proposed Project is not located within an identified landslide susceptibility area; the geologic environment has a low probability to become unstable; and the Proposed Project would avoid areas subject to rockfall, the Proposed Project would have a **less than significant** impact from the exposure of people or structures to potential adverse effects from landslides.

The Proposed Project involves site grading for installation of the solar facility that would result in the creation of areas of cut and areas underlain by fill. To ensure that any proposed structures (including those proposed on the Project site) are adequately supported (whether on native soils, cut, or fill), a Soils Investigation Report would be required as part of the building permit process. This report would evaluate the strength of underlying soils and make recommendations on the design of building foundation systems. Grading plans must be compliant with standards in County Grading Ordinance addressing the stability, incline, and compaction of cuts and fills. The Soils Investigation Report must demonstrate that a proposed building meets the structural stability standards required by the CBC and the local grading ordinance. Additionally, during trenching and excavation, the Proposed Project would be required to comply with OSHA standards to protect

slopes and prevent cave-ins and other hazards related to soil stability. The report must be approved by the County prior to the issuance of a building permit. With this standard requirement, impacts would be **less than significant**.

Switchyard

The switchyard is not located within a landslide susceptibility area as identified in the County's Guidelines for Determining Significance, Geologic Hazards (County of San Diego 2007a). The switchyard facility would not be located on steep slopes (slopes with a grade of 25% or greater) and would avoid areas subject to rockfall. Additionally, slope stability is not anticipated to be an issue at the switchyard site, due to the relatively flat nature of the site and the subsurface materials (Appendix F). Therefore, impacts relative to landslides as they pertain to the switchyard would be **less than significant**.

2.5.3.5 Expansive Soils

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Geologic Hazards Guidelines (County of San Diego 2007a) apply to both the direct impact analysis and the cumulative impact analysis. The following significance guidelines have been developed by the County to address question d) in the CEQA Guidelines, Appendix G. A significant impact would result if:

- The project would be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), and does not conform with the Uniform Building Code, creating direct or indirect risks to life or property.

Analysis

The Project site is not located in an area identified as having expansive soils as determined by the County's Geologic Hazards Guidelines (see Figure 6 in County of San Diego 2007a). However, the County's Geologic Hazards Guidelines maps are used for basic project screening purposes and are based on regional data as opposed to site specific studies. The Proposed Project would be designed in accordance with the seismic design requirements of the CBC, which contains universal standards for seismically sound site preparation and grading practices, foundations design, and guidelines for the appropriate selection and use of construction materials. In accordance with the CBC, an evaluation of the soils would be conducted that evaluates the soils underlying the Project site. With implementation of these standard practices, as required by the CBC and local ordinances, it is anticipated that potential for impacts due to expansive soils would be low. However, the Preliminary Geotechnical Evaluation (Appendix F) found that a more comprehensive evaluation of the soils underlying the Project site would be needed to determine the soil expansion risk and

to ensure that potentially expansive soils, if encountered, are adequately addressed; therefore, impacts associated with expansive soils would be **potentially significant (Impact GEO-2)**.

Switchyard

The switchyard site is not located in an area identified as having expansive soils as determined by the County's Geologic Hazards Guidelines (see Figure 6 in County of San Diego 2007a). Required compliance with the CBC would ensure that potentially expansive soils, if encountered, are adequately addressed. Standard practices include removing expansive soils and placing a mat of properly compacted, non-expansive fill prior to placing foundations, structures, utilities, and road beds. In some cases, potentially expansive soils can be treated or mixed with other materials to reduce its expansive potential to acceptable levels. With implementation of these standard practices as required by the CBC it is anticipated that the potential for impacts to occur on the switchyard site due to expansive soils would be low. However, impacts associated with expansive soils would be **potentially significant (Impact GEO-2)**.

2.5.3.6 Adequate Soils for Septic Systems or Other On-Site Wastewater Systems

Guidelines for the Determination of Significance

The County's Geologic Hazards Guidelines and its Guidelines for Determining Significance – Surface Water Quality (County of San Diego 2007a, 2007b) do not contain a significance criterion that addresses adequate soils for septic systems or other on-site wastewater systems. However, the following analysis is provided to address question e) in the CEQA Guidelines, Appendix G, which states that a significant impact would result if:

- The project would have soils incapable of supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Analysis

The Proposed Project does not include any septic or on-site wastewater systems. As such, the Proposed Project would result in **no impact**.

Switchyard

The switchyard does not include any septic or on-site wastewater systems. As such, the switchyard would result in **no impact**.

2.5.4 Cumulative Impact Analysis

All of Southern California lies within a seismically active region with an extremely diverse range of geologic and soil conditions that can vary substantially within short distances. However, impacts from geologic and soil conditions are also site-specific and would only have potential to combine with impacts of the Proposed Project if they occurred in the same general location, on similar soils and topographies. Thus, the geographic extent of the cumulative study area for potential impacts to people and structures related to geologic and seismic hazards is restricted to the Project site and the area immediately surrounding the site.

2.5.4.1 Fault Rupture

It is unlikely that past, existing, and/or future projects could contribute to the cumulative effects of geology and soils creating the acceleration of erosion, slope failures, fault or ground rupture, and/or earthquake-induced ground failure. These types of conditions would be limited to the areas within and adjacent to the boundaries of individual projects or structural components of the project. In order for impacts to be cumulatively considerable, these conditions would have to occur at the same time and in the same location as the Proposed Project. Therefore, potential seismic impacts (ground shaking, earthquake-induced ground failure, and fault rupture) as a result of local and regional faults, as well as soils that underlie individual projects, comprise an impact to the geologic environment that would not be cumulatively considerable. Additionally, each individual project would be designed in accordance with seismic design criteria as required by the CBC and with other specific design criteria from state and local building and grading regulations, and would be subject to CEQA, including analysis of and mitigation for geologic and soil impacts on an individual basis. Therefore, the Proposed Project **would not contribute, even incrementally, to potentially cumulative impacts** related to fault rupture.

2.5.4.2 Ground Shaking, Liquefaction, Landslides, Expansive Soils, and Adequate Soils for Septic Systems or Other On-Site Wastewater Systems

Potential geologic and soils impacts associated with the Proposed Project are restricted to potential facility damage from earthquake-related ground shaking, liquefaction, landslides, expansive soils, and general soil suitability. County Planning & Development Services reviews applications for building permits for compliance with the CBC, local amendments to the CBC, and County Zoning Ordinance Section 87.209. Grading Plans would also be reviewed for compliance with state and local standards. As part of the development review process, the County requires a Soil Investigation Report for all projects that includes data regarding the nature, distribution, and strength of existing soils and rock on the site; and the soil engineer's conclusions and recommendations for grading requirements, including the correction of weak or unstable soil conditions, and treatment of any expansive soils that may be present.

The Proposed Project would be designed in accordance with the seismic design requirements of the CBC, which contains universal standards for seismically sound site preparation and grading practices, foundations design, and guidelines for the appropriate selection and use of construction materials. Potential impacts within the Project site would be less than significant with mitigation, and no other projects identified on the list of cumulative projects would occur on the Project site, therefore, impacts associated with liquefaction would **not be cumulatively considerable**.

The Proposed Project does not include any septic or on-site wastewater systems. As such, the Proposed Project would **not contribute to a cumulative impact** related to adequate soils for septic tanks or on-site wastewater systems. In all cases, the impacts were determined to be less than significant because the existing regulatory framework controlling the design and construction of structures in California, and actions required to obtain a grading and/or development permits at the local level are sufficient to avoid or substantially reduce the potential impacts. All other cumulative projects in the cumulative projects would be required to comply with the same or similar set of laws, regulations, and ordinances.

Therefore, because all cumulative projects would be designed in accordance with seismic design criteria as required by the CBC and with other specific design criteria from state and local building and grading regulations, impacts would be **less than cumulatively considerable** as it relates to ground shaking, liquefaction, landslides, expansive soils, or adequate soils for septic systems.

2.5.5 Significance of Impact Prior to Mitigation

The Proposed Project's impacts associated with fault rupture, groundshaking, and landslides are **less than significant**. Impacts resulting from implementation of the Proposed Project associated with liquefaction (**Impact GEO-1**) and expansive soils (**Impact GEO-2**) during construction and operation are **potentially significant. No impacts** would occur related to septic systems or other wastewater systems. Cumulative impacts are **not cumulatively considerable.**

2.5.6 Mitigation Measures

M-GEO-1 Prior to the issuance of a building permit, the Project applicant shall retain a California Certified Engineering Geologist to perform a detailed site-specific subsurface report or preliminary geotechnical investigation, consistent with the California Building Code. The California Building Code (which incorporates the International Building Code) is contained in the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code, and includes design and construction requirements related to life safety and structural safety. The geotechnical study shall include subsurface investigation, laboratory testing, and additional deep explorations using borings of 60 feet or more and/or cone penetrometer tests across the alluviated portions of the Proposed Project site

to further define the alluvium profile and quantitatively address the potential for soil liquefaction and lateral spreading across the site. The subsurface geotechnical study shall also include recommendations for the proposed construction and grading such as remedial grading, ground improvement techniques, special foundation design, and other recommendations to ensure that construction of the Proposed Project does not result in substantial liquefaction, subsidence, or seismic-related ground failure due to lateral spread. In addition, the Proposed Project shall implement any necessary measures required to comply with existing building codes and regulations.

2.5.7 Conclusion

The Proposed Project's impacts associated with fault rupture, groundshaking, and landslides are **less than significant**. Within implementation of mitigation measure **M-GEO-1,** impacts associated with liquefaction (**Impact GEO-1**) and expansive soils (**Impact GEO-2**) would be reduced to **less than significant**. **No impacts** would occur related to septic systems or other wastewater systems. Cumulative impacts are **not cumulatively considerable.**

Table 2.5-1
Soil Units within the Project Site

Map Unit, Soil Name	Acres	Depth (inches)
AcG, Acid igneous rock land	131.1	0–4
CeC, Carrizo very gravelly sand 0%–9% slopes	91.04	0–60
InA, Indio silt loam, 0%–2% slopes	42.10	0–60
InB, Indio silt loam 2%–5% slopes	119.78	0–60
IoA, Indio silt loam, saline, 0%–2% slopes	305.0	0–60
LcE2, La Posta rocky loamy coarse sand, 5%–30% slopes, eroded	4.82	0–31
RaC, Ramona Sandy Loam, 5%–9% slopes	6.05	0–74
RaD2, Ramona sandy loam, 9%–15% slopes	24	0–74
RkA, Reiff fine sandy loam, 0%–2% slopes	272	0–60
RsC, Rositas loamy coarse sand, 2%–9% slopes	72.62	0–60
SrD, Sloping gullied land	61.70	0–60
SvE, Stony land	225.06	0–60
Total*	**1355.56**	

Source: Appendix I.

* Totals may not sum precisely due to rounding. The Project site itself is 1,345 acres. The additional 10 acres shown here includes the easement for Old Highway 80, which traverses the Project site.

AcG, Acid igneous rock land; CeC, Carrizo very gravelly sand 0–9% slopes; InA, Indio silt loam, 0–2% slopes; InB, Indio silt loam 2–5% slopes; IoA, Indio silt loam, saline, 0–2% slopes; LcE2, La Posta rocky loamy coarse sand, 5–30% slopes, eroded; RaC, Ramona Sandy Loam, 5–9% slopes; RaD2, Ramona sandy loam, 9–15% slopes; RkA, Reiff fine sandy loam, 0–2% slopes; RsC, Rositas loamy coarse sand, 2–9% slopes; SrD, Sloping gullied land; SvE, Stony land

2.6 Hazards and Hazardous Materials

This section discusses potential impacts relating to hazards and hazardous materials resulting from implementation of the JVR Energy Park Project (Proposed Project). The analysis is based on the review of existing resources; technical data; applicable laws, regulations, and guidelines; and the following technical reports prepared for the Proposed Project in conformance with the County of San Diego's Guidelines for Determining Significance (County of San Diego 2007a, 2007b, 2010a) and other applicable standards:

- Phase I Environmental Site Assessments for JVR Energy Park (Appendix G)
- Asbestos Building Inspection and Lead-Based Paint Testing For JVR Energy Park (Appendix H)
- Visual Resources Report for the JVR Energy Park (Appendix B)
- Fire Protection Plan for the JVR Energy Park (Appendix N)
- Construction Fire Protection Plan for the JVR Energy Park (Appendix A to Appendix N)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding glint and glare impacts to motorists on Interstate (I) 8, consistency with the Airport Land Use Consistency Plan for Jacumba Airport, impacts to emergency response and evacuation plans, potential fire hazards, and the potential rise in temperature in the area due to the proposed solar facility. These concerns are addressed in this section of this Environmental Impact Report (EIR) and in Section 2.11, Wildfire. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

This section is divided into an analysis of potential hazards to public safety and the environment related to hazardous materials, schools, airports, and emergency response and evacuation plans. The discussion of hazards and hazardous materials describes known and potential impacts due to hazardous materials/wastes, potential transport and disposal of hazardous materials, and potential threats of release of hazardous materials. The discussion of airports examines existing airport facilities and potential operational hazards within San Diego County, and specifically within the Project area. The discussion of emergency response and evacuation plans identifies operations and plans that exist to protect lives and property in the event of a disaster within San Diego County. The wildland fires analysis that examines fire threat hazards and the potential for wildfires on the Project site and within wildland/urban interface areas is covered under Section 2.11, Wildfire. The Proposed Project's impacts on fire protection services is also covered under Section 3.1.7, Public Services.

2.6.1 Existing Conditions

Regional Overview

The Project site, as defined in Chapter 1, Project Description, totals approximately 1,356 acres in unincorporated southeastern San Diego County. The Project site is located to the south of I-8 and immediately north of the U.S./Mexico international border, which previously included dairy and agricultural operations. The Proposed Project would be located entirely on private land consisting of 24 parcels. The proposed solar facility would cover approximately 643 acres of the 1,356-acre Project site (shown in Figure 1-1, Project Location, in Chapter 1 of this EIR). The topography of the site varies, containing gentle slopes and steeper hillslopes along the western and eastern sides. The elevation range within the study area is from 2,720 feet to 3,360 feet above mean sea level.

Regional access to the Project site is provided by I-8, located to the north, and by Old Highway 80 which traverses the southern portion of the Project site. Both I-8 and Old Highway 80 are designated as County of San Diego (County) Scenic Highways within this area. Adjacent and nearby land uses to the Project site include the community of Jacumba Hot Springs, an airport, and undeveloped land. The Jacumba Airport is located immediately to the east of the southern portion of the Project site. The southern boundary of the Project site is located along the U.S./Mexico border. The San Diego Arizona and Eastern Railroad transects the western section of the Project site. Public land in the surrounding area includes Anza-Borrego Desert State Park and federal Bureau of Land Management's lands. The Project site is located within the Jacumba Subregional Group Area of the County's Mountain Empire Subregional Plan Area. The unincorporated community of Jacumba Hot Springs, located immediately west of the Project site, lies between Old Highway 80 and the San Diego Arizona and Eastern Railroad bed. The Jacumba Hot Springs 2010 Census population was 561. The community includes residential and commercial uses, including a hot springs resort. Jacumba Hot Springs and the surrounding area are totally dependent on groundwater for water supply. The Jacumba Community Services District provides groundwater to the Jacumba Hot Springs area.

Hazardous Materials

Hazardous materials may be encountered during construction activities. Hazardous materials typically require special handling, reuse, and disposal because of their potential to harm human health and the environment. The California Health and Safety Code (H&SC), Section 25501, defines a hazardous material as follows:

> Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous

waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Potential Hazardous Material Association with Historical Land Uses

Historical land uses and conditions within the Project site may have resulted in adverse impacts to the Project site, representing potential hazards to humans and the environment. Phase I Environmental Site Assessments (ESAs) have been prepared for the Project site (Appendix G). In January 2018, Dudek prepared a Phase I ESA which included the majority of the Project site. Subsequently in August 2018, Dudek prepared a Phase I ESA for additional parcels (Landman property) within the Project site. Both of these Phase I ESAs are included in Appendix G. The Phase I ESAs include a history of the site was compiled based on the review of historical aerial photographs and topographic maps, agency records, City Directory listings, building permit reports, and site owner/representative interviews.

Based on the review of available sources, portions of the Project site were used as agricultural land from at least 1953 to before 1980, then again from at least 2002 through at least 2012. Between these periods, the agricultural land appeared fallow and unused based on a review of historic aerial photographs. A dairy complex located at 45346 Old Highway 80 (Assessor's Parcel Number [APN] 661-060-12) also operated on the Project site from 1927 to the early 1960s (see Appendix D, Historic Resources Report, of Appendix E, Cultural Resources Report). A sand mine or gravel pit operated in the northern portion of the Project site from at least 1959 to approximately 2014. A second gravel pit operated in the northeastern portion of the Project site from at least 1975 until at least 1997. A large wood-dumping area was present south of the dry wash from at least 2002 until at least December 2017.

Historic Uses of Hazardous Concern

Agricultural Uses: Portions of the Project site were historically used for agricultural purposes. The use of pesticides and herbicides, either recently or historically, is not entirely known. There is record of organophosphate insecticide use on a portion of the Project site between April 2011 and October 2011. Based on the long history of agricultural use and the documented period of insecticide use, it is assumed that other pesticides and herbicides were used. As with many agricultural properties, there is a potential for pesticide residues, including chlorinated compounds and metals, to remain in the soil. As pesticides break down over time, it is likely that concentrations of residual compounds, if present, are below risk-based criteria for the proposed solar energy facility use of the property.

Off-Site Sources: Based on the review of regulatory agency records and environmental conditions of the Project site, it is unlikely that off-site sources would impact the Proposed Project. Two nearby gasoline stations, located less than 0.25 miles away were listed in the Leaking Underground Storage Tank (LUST) database (see Table 2.6-1); however, these cases have been closed since the 1990s. Reportedly, groundwater contamination remains beneath the gasoline station site above regulatory cleanup guidelines, but the soil types in the area have allowed vertical downward migration with little lateral migration of the contaminated groundwater. The regulatory agency closed the file based on no impacts observed in nearby groundwater wells, and the assumption of natural attenuation of the contamination over the next several decades (County of San Diego 2012). As the gasoline station is adjacent to the Project site, there is a possibility that contaminated groundwater may migrate beneath the Project site. Given that the local depth to water is at least 40 feet below ground surface (bgs) on the northern portion of the Project site, it is not expected that this contaminated groundwater would be encountered during construction or operation of the Proposed Project. It is also not expected that, due to the depth to groundwater, vapor intrusion due to potential impacts to groundwater would become an issue if contaminants migrated onto the Project site.

Residential Use: The area specifically used as the former Mountain Meadow Dairy and Sunshine Ranch (45346 Old Highway 80) contains 20 existent buildings and structures constructed more than 45 years ago and in various states of disrepair. Four of the structures have been identified as dwellings (Historical Resources Technical Report, Appendix D to Appendix E). The Project site is not currently being used as a residence. Residential structures built prior to 1980 have a high potential to contain lead-based paint and/or asbestos-containing materials (ACM). An Asbestos Building Inspection and Lead-Based Paint Testing report was completed on the former ranch by Aurora Industrial Hygiene in November 2018 (Appendix H). Multiple compounds were found to contain greater than 1% asbestos in multiple structures, and in some of the debris piles located on the Project site. Numerous surfaces were found to contain greater than 1.0 milligram per square centimeter lead in multiple structures on the ranch.

Debris: Various debris piles have been documented on the Project site. The documented debris consists of wood, scrap metal, concrete, PVC, crushed asphalt, I-beams, steel drums, farming equipment, buried trash, tires, cement, and a metal watering trough (Appendix G; Appendix H). As discussed above, some of the debris was found to contain asbestos (Appendix H).

Existing Uses

The central portion of the Project site is relatively flat and primarily fallow agricultural land. The northwestern portion of the Project site is undeveloped, featuring hills and extending onto the east portion of Round Mountain. The northeastern portion of the Project site is undeveloped land, bordered by two gas stations. The former dairy complex and ranch is located in the southeastern portion of the Project site. Thirteen wells were documented on the Project site, two of which are

production wells (Appendix J, Groundwater Investigation Report). Three power transmission lines run east–west through the central portion of the Project site. The San Diego Arizona and Eastern Railroad extends along the western portion of the Project site. The railroad turns west toward the community of Jacumba Hot Springs approximately 0.5 miles north of Old Highway 80. There are multiple abandoned buildings on the southeastern portion of the Project site associated with the former dairy complex and ranch. Chemical storage and aboveground storage tanks (ASTs) were documented on the ranch portion of the Project site, including small containers (55 gallons or less) of oil, aerosol cans, wood stain, and fungicide, a propane tank, and a large oval-shaped metal AST, the contents of which are not known (Appendix G).

Environmental Database Records

A Phase I ESA was prepared for most of the Project site in January 2018. Subsequently, a Phase I ESA was prepared for a 58-acre portion known as the Landman property in August 2018. Both Phase I ESAs are included in Appendix G. As part of these Phase I ESA site investigations, regulatory database searches were conducted per ASTM Standard E1527-13, which includes Cortese List databases per Government Code 65962.5. The Project site was listed in one federal regulatory database searched, the Facility Index System/Facility Registry Service (FINDS/FRS). Five additional FINDS/FRS sites were found within approximately 0.02 miles of the Project site, including gas stations, a substation, and an auto repair shop. The Project site was listed in the State regulatory databases HAZNET and SANDIEGO HAZ. These databases are used for regulatory compliance and permitting purposes, and do not directly indicate a release of hazardous substances to the environment. The listings relate to a heavy equipment maintenance company, Bornt & Sons Inc., and a listing called 2 Heavy Equipment, that previously operated on the Project site at 45346 Old Highway 80. The site managed and stored hazardous wastes and materials associated with operations, but no violations or releases were noted.

Online Databases: Available online databases that provide environmental information on facilities and sites in the State of California were consulted. Table 2.6-1 provides a summary of the databases that were searched on March 22, 2019.

The California Environmental Protection Agency (CalEPA) database listed three sites in addition to those identified in the Phase I ESA reports (Appendix G). Listings for the Jacumba Solar Energy Project and San Diego Gas & Electric Pole Replacements Project were identified in the database[1] approximately 0.17 miles west and 0.15 miles north, respectively, of the Project site. The sites are listed as a Wetlands Fill and Dredge project, which does not indicate a release of hazardous materials to the environment. The Oak Glen Disposal site was also identified within a 1-mile radius

[1] The georeferenced location on the database does not appear to be the exact project location for the Jacumba Solar Energy Project. Rather, it is a general location for Jacumba Hot Springs, California, as no address was provided in the database listing.

of the Project site. However, based on the address and further online georeferencing, the site is actually located greater than 10 miles north of the Project site.

The Regional Water Quality Control Board (RWQCB) database listed the "Jacumba I & II" burn dump sites, located at 1000 Old Highway 80, on the Project site. Further mapping of the associated APNs (661-030-03 and 661-070-08) confirmed the dump site is not on the Project site, but rather located approximately 0.40 miles east of the Project site.

No additional sites were identified in the online databases within a 1-mile radius of the Project site beyond those identified in the Phase I ESA reports (Appendix G). No pipelines or associated features were identified on the National Pipeline Mapping System (NPMS) database within a 1-mile radius of the Project site.

Cortese List: Government Code Section 65962.5(a) requires CalEPA to compile a list of hazardous waste and substances sites (Cortese List). While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1. List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database (Health and Safety Codes 25220, 25242, 25356, and 116395).
2. List of Open, Active LUST Sites by County and Fiscal Year from the RWQCB GeoTracker database (Health and Safety Code 25295).
3. List of solid waste disposal sites identified by the RWQCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision [e] and California Code of Regulations Title 14 Section 18051).
4. List of "active" Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from the Water Board (Water Code Sections 13301 and 13304).
5. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Sites identified in the EnviroStor and GeoTracker databases are discussed above; none are located on or are expected to impact the Proposed Project. Other Cortese list sites were not identified on or within 1 mile of the Project site.

Public and Private Airport Hazards

The nearest registered airport is the Jacumba Airport, which is located adjacent to the Project site to the southeast. The Project site is located within the Airport Influence Area (AIA) of the Jacumba Airport Land Use Compatibility Plan (ALUCP) (San Diego County 2011a). The Jacumba Airport is unattended and unlighted and is mainly used as a glider facility by single-engine aircraft and

sailplanes, with activity predominately occurring during weekends in non-summer months (County of San Diego 2019). The AIA (noise, safety, airspace protection, and overflight) overlap the Project site. There are no active private airstrips within the vicinity of the Project site.

Schools

The Project site is not located within 0.25 miles of an existing or proposed school. The nearest school is Jacumba Elementary School, located approximately 0.36 miles west of the Project site. This school is permanently closed.

Emergency Response

The Project site is located within the County's responsibility area. Emergency response for the Proposed Project would be provided, initially, by the County and/or the California Department of Forestry and Fire Protection (CAL FIRE) from the County's Fire Station 43 in Jacumba Hot Springs. Fire Station 43 is located at 1255 Jacumba Street and is staffed with two CAL FIRE firefighters (one firefighter and one company officer) on a Type 1 fire engine under a Cooperative Fire Protection Agreement with CAL FIRE. Fire Station 43 is approximately 3.6 miles from the most remote areas of the Project site with a calculated travel time of approximately 6.8 minutes. In addition to this responding fire station, the County and/or CAL FIRE co-located Station 47 would respond with additional resources. Station 47 is located at 40080 Ribbonwood Road in the unincorporated community of Boulevard and is staffed with three CAL FIRE firefighters on a Type 2 fire engine that is designed to deal with wildland fire suppression. Station 47 is approximately 10.6 miles to the most remote portion of the JVR Energy Park site, with a calculated travel time of approximately 18.7 minutes. In addition to these responding stations, there are additional resources available through automatic or mutual aid agreements. For more information on fire protection services in the Project area, see Section 3.1.6, Public Services, and Section 2.12, Wildfire, of this EIR.

Law Enforcement

The Project site is within the jurisdiction of the San Diego County Sheriff's Department, Boulevard/Jacumba Office (39919 Highway 94, Boulevard, California). The Boulevard Office, located approximately 8 miles from the Project site, is a satellite office of the Pine Valley Substation, and serves over 200 square miles, including the communities of Boulevard and Jacumba.

Other law enforcement services include California Highway Patrol (CHP) and U.S. Customs and Border Protection (CBP). CHP separates the state into eight patrol divisions or areas, and its jurisdiction is over state highways, the closest of which are I-8 and Old Highway 80 adjacent to the Project site. CHP can also act as state police. The closest CHP offices to the Project site are located in the cities of El Cajon and El Centro (CHP 2019), approximately 50 and 37 miles away, respectively.

CBP also maintains a strong presence in southeastern San Diego County. The Boulevard CBP Station is located at 2463 Ribbonwood Road in the unincorporated community of Boulevard (CBP 2014a) approximately 8.4 miles away from the Project site. The Boulevard station is responsible for a patrol area of 417.8 square miles and two traffic checkpoints (CBP 2014b). CBP officers at the Boulevard CBP Station patrol east of Jewel Valley Road to the County border with Imperial County.

2.6.2 Regulatory Setting

Numerous federal, state, and local regulations have been enacted to prevent or mitigate damage to public health and safety and the environment from the release or threatened release of hazardous substances into the workplace or environment, to protect human health and environmental resources from existing site contamination, and to protect human health and safety from the threat of an emergency, including fire. The regulations below are relevant to the Proposed Project and the topics of hazardous substances, site contamination, and potential emergencies on the site.

Federal Regulations

National Emission Standards for Hazardous Air Pollutants

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) requires that a thorough asbestos survey be performed prior to demolition or renovation activities that may disturb ACM. This requirement may be enforced by federal, state, and local regulatory agencies, and specifies that all suspect ACMs be sampled to determine the presence or absence of asbestos prior to any renovation or demolition activities that may disturb them to prevent potential exposure to workers, building occupants, and the environment.

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under Resource Conservation and Recovery Act (RCRA). RCRA establishes a framework for national programs to achieve environmentally sound management of both hazardous and non-hazardous wastes. RCRA was designed to protect human health and the environment, reduce/eliminate the generation of hazardous waste, and conserve energy and natural resources. RCRA also promotes resource recovery techniques. The Hazardous and Solid Waste Amendments of 1984 both expanded the scope of RCRA and increased the level of detail in many of its provisions. The Hazardous Waste Management subchapter of the RCRA deals with a variety of issues regarding the management of hazardous materials including the export of hazardous waste, state programs, inspections of hazardous waste disposal facilities, enforcement, and the identification and listing of hazardous waste.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, and encouraged greater citizen participation in making decisions on how sites should be cleaned up.

Chemical Accident Prevention Provisions

When Congress passed the Clean Air Act Amendments of 1990, it required the U.S. Environmental Protection Agency (EPA) to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. These rules, which built upon existing industry codes and standards, require companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program.

Clean Water Act

Refer to EIR Section 2.7, Hydrology and Water Quality, for an overview of the Clean Water Act and associated Stormwater Pollution Prevent Plan (SWPPP) requirements. Relevant to the hazards discussion, the Clean Water Act Section 311(j)(1)(C) also includes the Spill Prevention, Control, and Countermeasure (SPCC) Regulation. The intent of this regulation is to prevent oil from entering navigable waters. This regulation typically applies to a total aggregate capacity of aboveground oil storage containers greater than 1,320 gallons or below ground aggregate capacity of 42,000 gallons, with certain exceptions as described in the code. The SPCC establishes procedures, methods, and equipment requirements for these regulated facilities. In addition, it requires facilities subject to the SPCC code to prepare a facility-specific response plan to be implemented in the event of an accidental spill.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as SARA Title III, was enacted in October 1986. The act was passed in response to concerns regarding the environmental

and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the United States, Congress imposed requirements on both state- and federally regulated facilities. SARA Title III establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The act requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR 355). The community right-to-know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, SARA Title III is implemented through the California Accidental Release Prevention (CalARP) program.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations (CFR). State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). These agencies also govern permitting for hazardous materials transportation.

U.S. Environmental Protection Agency Risk Assessment and Regional Screening Levels

The EPA and DTSC use risk assessments to characterize the nature and magnitude of health risks to humans and ecological receptors from chemical contaminants and other stressors that may be present in the environment. The environmental risk assessments typically fall into one of two areas: Human Health and Ecological. The risk assessment is, to the highest extent possible, a scientific process. In general terms, risk depends on the following three factors: how much of a chemical is present in an environmental medium (air, soil, and water), how much contact (exposure) a person or ecological receptor has with the contaminated environmental medium, and the inherent toxicity of the chemical.

The EPA developed Regional Screening Levels (RSLs), which provide a unified set of screening level/preliminary remediation goals for all regions of the EPA for screening chemical contaminants at superfund sites. These tables, which include 813 listed chemicals, are intended to promote national consistency. The RSLs are calculated using the latest toxicity values, default exposure assumptions and physical and chemical properties. An online calculator is also available where default parameters can be changed to reflect site-specific risks. The RSL Generic Tables are considered ready for use, and contain both the screening level calculation and the toxicity values used to create the generic RSL. The RSLs are considered by the EPA to be protective for humans

(including sensitive groups) over a lifetime. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding RSLs can be assumed to not pose a significant health risk to people who may live (residential RSLs) or work (commercial/industrial RSLs) at the site. The EPA RSL tables were most recently updated in November 2018.

The California DTSC Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. The HERO review of the EPA RSLs determined that the revised RSLs (which replaced the EPA Preliminary Remediation Goals [PRGs] in 2008) included some levels that were substantially higher, and therefore less protective, than the previous PRGs. HERO therefore created Human Health Risk Assessment Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. HERO reference tables 1, 2, and 3 provide recommended screening levels for compounds in soil, tap water, and air, respectively. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities. DTSC-SLs for soil and tap water are identified in the tables when the value is at least three-fold more stringent than the corresponding EPA RSL, and an air DTSC-SL is identified when it is more stringent than the corresponding EPA RSL by any degree. DTSC also accepts use of the EPA online screening calculator to calculate site-specific screening levels that are more protective of CalEPA and EPA toxicity values and applied assumptions are consistent with HERO recommendations. HERO Note 3 was most recently updated in June 2018.

Federal Aviation Administration Functions

The Federal Aviation Administration (FAA) has primary responsibility for the safety of civil aviation. The FAA's major functions regarding hazards include the following: (1) developing and operating a common system of air traffic control and navigation for both civil and military aircraft, (2) developing and implementing programs to control aircraft noise and other environmental effects of civil aviation, (3) regulating U.S. commercial space transportation, and (4) conducting reviews to determine that the safety of persons and property on the ground are protected.

An FAA report titled Technical Guidance for Evaluating Selected Solar Technologies on Airports (FAA Solar Guide) was prepared to provide the FAA with procedures for reviewing solar projects (FAA 2018). The FAA Solar Guide includes the following content:

- Chapter 1 provides an introduction to solar electricity and how it is delivered to customers. It includes a description of solar photovoltaic (PV) technology, which is one of the more practical applications for airports, other types of solar energy systems, how systems connect and operate with the electric grid, and the specific electricity supply and demand issues associated with solar projects at airports.

- Chapter 2 reviews airport site planning issues including the life cycle of a typical solar PV project, project participants, and airport planning considerations for locating solar facilities at airports (e.g., Airport Layout Plan consistency).
- Chapter 3 examines the regulatory issues that FAA must consider, including Title 14 of the CFR Part 77 (Airspace Review) and obligations under the National Environmental Policy Act. Objects that exceed the Part 77 height limits constitute airspace obstructions.
    - Part 77 Subsection C describes the standards used for determining obstructions to air navigation. These standards apply to the following:

      An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:

      1 A height of 499 feet above ground level (AGL) at the site of the object.

      2 A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.

      3 A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.

      4 A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.

      5 The surface of a takeoff and landing area of an airport or any imaginary surface established under Section 77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.
- Chapter 4 describes the financial landscape for solar projects including the government incentives available to fund projects and how the different ownership models (e.g., public versus private) can maximize project cost-effectiveness.
- Chapter 5 reviews the federal government's role in solar development and includes recommendations for future research and procedural efficiency.

The April 2018 version updated Section 3.1.2, Reflectivity, of the FAA Solar Guide to incorporate the latest information about evaluation of solar glint and glare. The 2018 version also clarified the relationship between solar energy and the FAA's Voluntary Airport Low Emission program in Section 5.3.2 of the FAA Solar Guide, and added information about the FAA's Airport Energy Efficiency Program to Section 5.3.3 of the FAA Solar Guide.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

Occupational and Safety Health Act

Congress passed the Occupational and Safety Health Act to ensure worker and workplace safety. Its goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. In order to establish standards for workplace health and safety, the Occupational and Safety Health Act also created the National Institute for Occupational Safety and Health as the research institution for the Occupational Safety and Health Administration (OSHA). OSHA is a division of the U.S. Department of Labor that oversees the administration of the Occupational and Safety Health Act and enforces standards in all 50 states. Because California has an approved State Plan, only California Occupational Safety and Health Administration (Cal/OSHA) standards apply to the Project site.

State Regulations

Hazardous Materials

California Occupational Safety and Health Administration

Cal/OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are required to be "as effective as" federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 330 et seq.). The regulations specify requirements for

employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings. The employer is also required, among other things, to have an Illness and Injury Prevention Program.

Cal/OSHA Asbestos and Carcinogen Unit

Cal/OSHA Asbestos and Carcinogen Unit enforces asbestos standards in construction, shipyards, and general industry. This includes identification and removal requirements of asbestos in buildings, as well as health and safety requirements of employees performing work under the Asbestos-In-Construction regulations 8 CCR 1529. Only a Cal/OSHA-Certified Asbestos Consultant can provide asbestos consulting (as defined by the Business and Professions Code, 7180–7189.7, and triggered by the same size and concentration triggers as for registered contractors). These services include building inspection, abatement project design, contract administration, supervision of site surveillance technicians, sample collection, preparation of asbestos management plans, and clearance air monitoring.

California Department of Public Health

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in a construction project and to perform lead-related construction work in an effective and safe manner.

California Government Code Section 65962.5(a), Cortese List

California Government Code Section 65962.5(a), also known as the Hazardous Waste and Substance Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires CalEPA to develop at least annually an updated Cortese List. The Department of Toxic Substances Control is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Health and Safety Code and Code of Regulations

Article 1 of H&SC Chapter 6.95, Article 1 (Sections 25500–25520) requires that any business that handles, stores, or disposes of a hazardous substance at a given threshold quantity must prepare a hazardous materials business plan (HMBP). This regulation requires that no final certificate of

occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Division 20, Chapter 6.95, Article 2, Sections 25500–25520. The HMBP is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on site. The plan also contains an emergency response plan which describes the procedures for mitigating a hazardous materials release, procedures and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the Hazardous Materials Division, the Office of Emergency Services, and other emergency response personnel such as the local Fire Agency having jurisdiction. The HMBP must also be amended within 30 days whenever there are changes in the amount or location of stored hazardous chemicals on a site. The Hazardous Materials Division conducts routine inspections at businesses required to submit business plans. The purpose of these inspections is to (1) ensure compliance with existing laws and regulations concerning HMBP requirements, (2) identify existing safety hazards that could cause or contribute to an accidental spill or release, and (3) suggest preventative measures designed to minimize the risk of a spill or release of hazardous materials. After initial submission of an HMBP, the business must review and recertify the HMBP every year.

Risk Management Plans

H&SC Chapter 6.95, Article 2 (Sections 25531–25543.3) requires the owner or operator of a stationary source (non-transportation) with more than a threshold quantity of a regulated substance to prepare a risk management plan. The state statutes and regulations combine federal and state program requirements for the prevention of accidental releases of listed substances into the atmosphere. The incorporation of the federal and state requirements have been designated the CalARP program. CalARP requires that a risk management plan include a hazard assessment program, an accidental release prevention program, and an emergency response plan. The risk management plan must be revised every 5 years or as necessary. The majority of facilities or businesses in the County that have prepared risk management plans are ammonia refrigeration facilities, water treatment and wastewater treatment plants that handle chlorine gas and facilities that store flammable chemicals such as methane and propane.

Title 22 of the California Code of Regulations and Hazardous Waste Control Law, Chapter 6.5

The Department of Toxic Substances Control regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under RCRA and the California Hazardous Waste Control Law. Both laws impose "cradle-to-grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. CalEPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other Certified Unified Program Agencies, including the San Diego County Department of Environmental Health (DEH).

Title 23 of the California Code of Regulations, Underground Storage Tank Act

The underground storage tank monitoring and response program is required under H&SC Chapter 6.7 and Title 23 of the California Code of Regulations. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning underground storage tanks. The County DEH is the local administering agency for this program.

Title 27 of the California Code of Regulations, Solid Waste

Title 27 of the California Code of Regulations contains a waste classification system that applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management sites for treatment, storage, or disposal. The California Integrated Waste Management Board and its certified Local Enforcement Agency regulate the operation, inspection, permitting, and oversight of maintenance activities at active and closed solid waste management sites and operations.

Senate Bill 1889, Accidental Release Prevention Law/CalARP

Senate Bill 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as "regulated substances," which if involved in an accidental release could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government, and private agencies. The plan is administered by the California Emergency Management Agency and includes response to hazardous materials incidents. The California Emergency Management Agency coordinates the response of other agencies, including CalEPA, California Highway Patrol, California Department of Fish and Wildlife, RWQCB, San Diego Air Pollution Control District, CAL FIRE, the County DEH Hazardous Incident Response Team, and the County of San Diego Office of Emergency Services.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the California Code of Regulations. It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and

enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

Title 14 Division 1.5 of the California Code of Regulations

Title 14 of the California Code of Regulations, Division 1.5, establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated area of the County is a State Responsibility Area, and any development in State Responsibility Areas must comply with these regulations. Among other things, Title 14, Section 1270 et seq. establishes minimum standards for emergency access, fuel modification, setback to property line, signage, and water supply.

State Fire Regulations

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The state fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

Emergency Response

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or the resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after the following occurs: (1) a local

declaration of emergency; or (2) California Emergency Management Agency gives concurrence with the local declaration, or the governor issues a proclamation of a state emergency. Once the act is activated, local government is eligible for certain types of assistance, depending upon the specific declaration or proclamation issued.

Local Regulations

San Diego County, Site Assessment and Mitigation Program

The County DEH maintains the Site Assessment and Mitigation list of contaminated sites that have previously or are currently undergoing environmental investigations and/or remedial actions. The County Site Assessment and Mitigation Program, within the Land and Water Quality Division of the DEH, has a primary purpose to protect human health, water resources, and the environment within the County by providing oversight of assessments and cleanups in accordance with the California Health and Safety Code and California Code of Regulations. The Site Assessment and Mitigation's Voluntary Assistance Program also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects, including properties contaminated with hazardous substances.

San Diego County, Air Pollution Control District

The San Diego County Air Pollution Control District is the local agency responsible for enforcing the rules and regulations for asbestos removal and demolition operations. Rule 1206 – Asbestos Removal, Renovation, and Demolition, adopted on November 15, 2017, applies to owners and operators of any renovation or demolition operation.

Jacumba Airport Land Use Compatibility Plan

ALUCPs are plans that guide property owners and local jurisdictions in determining what types of proposed new land uses are appropriate around airports. They are intended to protect the safety of people, property, and aircraft on the ground and in the air in the vicinity of the airport. They also protect airports from encroachment by new incompatible land uses that could restrict their operations. Airport safety zones are established as part of the ALUCP, and land use restrictions within safety zones are established to protect people and property on the ground and in the air. Main areas of concern related to airport hazards include overflight safety, airspace protection, flight patterns, and land use compatibility. Hazards associated with airports can have serious human safety and quality of life impacts. An ALUCP identifies an area around the airport as the AIA, which is established by factors including airport size, operations, and configuration, as well as the safety, airspace protection, noise, and overflight impacts on the land surrounding an airport.

The County adopted the ALUCP for the Jacumba Airport in December 2006 and amended the plan in 2011 (County of San Diego 2011a). As established by the San Diego County Airport Land Use Commission (ALUC), the geographic scope of the Jacumba ALUCP encompasses an AIA. Most of the Project site is located within the Jacumba AIA.

As established in Chapter 3 of the Jacumba ALUCP, the Jacumba AIA is divided into two subareas, Review Area 1 and Review Area 2. Review Area 1 encompasses six designated safety zones and the 50 decibels (dB) community noise equivalent level (CNEL) noise contour. Within Review Area 1, all types of land use actions are to be submitted to the ALUC for review to the extent review is required by law. Review Area 2 encompasses the airport-related overflight areas and the airspace protection area not encompassed within Review Area 1. Limits on the heights of structures, particularly in areas of high terrain, are the only restrictions on land uses within Review Area 2. The additional function of this area is to define where various mechanisms to alert prospective property owners about the nearby airport are appropriate.

The noise contours established for the purpose of evaluating the noise compatibility of land use development in the influence area of Jacumba Airport are depicted in Figure 2.6-1, Project Location in Jacumba Airport Influence Area. As required by state law (Public Utilities Code Section 21675[a]), the noise contours reflect the anticipated growth of the airport during at least the next 20 years.

Chapter 3 of the Jacumba ALUCP also provides policies which identify specific characteristics to be avoided on land uses that may cause visual, electronic, or wildlife hazards, particularly bird strikes to aircraft influence areas. For example, sources of glare or dust are characteristics to be avoided.

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

The County Multi-Jurisdictional Hazard Mitigation Plan is implemented by the County of San Diego Office of Emergency Services. The Multi-Jurisdictional Hazard Mitigation Plan is a County-wide plan that identifies risks posed by natural and human-caused disasters and discusses ways to minimize potential damage occurring as a result of these disasters. The comprehensive plan is intended to serve many purposes, including enhancing public understanding and awareness of potential hazardous situations, creating a decision tool for managing hazards, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, providing inter-jurisdictional coordination, and achieving regulatory compliance (County of San Diego 2010b).

Operational Area Emergency Plan

The Operational Area Emergency Plan (County of San Diego 2010c) is a comprehensive emergency plan that defines responsibilities, establishes an emergency organization, defines lines of communications, and is designed to be part of the statewide Standardized Emergency

Management System. The Operational Area Emergency Plan provides guidance for emergency planning and requires subsequent plans to be established by each jurisdiction that has responsibilities in a disaster situation. The Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2010b) includes an overview and discussion of the risk assessment process, hazards present in the jurisdiction, hazard profiles, and vulnerability assessments. The plan also identifies goals, objectives, and actions for each jurisdiction in the County, including all cities and the County's unincorporated areas.

County of San Diego Code of Regulatory Ordinances Sections 68.401–68.406, Defensible Space for Fire Protection Ordinance

This ordinance addresses the accumulation of weeds, rubbish, and other materials on a private property found to create a fire hazard and be injurious to the health, safety, and general welfare of the public. The ordinance constitutes the presence of such weeds, rubbish, and other materials as a public nuisance, which must be abated in accordance with the provisions of this section. This ordinance is enforced in all County Service Areas, and in the unincorporated areas of the County outside of a fire protection district. All fire protection districts have a combustible vegetation abatement program, and many fire protection districts have adopted and enforce the County's ordinance.

County of San Diego Code of Regulatory Ordinances Sections 96.1.005 and 96.1.202, Removal of Fire Hazards

The SDCFA, in partnership with CAL FIRE, the federal Bureau of Land Management, and the U.S. Forest Service, is responsible for the enforcement of defensible space inspections. Inspectors from CAL FIRE are responsible for the initial inspection of properties to ensure an adequate defensible space has been created around structures. If violations of the program requirements are noted, inspectors provide a list of required corrective measures and provide a reasonable time frame to complete the task. If the violations still exist upon reinspection, the local fire inspector will forward a complaint to the County for further enforcement action.

County of San Diego Consolidated Fire Code

The County, in collaboration with the local fire protection districts, created the first Consolidated Fire Code in 2001. The Consolidated Fire Code contains the County and fire protection districts' amendments to the CFC. The purpose of consolidation of the County and local fire districts adoptive ordinances is to promote consistency in the interpretation and enforcement of the fire code for the protection of the public health and safety, which includes permit requirements for the installation, alteration, or repair of new and existing fire protection systems, and penalties for violations of the code. The Code provides the minimum requirements for access, water supply and distribution, construction type, fire protection systems, and vegetation management. Additionally,

the fire code regulates hazardous materials and associated measures to ensure that public health and safety are protected from incidents relating to hazardous substance releases. San Diego County's 2017 Consolidated Fire Code is the most recently adopted version and it contains the County and fire protection districts' amendments to the 2016 CFC.

County of San Diego General Plan

Updated and adopted in August 2011, the County of San Diego General Plan guides future growth in the unincorporated areas of the County and considers projected growth anticipated to occur within various communities. Policies relevant to emergencies, hazards, and hazardous materials are listed below (County of San Diego 2011b, 2011c).

Land Use Element

- ***Policy LU-6.10: Protection from Hazards***. Require that development be located and designed to protect property and residents from the risks of natural and [hu]man-induced hazards.

Safety

- ***Policy S-3.1: Defensible Development.*** Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.
- ***Policy S-3.4: Service Availability***. Plan for development where fire and emergency services are available or planned.
- ***Policy S-3.5: Access Roads.*** Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.
- ***Policy S-11.1: Land Use Location***. Require that land uses involving the storage, transfer, or processing of hazardous materials be located and designed to minimize risk and comply with all applicable hazardous materials regulations.
- ***Policy S-11.3: Hazards Sensitive Uses.*** Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such a schools, hospitals, day care centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or High Impact Industrial areas where incompatibilities would result.
- ***Policy S-11.4: Contaminated Lands.*** Require areas of known or suspected contamination to be assessed prior to reuse. The reuse shall be in a manner that is compatible with the nature of the contamination and subsequent remediation efforts.

- ***Policy S-11.5: Development Adjacent to Agricultural Operations.*** Require development adjacent to existing agricultural operations in Semi-Rural and Rural Lands to adequately buffer agricultural areas and ensure compliance with relevant safety codes where pesticides or other hazardous materials are used.
- ***Policy S-15.3: Hazardous Obstructions within Airport Approach and Departure***. Restrict development of potentially hazardous obstructions or other hazards to flight located within airport approach and departure areas or known flight patterns and discourage uses that may impact airport operations or do not meet Federal or State aviation standards.

Subregional Plans

The Project site is located within the Mountain Empire Subregional Plan and the Jacumba Subregional Group Area Community Plan planning area boundaries. There are no policies relevant to hazards or hazardous materials in the Mountain Empire Subregional Plan or the Jacumba Subregional Group Area vision statement.

2.6.3 Analysis of Proposed Project Effects and Determination as to Significance

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1 of this EIR) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

Direct, indirect, and cumulative impacts pertaining to hazards and hazardous materials are evaluated based on specified thresholds identified in the CEQA Guidelines, Appendix G and in the County of San Diego's Guidelines for Determining Significance, including the following:

- County Guidelines for Determining Significance, Hazardous Materials and Existing Contamination (County of San Diego 2007a)
- County Guidelines for Determining Significance, Airport Hazards (County of San Diego 2007b)
- County Guidelines for Determining Significance and Report Format and Content Requirements, Wildland Fire and Fire Protection (County of San Diego 2010a)
- County Guidelines for Determining Significance, Emergency Response Plans (County of San Diego 2007c)

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted, or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G of the CEQA Guidelines. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

2.6.3.1 Listed Hazardous Sites

For the purposes of this section, the County's Guidelines for Determining Significance, Hazardous Materials and Existing Contamination (Hazardous Materials Guidelines) (County of San Diego 2007a) applies to both the direct impact analysis and the cumulative impact analysis. The County's Guidelines indicate that a project will generally be considered to have a significant effect if:

- The project is located on or within one quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.5 or is otherwise known to have been the subject of a release of hazardous substances, and as a result the project may result in a significant hazard to the public or the environment.
- The project is proposed on or within 1,000 feet of a Formerly Used Defense Site (FUDS) and it has been determined that it is probable that munitions or other hazards are located on site that could represent a significant hazard to the public or the environment.
- The project could result in human or environmental exposure to soils or groundwater that exceed EPA Region 9 PRGs, CalEPA CHHSLs, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or the environment.

Analysis

The Project site is not included in the State of California Hazardous Waste and Substances site list (Appendix G). Five FINDS/FRS sites were identified within approximately 0.02 miles of the Project site: including gas stations, a substation, and an auto repair shop. Thirty-four sites (at 11 unique addresses) within the specified search areas were identified in the state regulatory databases searched by Environmental Risk Information System. Four of the 11 addresses are listed in databases that do not indicate a release to the subsurface has occurred and thus are not considered

to be of concern to the subject property. The remaining seven addresses include sites listed in databases indicating hazards such as LUSTs, CLEANUP SITES, SANDIEGO HAZ, and others. These sites include Woodwards Shell Service, Jacumba Chevron, Jacumba Airport, a Former Chevron Station, Rodfers Auto Repair, Josephine Noltz Property, and Jacumba Burn Dumps I and II site. Based on the review of regulatory agency records, it is unlikely that these off-site sources have impacted the environmental conditions of the Project site (Appendix G).

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. The Jacumba Airport site is listed in the ENVIROSTOR database as a FUDS and is located less than 0.25 miles east of the Project site. As such, the Project site is located within 1,000 feet of a FUDS (Appendix G). However, there is no indication of a release to the environment; therefore, it is not likely that this FUDS site impacted the environmental conditions at the Project site.

Jacumba Chevron, formerly Jacumba Texaco, is located less than 0.25 miles northeast of the Project site. Concentrations of benzene, toluene, ethylbenzene, and MTBE (a blending component of gasoline) in the groundwater exceed their respective MCLs in monitoring wells located within the former LUST area (Appendix G). Remedial investigations and corrective actions were completed on the Jacumba Chevron site between 2003 and 2010. The most recent available groundwater monitoring report indicates groundwater on the Jacumba Chevron site flows in a north-northeastern direction (away from the Project site) (Appendix G). The County closed the LUST case file in 2012, as it was determined the remaining contamination plume migrated vertically, but little lateral migration was noted, and natural degradation of the plume would be protective of human health and the environment. Monitoring wells on the west and southwest portion of the Jacumba Chevron site, nearest to the Project site, showed no detectable concentrations of contaminants of concern in the most recent monitoring event, and historical monitoring of those wells from 2003 to 2010 showed consistently undetected concentrations of concern (with a few minor outliers) (Appendix G). Furthermore, the Jacumba Chevron site is more than 4,300 feet from the nearest groundwater production well on the Project site. Therefore, given the available monitoring data, and the distance to the nearest groundwater production well, it is not expected that contaminated groundwater would be encountered during construction or operation of the Proposed Project. Therefore, impacts from listed hazardous sites would be **less than significant.**

Switchyard

The proposed switchyard would be located within the boundary of the Proposed Project; therefore, the previous analysis for the Proposed Project applies to the switchyard. Thus, the switchyard Proposed Project component would be in proximity to sites identified in regulatory databases for

hazards sites. However, with compliance with existing applicable regulations impacts would be **less than significant**.

2.6.3.2 Landfill Hazards

Guidelines for the Determination of Significance

For the purposes of this section, the County's Guidelines for Determining Significance, Hazardous Materials and Existing Contamination (County of San Diego 2007a) applies to both the direct impact analysis and the cumulative impact analysis. A project would generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it would generally not be considered to have a significant effect related to hazardous substances and existing contamination, absent specific evidence of such an effect:

- The project proposes structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burn sites) and as a result, the project would create a significant hazard to the public or the environment.
- The project is proposed on or within 250 feet of the boundary of a parcel identified as containing burn ash (from the historic burning of trash); and as a result, the project would create a significant hazard to the public or the environment

Analysis

As discussed in Appendix G, the nearest open, abandoned, or closed landfill is the Jacumba Burn Dumps I and II site, which is located at 1000 Old Highway 80, approximately 0.5 miles east of the Project site. The site is listed in the CLEANUP SITES database. The site was a former burn dump. Approximately 8,500 cubic yards of burn debris were taken off the burn dump site in 2010 for disposal at a landfill in Yuma, Arizona. The case was clean closed in 2010. Due to the case status (closed), the complete removal of burn debris from the burn dump site, and distance from the Project site, it is not likely that burn dump impacted the environmental conditions at the Project site. The Project site is not within 1,000 feet of an open, abandoned, or closed landfill; therefore, no impact would occur. The Jacumba Burn Dumps I and II site is also the nearest parcel having the potential of containing burn ash. Therefore, the Proposed Project would not be within 250 feet of a parcel containing burn ash; **no impact** would occur.

Switchyard

The proposed switchyard would be located within the boundary of the Proposed Project; therefore, the previous analysis for the Proposed Project applies to the switchyard. Thus, the switchyard Proposed Project component would not be within 1,000 feet of an open, abandoned, or closed

landfill, nor would it be within 250 feet of a parcel containing burn ash. Therefore, **no impact** would occur.

2.6.3.3 Hazardous Materials

Guidelines for the Determination of Significance

For the purposes of this section, the County's Guidelines for Determining Significance, Hazardous Materials and Existing Contamination (County of San Diego 2007a) applies to both the direct impact analysis and the cumulative impact analysis. A project would generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it would generally not be considered to have a significant effect related to hazardous substances and existing contamination, absent specific evidence of such an effect:

- The project is a business, operation, or facility that proposes to handle hazardous substances in excess of the threshold quantities listed in Chapter 6.95 of the H&SC, generate hazardous waste regulated under Chapter 6.5 of the H&SC, and/or store hazardous substances in underground storage tanks regulated under Chapter 6.7 of the H&SC, and the project will not be able to comply with applicable hazardous substance regulations.
- The project is a business, operation, or facility that would handle regulated substances subject to CalARP risk management plan requirements that in the event of a release could adversely affect children's health due to the presence of a school or day care within one-quarter mile of the facility.

Analysis

During construction, operation and maintenance, and decommissioning of the Proposed Project, hazardous materials, such as petroleum products and maintenance chemicals, would be brought to and used on the Project site. Numerous federal, state, and local regulations exist that require strict adherence to specific guidelines regarding the use, transportation, and disposal of hazardous materials. Regulations that would be required of those transporting, using or disposing of hazardous materials are discussed above and include RCRA, CERCLA, the Hazardous Materials Transportation Act, the International Fire Code, Title 22 and Title 27 of the California Code of Regulations, and the County Consolidated Fire Code. The Project site would include the use and storage of limited quantities of lubricants and cleaners potentially covered under Chapter 6.95 of the H&SC, which would be used to maintain the on-site equipment and facilities. Storage and handling of any materials covered under Chapter 6.95 of the H&SC would be undertaken in accordance with all applicable regulations. In addition, as required by the State Health & Safety Code Section 25501, the Proposed Project would be conditioned to prepare a HMBP. No underground storage tanks are proposed as a part of the Proposed

Project. The Proposed Project would comply with all applicable regulations governing the use of hazardous substances during construction.

PV panels typically contain stable components such as silicon and metal, which would not pose a hazardous materials concern. The silicon in some panels may be infused with trace amounts of chemicals such as boron or phosphorous. However, the small amounts of these chemicals would not pose a hazard in the unlikely event of panel failure and release.

The Proposed Project would include a step-up transformer that would contain approximately 6,000 gallons of mineral oil, which would necessitate an HMBP in accordance with Chapter 6.95 of the H&SC, Division 20 (AB 2185 and AB 2189). The Proposed Project is designed to comply with the requirement of Chapter 6.95 of the H&SC, including containment provisions for potential spills by containing the materials within boxed components and mounting these on concrete foundations.

A battery energy storage system with a maximum capacity of up to 90 MW, 180 MWh, is proposed to be located throughout the Project site adjacent to the inverter/transformer platforms (up to 3 steel containers at each location for a total of 75 containers on site). Each steel container would hold Lithium-ion nanophosphate battery packs on racks throughout a large percentage of the container. The containers are typically made from the 12- to 14-gauge steel, and measure approximately 55 feet long, 19 feet wide, and 10 feet high. Each container would be separated from neighboring containers by approximately 10 feet, as recommended by manufacturers. As required, the battery system would be included in the HMBP in accordance with Chapter 6.95 of the H&SC, Division 20.

The primary hazards associated with Lithium-ion nanophosphate batteries are overheating and fire caused by thermal runaway. Thermal runaway is a temperature-triggered process that produces heat faster than the battery can cool, thus leading to temperature increases that can eventually lead to a fire. The release of the lithium in the Proposed Project's battery packs is unlikely due to the rigorous construction of the packs and regulations such as UL1642, lithium cell safety standards. Lithium-ion nanophosphate batteries include a stable cathode chemistry that substantially reduces the possibility of thermal runaway, and provides for a reduced reaction from any sort of abuse such as short-circuiting, overcharging, introduction of nails, or being crushed. In addition, the proposed battery storage system would include the following monitoring and safety components:

- Modular battery racks designed for monitoring and safety
- Integrated heat and fire detection and suppression system
- Explosive gas monitoring
- Exhaust/ventilation systems
- Integrated air conditioning system

- Integrated battery management system

The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior sprinkler system with several sprinkler heads for coverage and an external dry standpipe for fire fighters to connect and pump water.

Critical information from the battery system, equipment data from the DC:DC converters and inverters would be monitored by the battery monitoring system inside the containers, at the metering at the inverter cabinets and at the SCADA control system. The battery management system within each container would track the performance, voltage and current, and state of charge of the batteries. The system would proactively search for changes in performance that could indicate impending battery cell failure, and power down and isolate those battery strings in order to avoid potential failures. The battery energy storage system would be purchased from vendors who are on track to have their equipment meet the following Underwriters Laboratories (UL) listings: UL 9540, 1741, 1973, 1642, and any other UL standards at the time of the application of the building permit. In addition, the Proposed Project would comply with the National Fire Protection Association's new Standards for the Installation of Energy Storage Systems (NFPA 855) and all applicable standards in place at the time the building permit is issued. These standards provide the requirements for minimizing the hazards associated with the construction, installation, commissioning, operation, and maintenance of battery energy storage systems.

Decommissioning of the solar facility would entail disassembly of the facility components. Most of components could be recycled or reclaimed. Generally, if the panels can no longer be used in a solar array, the aluminum can be resold, and the glass can be recycled. Any hazardous components of the PV panels would be removed and properly disposed of off site prior to recycling. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of offsite, consistent with the County of San Diego Construction Demolition and Debris Management Plan (County Ordinance 68.508–68.518). Impacts associated with closure, decommissioning and recycling of the Project site would be temporary.

The Proposed Project would not include any other on-site storage, use, or transport of hazardous materials as a part of normal operations in quantities equal to or greater than 55 gallons, 500 pounds, or 200 cubic feet of substances classified as hazardous materials. All storage, handling, transport, emission, and disposal of hazardous substances shall be in full compliance with federal, state, and local regulations. California Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the H&SC, Division 20, Chapter 6.95, Article 2, Sections 25500–25520. The Proposed Project would comply

with applicable hazardous substance regulations; therefore, impacts related to operational on-site storage, use, or transport of hazardous materials would be **less than significant**.

Multiple existing structures on the Project site contain potentially hazardous levels of asbestos and/or lead-based paint, as discussed in the asbestos and lead-based paint survey (Appendix H). These structures are proposed to be demolished as part of the Proposed Project. These structures are located within the portion of the Project site previously used for dairy and agricultural operations. Asbestos was also identified in debris piles located on the Project site. The Proposed Project would comply with applicable hazardous substance regulations with respect to the asbestos. In accordance with Cal/OSHA, California Department of Public Health, and San Diego County Air Pollution Control District, the removal of these materials by a certified abatement contractor is required. As such, with the implementation of the existing regulations, impacts regarding hazardous levels of asbestos and/or lead based paint would be less than significant.

Considering the Proposed Project is not located within 0.25 miles of a school or preschool, and would not include the use of a regulated substance subject to CalARP risk management plan requirements (19 CCR, Division 2, Chapter 4.5), the Proposed Project would not exceed the threshold of exposing a school or daycare facility to regulated substances that could adversely affect children's health. Based on the analysis provided, the Proposed Project would comply with applicable hazardous substance regulations and would not adversely affect children's health due to the presence of a school or day care within 0.25 miles of the facility. Therefore, impacts regarding release of hazardous substances within 0.25 miles of a school or preschool would be **less than significant.**

Switchyard

As discussed above, the switchyard component of the Proposed Project would comply with hazardous substance regulations and would not expose persons to hazardous materials. Further, the switchyard site is not located within 0.25 miles of a school or preschool. Impacts relative to hazardous materials as they pertain to the switchyard would be **less than significant**.

2.6.3.4 Airport Hazards

Guidelines for the Determination of Significance

Pursuant with Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would:

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

Additionally, as stated in the County's Guidelines for Determining Significance – Airport Hazards (County of San Diego 2007b) applies to the direct and indirect impact analysis, as well as the cumulative impact analysis.

A significant impact would result if:

- The project is located within an established AIA for a public airport or public use airport and proposes a development intensity, flight obstruction, or other land use that conflicts with the ALUCP or CLUP (if no ALUCP is adopted) and as a result, the project may result in a significant airport hazard.
- Conflicts with FAA Regulations: The proposed project is determined by the FAA to constitute a hazard to aviation based on FAA review of Form 7460-1, is inconsistent with current FAA Heliport Design Criteria for Heliports not subject to an ALUCP or CLUP, or conflicts with FAA rules or regulations related to airport hazards and as a result, the project may result in a significant airport hazard.

Analysis

As discussed above, the Jacumba Airport is located immediately to the east of the southern portion of the Project site. The airport is unattended and unlighted and is mainly used as a glider facility by single-engine aircraft and sailplanes, with activity predominately occurring during weekends in non-summer months. Most of the Project site is located within Jacumba AIA. According to the Jacumba ALUCP, a portion of the Project site is located within Review Area 1, which consists of locations subject to noise and safety concerns. More specifically, the southern portion of the site, located to the west of the Jacumba Airport, is located within noise CNEL zones 50 dBA and 55 dBA, and safety Zones 2, 4, and 5 (County of San Diego 2011a). A portion of the Project site is also located within Review Area 2, which is not located within the noise and safety concerns zones. The remainder of the Project site, which includes the northeastern portion of the site adjacent to I-8, is outside the review areas.

Review Area 1 encompasses six designated safety zones and the 50 dB CNEL noise contour. Specifically, Review Area 1 contains both the 50 dB CNEL noise contours and all of the safety zones. Within Review Area 1, all types of land use actions are to be submitted to the ALUC for review to the extent review is required by law.

All development in Safety Zones 2 and 4 must adhere to maximum lot coverage requirements in Table JAC-2, with all structures counted toward coverage. Table JAC-2 compares the land use to the Safety Zone to determine if the use is incompatible, conditional, or compatible with the airport use. If a use is conditional or compatible, it is allowed with a maximum 50% lot coverage in Zone 2 and 70% lot coverage in Zone 4. Solar panel energy production is not specifically addressed in Table JAC-2, but it

is most similar to the utility use "cell phone tower, wind turbines," which is marked compatible in Table JAC-2 and allowed with 50% and 70% lot coverage in Zones 2 and 4, respectively.

Lot coverage is not defined in the ALUCP or in the California Airport Land Use Planning Handbook. The County's Zoning Ordinance defines lot coverage as "the percentage of net site area covered by the vertical projection of any structure excluding any structure not extending above grade." Under this definitions, the area between each solar panel is not included as lot coverage because the ground is openly exposed to the sky and there is no vertical projection above grade.

The Project site is 1240 acres, with 33.81 acres in Zone 2 and 87.95 acres in Zone 4.

Of the 33.81 acres in Zone 2, the County believes 8.45 to 15.21 acres are covered, which is 25% to 45%. If the County measured the general area in which solar panels are grouped together, including the uncovered area between the individual panels, the lot coverage would be approximately 30 acres, or 88%. But as described above, the County determined lot coverage by measuring the actual coverage from each individual solar panel at its widest part and excluding the uncovered area between them from the coverage total. Using that methodology, the lot coverage is between 8.45 to 15.21 acres, or 25% to 45%.

Of the 87.95 acres in Zone 4, approximately 22 acres to 39.58 are covered, which is 25% to 45%. If the County measured the general area in which solar panels are grouped together, including the uncovered area between the individual panels, the lot coverage would be approximately 73 acres, or 83%. But as described above, the County determined lot coverage by measuring the actual coverage from each individual solar panel and excluding the uncovered area between them from the coverage total. Using that methodology, the lot coverage is approximately 22 to 39.58 acres, or 25% to 45%.

Because the lot coverage in Zone 2 is between 25% to 50% (which is less than 50%), and because the lot coverage in Zone 4 is 25% to 45% (which is less than 70%), the Proposed Project's lot coverage is consistent with the ALUCP.

Project sites 10 acres or greater must provide at least one area of open land (0.5 acres) per 10 acres. Open land is intended to allow light aircraft to have controlled emergency landings, and an area qualifies as "open land" if it meets the following requirements: free of most structures and obstacles such as walls, large trees or poles, and overhead wires; minimum dimensions of 75 x 300 feet; oriented in the typical direction of flights. Roads are acceptable as open land if they meet the above criteria.

As noted above, the Project site impacts 121.95 acres within Safety Zone 2 and 4, and it requires 6.1 acres to satisfy the open land criteria. That total provided is 8.8 acres, which satisfies the requirement for 0.5 acre of open land per 10 acres of the Project site.

Review Area 2 is concerned with height of developments based on the "conical surface," which is the elevations at which aircraft navigate in proximity to the airport. The Proposed Project structures would be below the conical surface for the Jacumba Airport and would not represent an incompatible use. Within Review Area 2, objects would require review if they exceed 200 feet in height, or exceed an imaginary surface extending outward and upward at a slope of either 100:1 for a horizontal distance of 20,000 feet, 50:1 for a horizontal distance of 10,000 feet, 25:1 for a horizontal distance of 5,000 feet. The Proposed Project would not include any object or structure exceeding 200 feet above ground surface. The Proposed Project would include up to 5 poles 70 feet to 115 feet in height; however these poles are located approximately 0.87 miles from the Jacumba Airport. Incompatible uses are defined in the ALUCP and include those uses creating visual or electrical distractions such as bright lights or those that may look like runway lights or uses that may attract birds or other wildlife hazardous to aircraft.

Federal Aviation Regulations (FAR) Part 77 deals with objects affecting navigable airspace in the vicinity of airports. Objects that exceed the Part 77 height limits constitute airspace obstructions. The Proposed Project would not exceed the height limits established in Part 77 Subsection C, because the PV module arrays' final elevations from the ground would be determined during the detailed Proposed Project design process; however, for the purpose of the analysis in this EIR, maximum height above the graded ground surface would be 12 feet.

The Proposed Project would have the potential to be considered an Other Flight Hazard, due to the potential for glare and glint from the PV panels and its proximity to the Jacumba Airport. Therefore, the Proposed Project would be required to notify the FAA of certain proposed construction and alteration. A notification is required at least 45 days prior to the start of construction; however, notification provided as early as possible in the planning stage is desired to identify potential conflicts and minimize adverse impacts to aviation safety. Notification to the FAA is typically provided by Form 7460-1, Notice of Proposed Construction or Alteration (County of San Diego 2007b).

While the FAA Solar Guide focuses on the design considerations and application of solar panels at airport sites, there is some guidance pertaining to reflectivity of solar technology that may apply. However, as previously stated in Section 2.6.2, Regulatory Setting, the FAA cautions users against relying on the reflectivity section as the FAA is reviewing it based on new information and field experience (FAA 2018). It should also be noted that pursuant to the Code of Federal Regulations, Section 91.119 of the General Operating and Flight Rules, aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure except when necessary for takeoff or landing (14 CFR 91.119).

A Glare Study was prepared by POWER Engineers in 2018 for the Proposed Project (see Appendix A to Appendix B, Visual Resources Report). The Proposed Project may result in brief periods of

glare potential immediately west of the facility shortly after sunrise and immediately east of the facility shortly before sunset at specific times of the year. The solar facility would be directed southward toward the sun and include PV technology that is designed to maximize absorption and avoid reflectivity of solar light to realize the greatest potential conversion to electricity. The proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. Potential glare visible from the proposed solar operations would be limited to the Jacumba Airport Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than one hour per day. During the morning hours, the modified wake angle of arrays south of Old Highway 80 would redirect any potential glare up and out of the view of pilots landing on the Runway 7 approach. The exposure of pilot's Proposed-Project-generated glare on the westbound approach to the Jacumba Airport Runway 7 to would be limited throughout the year and would be within the range deemed acceptable by the FAA (i.e., "green" hazard level). Based on the analysis in the Glare Study (Appendix A to Appendix B, Visual Resources Report), the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, Proposed-Project-generated glare impacts would be less than significant.

The low glare of the proposed solar facility combined with the orientation of the PV panels to the south, away from approaching aviation users, would ensure that the Proposed Project would not cause a significant impact to aircraft as a result of glare. Further, the Proposed Project would comply with FAA regulations, including requiring the Proposed Project to notify the FAA through Form 7460-1. As such, the Proposed Project's impacts on airports or air traffic in the area would be **less than significant.**

As further discussed in the Acoustical Assessment Report (Appendix M) according to the Jacumba ALUCP, the Project site partially lies within the 50–55 dB CNEL and 55–60 dB CNEL calculated noise contours (County of San Diego 2011a). The Jacumba Airport is within 1,000 feet of the southeastern boundary of the Proposed Project; however, the average aircraft operations frequency of 34 flights per week (AirNav.com 2020) among which only 80% are single-engine powered flight (County of San Diego 2011a), suggests that aviation noise is infrequent. The Jacumba ALUCP indicates that aviation noise is less than 50 dBA CNEL east of parcels APN 660-15-005 and APN 660-15-006 that abut Old Highway 80 and are approximately 1,330 feet west-northwest of the airport's western property boundary (County of San Diego 2011a). At this magnitude, which is comparable to multiple daytime samples of outdoor ambient sound levels in the vicinity of the Proposed Project, aviation noise exposure to Proposed Project construction workers would not be considered significant. In addition, the Proposed Project would be operated remotely; therefore, the amount of on-site workers would be limited to maintenance workers who would only visit the Project site periodically. This would limit the potential exposure maintenance workers would have

to airport noise. In addition, during the construction period and when routine maintenance is being performed, the Jacumba Airport is unattended and is mainly used as a glider facility by single-engine aircraft and sailplanes, with activity predominately occurring during weekends in non-summer months; therefore, the Proposed Project would not result excessive noise for people residing or working in the Project area due to the proximity to the Jacumba Airport. Therefore, impacts would be **less than significant**.

Switchyard

The Jacumba Airport is located 0.9 miles south of the switchyard site. At this distance, the magnitude of aviation noise exposure to construction workers would be comparable to multiple daytime samples of outdoor ambient sound levels in the vicinity of the switchyard and would not be considered significant. In addition, the switchyard would be operated remotely; therefore, the amount of on-site workers would be limited to maintenance workers who would only visit the switchyard site periodically. This would limit the potential exposure maintenance workers would have to airport noise. This Proposed Project component would also not exceed the Part 77 height limits, as the tallest structure on site would be within the switchyard and would have maximum height of 115 feet; therefore, the switchyard component would not constitute an airspace obstruction. The switchyard would consist of circuit breakers, overhead electrical bus work, switches and controls, and a control enclosure none of which would produce glare in the proximity of Jacumba Airport; therefore, this component would not have the potential to be considered an Other Flight Hazard. In addition, the switchyard would be an un-staffed facility. As such, the switchyard component of the Proposed Project would have less than significant impacts on airports or air traffic in the area.

2.6.3.5 Hazards Associated with Interference with Emergency Responses

Guidelines for the Determination of Significance

Pursuant to Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Additionally, the County's Guidelines for Determining Significance for Emergency Response Plans (County of San Diego 2007c), Airport Hazards (County of San Diego 2007b), and Guidelines for Determining Significance and Report Format and Content Requirements for Wildland Fire and Fire Protection (County of San Diego 2010a) apply to the direct and indirect impact analysis, as well as the cumulative impact analysis. An affirmative response to, or confirmation of, any one of the following guidelines, will generally be considered a significant impact related to emergency responses as a result of a project, in the absence of evidence to the contrary:

- The project does not meet the emergency response objectives identified in the Safety Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.
- The project proposes a structure or tower 100 feet or greater in height on a peak or other location where no structures or towers of similar height already exist and as a result, the project could cause hazards to emergency response aircraft resulting in interference with the implementation of an emergency response.
- The project would substantially impact an adopted emergency response plan or emergency evacuation plan.

Analysis

Adopted Plans

To better establish Mutual Aid capabilities and improve communications between jurisdictions and agencies, as well as assist the County and cities in developing emergency plans and exercising those plans, the San Diego County Operational Area (OA) was formed. The OA Emergency Operations Plan (EOP) is used by the County and all of the cities within the San Diego County to respond to major emergencies and disasters, including wildfire. The OA EOP describes the roles and responsibilities of all departments and the relationship between the County and its departments and the jurisdictions within the County. The OA EOP has been adopted and is complete with 16 functional annexes, including an Evacuation Annex (Annex Q). The OA Evacuation Annex is intended to be used as a template for the development of other jurisdictional evacuation plans and describes how emergencies are managed and how the evacuation of residents and their pets are implemented. The OA Evacuation Annex outlines strategies, procedures, recommendations, and organizational structures that can be used to implement a coordinated evacuation effort in the OA, as described in the County's Operational Area Emergency Operations Plan (County of San Diego 2018).

In addition, the County has contracted with an independent fire operations consulting firm (Rohde and Associates) which has been preparing regional Wildland Urban Interface emergency response plans for certain areas in the County to encapsulate the County's pre-fire planning for wildfire emergencies. However, a Wildland Urban Interface plan has not been prepared for the Jacumba area. Thus, there is no adopted plan specific to the Project area.

The Proposed Project is an unmanned solar energy generation and storage facility; therefore, the Project would not result in increased population or housing in the Project area. During operations, there would at times be a minimum number of workers (up to five workers) for maintenance activities as needed. Therefore, during operations the Project would not increase the number of people and vehicles needing to evacuate the area during a wildfire emergency.

During construction of the Project there would be up to 500 workers on site. The construction period is anticipated to last up to 13 months. Thus, the construction period would include the highest daily on-site population and potential for additional vehicles. The addition of up to 500 vehicles in the area during construction would increase the number of vehicles evacuating the Jacumba community area during this period. During decommissioning, it is anticipated up to 250 workers would be onsite.

Measures to reduce fire risk during the construction period are included in the Construction Fire Protection Plan (CFPP), which is Appendix A of the Project's FPP (Appendix N of the Draft EIR). Informing on-site workers of their evacuation alternatives and that the route to the east to Carrizo Gorge Road will be the priority and preferred route unless it is compromised. Within the Project site, evacuation routes shall be maintained and free of obstructions. Unavoidable evacuation route blockages within the Project site shall be coordinated such that a secondary route is identified and available.

In addition, emergency response agencies managing wildfire evacuations know that wildfires are fluid events and San Diego County has developed a sophisticated approach to tracking and predicting wildfire spread and behavior with corresponding technology to phase evacuation notifications of down-wind communities. Situation awareness during a wildfire is important and the combined resources available to emergency managers are robust, providing these agencies with appropriate and essential evacuation control, which can evolve and include mid-evacuation changes.

The Proposed Project would not conflict with an adopted emergency response plan or evacuation plan; thus, there would be **no impact** to an adopted plan. Further, the Proposed Project would be an unmanned facility and the increase in up to 500 workers and vehicles on site would be temporary during the construction period.

Emergency Response

An increase in demand for fire protection and emergency services would occur at the Project Site due to increased activity during construction and decommissioning leading to higher amounts of fuel on the site, and a greater number of ignition sources on the site, including equipment and human activities. In addition, during operations and maintenance, the Proposed Project would introduce potential ignition sources that do not currently exist on the Project site.

The County's General Plan requires that fire protection services be provided that meet the minimum travel time standards identified in Table S-1 of the Safety Element (Policy S-6-4). The travel time standards are based on the Regional Category and/or land use designations. The Project site has a Regional Category of Rural Village and the vast majority of the acreage within the proposed development footprint (approximately 627 acres) is designated as Specific Plan.

Based on these land use categories, the travel time standard from the closest fire station is 10 minutes. The Jacumba Fire Station 43 is approximately 3.6 miles from the most remote areas of the proposed development footprint with a calculated travel time of less than 6.8 minutes.[2] Therefore, the Proposed Project would comply with the County General Plan for the travel time from the closest fire station (Dudek 2019a). In addition, the Proposed Project would also have additional fire protection services from the Boulevard Fire Station that is located approximately 10.6 miles to the most remote portion of the Proposed Project site with a calculated travel time of approximately 18.7 minutes. In addition to these responding fire stations, there are resources available through automatic or mutual aid agreements. Thus, the Project meets the General Plan travel time standards.

Once operational, the Proposed Project would have access driveways, a perimeter drive and interior driveways within the solar facility. Access to the solar facility from Carrizo Gorge Road and Old Highway 80 would be established through construction of six driveways that would be located at the following five locations:

- Access 1 – Full access driveway along Carrizo Gorge Road (east leg), approximately 1,000 feet southeast of the I-8 interchange;
- Access 2 – Full access driveway along Carrizo Gorge Road (west leg), approximately 1,450 feet southeast of the I-8 interchange;
- Access 3 – Full access driveway along Carrizo Gorge Road (east leg), approximately 2,100 feet southeast of the I-8 interchange;
- Access 4 – Full access driveway along Carrizo Gorge Road (west leg), approximately 2,800 feet southeast of the I-8 interchange; and
- Access 5 – Full access driveway along Old Highway 80 (north and south leg), approximately 1,200 feet east of Campo Street.

These access driveways would be paved, would be a minimum of 24 feet in width, and would be fully accessible to emergency services via a Knox Box placed at each access driveway. The Project does not propose any to changes to the design of Carrizo Gorge Road or Old Highway 80.

Within the fenced solar facility, the perimeter access driveway would be constructed to a minimum improved width of approximately 24 feet. The interior access would be constructed to a minimum improved width of 20 feet. All access would be arranged to provide a minimum inner turning

[2] Travel distances were derived from Google Earth road data and driving on the access roads to fire stations from Proposed Project site while travel times were calculated applying the nationally recognized Insurance Services Office (ISO) Public Protection Classification Program's Response Time Standard formula (T=0.65 + 1.7 D, where T= time and D = distance). The ISO response travel time formula discounts speed for intersections, vehicle deceleration and acceleration, and does not include turnout time.

radius of 28-feet, would be graded and maintained to support the imposed loads of a fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather driving capabilities. Minimum vertical clearance of 13 feet 6 inches from the driving surface shall be maintained for the interior access. Thus, the Project has been designed to allow ease of access for emergency responders both externally and internally.

The Project would also implement a project design feature (**PDF-TR-1**) that would require the preparation of the County-required traffic control plan during Project construction and decommissioning. **PDF-TR-1** would provide safe and efficient traffic flow in the Project area and on-site during construction and decommissioning activities, which would also ensure safe access to the site and surrounding properties by emergency responders.

During the operations phase of the Proposed Project, no full-time personnel would be working on site, but the site may include up to five people at a time as needed for inspections, maintenance, and repair activities. The Proposed Project is estimated to add fewer than 0.2 calls per year to Jacumba Fire Station 43 and the co-located CAL FIRE and County Boulevard Fire Station 47 during operation of the Proposed Project facilities (Appendix N).

During the construction phase, which would occur over approximately 13 months, there would be up to 500 people on the Project site on any given day. The short duration of the construction phase in comparison to the longer-term operational period is considered not significant in terms of its overall increase in annual calls. For example, assuming 500 people are on site every day for 12 months, this on-site population would be expected to result in up to 35 emergency calls, or 0.1 calls per day. Because construction would not occur during the nighttime hours, there would not be workers on site for 12 hours of the day, reducing the potential calls to 0.05 calls per day. Neither of these call volume increases would substantially impact the capabilities of the responding fire stations. The addition of 0.05 calls for a short duration or 0.2 calls per year long term to rural fire stations that currently respond to approximately one call per day is not considered significant and would not require the construction of additional Fire Station facilities based on that increase alone.

During decommissioning, up to 250 workers would be on site during the 10-month decommissioning period. This temporary impact on emergency response would be less than during the construction period.

For the reasons stated above, impacts to the emergency response objectives identified in the Public Facilities Element of the County General Plan as a result of the Proposed Project would be **less than significant**.

Hazards to Emergency Response Aircraft

The tallest structure on the Project site would be a 138-kilovolt (kV) 1,860-foot-long overhead transmission line (gen-tie) on five transmission poles that would have a maximum height of 70 to 115 feet. These poles would be located in the switchyard site, which is located immediately south of the existing east-west transmission corridor that crosses the northern area of the Project site. Existing transmission infrastructure installed within the corridor includes two 500 kV transmission lines (i.e., Southwest Powerlink and Sunrise Powerlink) that are each supported by a number of steel lattice towers that are approximately 150 feet tall. An additional high-voltage transmission line, the East County Substation 138 kV transmission line, is also supported by tall steel poles and parallels the 500 kV transmission lines. The Proposed Project would include five poles that may be 100 feet or greater in height, but they would be located along the existing transmission corridor that already has existing infrastructure that is of similar height (up to 150 feet high). Therefore, the poles would not be located on a peak, ridgeline other location where no structures or towers of similar height already exist. Thus, the Proposed Project would not result in hazards to emergency response aircraft resulting in interference with the implementation of an emergency response. Impacts would be **less than significant**.

Switchyard

The switchyard component of the Proposed Project is located adjacent to the on-site collector substation and would be an un-staffed facility, except in cases of maintenance and repair activities. The switchyard site has a Regional Category of Rural Village and is designated as Specific Plan. Based on these land use categories, the travel time standard from the closest fire station is 10 minutes. The Jacumba Fire Station 43 is approximately 1.5 miles from the switchyard site and would require a travel time of approximately 5 minutes. Therefore, the switchyard would comply with the County General Plan for the travel time from the closest fire station (Dudek 2019a). In addition, the Proposed Project would also have additional fire protection services from the Boulevard Fire Station that is located approximately 8 miles from the switchyard site with a calculated travel time of approximately 16 minutes. In addition to these responding fire stations, there are resources available through automatic or mutual aid agreements.

Construction of the switchyard would be subject to the Traffic Control Plan, and when fully operational, the switchyard would include an approximately 1,450-foot long asphalt paved access driveway from Carrizo Gorge Road to the switchyard. The access driveway would be approximately 30-feet-wide, requiring approximately 1.2 acres of land in new right-of-way and 0.3 acres of land on existing SDG&E right-of-way. The access road would be fully accessible to emergency services via a Knox Box. Thus, the Project has been designed to have ease of access by emergency responders.

During construction of the switchyard, up to 41 people may be on the site at one time, and during the operations and maintenance of the switchyard, no full-time personnel are proposed to be located on

site except for periodic visits from up to four workers at a time during operations inspections, maintenance, and repair activities. Thus, the amount of calls the switchyard would add per year to the Jacumba Fire Station 43 and the co-located CAL FIRE and County Boulevard Fire Station 47 during construction and operation of the switchyard facilities would not be substantial.

Therefore, impacts to the emergency response objectives identified in the Public Facilities Element of the County General Plan would be **less than significant**.

Because there are no officially adopted evacuation plans for the area, impacts to an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

The tallest structure on the switchyard site would be a 138 kV 1,860-foot-long overhead transmission line (gen-tie) on five transmission poles that would have a maximum height of 70 to 115 feet. These poles would be located on the switchyard site immediately south of the existing east-west transmission corridor. Existing transmission infrastructure installed within the corridor includes two 500 kV transmission lines (i.e., Southwest Powerlink and Sunrise Powerlink) that are each supported by a number of high steel lattice towers that are approximately 150 feet tall. An additional high-voltage transmission line, the East County Substation 138 kV transmission line, is also supported by tall steel poles and parallels the 500 kV transmission lines. The switchyard would include five poles that may be 100 feet or greater in height, but they would be located along the existing transmission corridor that already has existing infrastructure that is of similar height (up to 150 feet high). Therefore, the poles would not be located on a peak, ridgeline, or other location where no structures or towers of similar height already exist. Thus, the switchyard would not result in hazards to emergency response aircraft resulting in interference with the implementation of an emergency response plan. Impacts would be **less than significant**.

2.6.3.6 Demolition of Hazardous Material-Containing Structures

Guidelines for the Determination of Significance

For the purposes of this EIR, the County's Guidelines for Determining Significance, Hazardous Materials and Existing Contamination (County of San Diego 2007a) applies to both the direct impact analysis and the cumulative impact analysis. A project would generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it would generally not be considered to have a significant effect related to hazardous substances and existing contamination, absent specific evidence of such an effect:

- The project will involve the demolition of commercial, industrial or residential structures that may contain ACM, lead-based paint and/or other hazardous building materials and as a result, the project would represent a significant hazard to the public or the environment.

Analysis

The Proposed Project includes demolition of existing structures on the Project site. These structures are associated with prior dairy and agricultural operations. The structures are located within one parcel (APN 661-060-12) within the Project site.

An Asbestos Building Inspection and Lead-Based Paint Testing was prepared by Aurora Industrial Hygiene for the subject parcel (Appendix H). The intent of the report is to provide an understanding of the potential hazards that the property may pose to human health due to ACMs and lead-based paint. Site visits to the property were conducted in 2018. The report documents the findings from asbestos bulk sampling and X-ray fluorescence instrumentation to determine if lead-based paint was present on building components. The report identifies various structures which contained asbestos and/or lead-based paint.

In accordance with CalOSHA, California Department of Public Health, and San Diego County Air Pollution Control District the removal of these materials by a certified abatement contractor is required. Removal of these materials in accordance with requirements would reduce potential impacts below levels of significance. Therefore, impacts related to hazardous materials as a result of demolition of on-site structures would be **less than significant**.

2.6.3.7 Wildland Fire Hazards

Guidelines for the Determination of Significance

Pursuant with Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The County's Guidelines for Determining Significance and Report Format and Content Requirements, Wildland Fire and Fire Protection are analyzed in Section 2.12 of this EIR.

Analysis

During construction, operation, and decommissioning of the Proposed Project, there would be increased human activity and ignition sources at the Project site, including equipment that could create a spark or be a source of heat.

Operation and Maintenance

During operations and maintenance, the Proposed Project would introduce potential ignition sources that do not currently exist on the Project site. With these additional ignition sources, the risk of wildfire would be increased. The lack of steep terrain within the development footprint is beneficial and results in reduced fire intensity and slower fire spread rates. However, Santa Ana wind events have the potential to increase fire spread rates and these weather periods will be a focused fire prevention period whenever they occur, subject to onsite activity limitations that reduce the potential for accidental ignitions. Potential causes of wildfire associated with operations and maintenance of the Proposed Project include:

- Explosion/Arcs, arc flashing, electrical shorts, sparking, motor or other machinery fire, wiring and harnessing fire, overheated junction boxes, rodents chewing on wires and causing arcing, etc.
- Switchyard
- Employee and maintenance vehicles
- Collapse of supporting structures causing electrical shorts and fire
- Overgrown vegetative fuel under and around the array – the Project would minimize this potential fire hazard by managing its fuels
- Unauthorized equipment and supplies stored under arrays for shading – the Project would restrict storage under arrays
- Fire in an inverter
- Short circuit and fire of components in or on a panel
- Potential for sun reflection from panels igniting vegetation
- Illegal target practice or other vandalism or arson in a rural area
- Switchgear and cable fire

Fire risk associated with Proposed Project operations may result from the addition of new electrical equipment on site. Equipment such as the collector substation, switchyard, battery energy storage system, and other solar facility related infrastructure would be implemented for the Proposed Project. The Proposed Project facilities have been designed to minimize the risk of fire hazard as much as feasible as described below.

Battery Energy Storage System Design

Potential hazards associated with battery energy storage systems are primarily associated with the possibility of thermal runaway (similar to overheating) occurring from a malfunctioning or damaged battery. Newer battery technologies have minimized the occurrence of thermal runaway through a system of protections including internal cell monitoring and partitioning; use of non-flammable chemicals; container design and features; ventilation, and air-conditioning systems; and inert gas fire suppression systems.

The Proposed Project's battery energy storage system would have a maximum capacity of up to 90 MW, 180 MWh and would to be located throughout the proposed solar facility. The battery energy system would include a total of up to 75 containers distributed at 25 locations within the solar facility (three containers at each location adjacent to inverter/transformer platforms). Figure 1-2 shows the location of the containers within the proposed solar facility. The battery system would be DC coupled with the PV system, connecting electrically at the DC bus of the inverters. The same inverters, transformers, medium voltage equipment, and AC wiring would all serve both the battery energy storage system and the PV system.

The Project proposes the use of customized steel containers to store banks of Lithium-ion batteries, which will enable on-site storage of solar energy produced by the Project. There are various types of Lithium-ion batteries available for use in this application. The specific battery type proposed for the Project is a Lithium-ion nanophosphate cell. Available data indicates that this particular type of Lithium-ion battery has proven to be less vulnerable to fire occurrences than typical Lithium-ion batteries. Lithium-ion nanophosphate batteries include a stable cathode chemistry that substantially reduces the possibility of thermal runaway and provides for reduced reaction from abuse (Sandia National Laboratories 2012).

The Proposed Project's battery storage would also include multiple levels of protections against overcharge. All battery components would be contained within an enclosed structure, avoiding contact with ignition sources and would not include liquids that could spill. The Project's steel containers would each hold Lithium-ion nanophosphate battery packs on racks throughout a large percentage of the container. Each container would have underground wiring connecting it to a 600 kW skid mounted DC:DC converter, which would bring the voltage from the strings of batteries in the containers up to match the voltage of the PV energy entering into the inverter's DC bus. The containers are typically made from the 12 to 14-gauge steel in shipping containers that measure approximately 55-feet-long, 19-feet-wide, and 10-feet-high. Each container would be separated from neighboring containers by approximately ten feet.

The proposed batteries and containers would also include the following important monitoring and safety components:

- Modular battery racks designed for ease of maintenance
- Integrated heat and fire detection and suppression system
- Integrated air conditioning system
- Integrated battery management system

The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior sprinkler system with several sprinkler heads for coverage and an external dry standpipe for fire fighters to connect and pump water.

Critical information from the battery system, equipment data from the DC:DC converters and inverters would be monitored by the battery monitoring system inside the containers, at the LV (1500V) metering at the inverter cabinets and at the power plant controller measured along with the solar plant performance with the Supervisory Control and Data Acquisition control system. The battery management system would track the performance, voltage and current, and state of charge of the batteries, proactively searching for changes in performance that could indicate impending battery cell failure. If an event is identified, the system powers down and isolates those battery strings in order to avoid potential failures and fire risks. If a fire event does occur, the battery energy storage system would activate its fire suppression system. The batteries would be located in a manner to avoid contact with other flammable sources; therefore, the most efficient way to control any fire would be to let it burn in place. Therefore, the battery energy storage system has been designed to minimize the risks of starting a fire.

Site Access

Site access driveways are necessary for the Proposed Project's development, but would also facilitate access by fire agencies. Access to the site has been designed per the County Fire Code. All Project site entrances off Old Highway 80 would be 24 feet wide and paved, and the access road to the switchyard site off Carrizo Gorge Road would be 30 feet wide and paved. The perimeter vehicle access within the fenced area would be constructed as suitable for fire access roads and would be constructed to a minimum width of approximately 24 feet. The interior on-site vehicle access would be constructed to a minimum improved width of 20 feet. All on-site vehicle access would be designed to provide a minimum inner turning radius of 28-feet, would be graded and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather driving capabilities. The purpose of the internal access is to allow for two-way access of fire apparatus throughout the solar facility in order to

reach all of the inverter/transformer platforms and battery storage containers. The non-load-bearing surface material of the fire access roads would consist of an all-weather surface capable of supporting 75,000 pounds as required by County Fire Code. An access-controlled gate with a Knox Box would be installed at all access driveways to allow ease of access for fire authorizes.

Defensible Space and Fuel Management

Targeted fire prevention measures would be implemented within the solar facility to reduce the potential for ignitions, and defensible space and fuel management would be provided. For example, the perimeter of the solar facility would be fenced and all vegetation within the fenceline would be managed to reduce fire risk, substantially reducing the fuels available to be ignited within the fenced facility. The Proposed Project would provide defensible space by setting back all PV modules a minimum of 30 feet from the solar facility's perimeter fence. The perimeter Fuel Modification Zone (FMZ) buffer would include at least 30 feet of modified fuels and the perimeter fire access. Fuels throughout the solar facility would be maintained to a six-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the collector substation pad area and 100 feet surrounding the adjacent switchyard.

After construction of the Proposed Project, fires from off-site sources would not have continuous fuels across the solar facility and would therefore be expected to burn around and/or over the site via spotting. Burning vegetation embers may land on Project structures, but are not likely to result in ignition based on ember decay rates and the types of non-combustible and ignition resistant materials that would be used on site. Ignition resistant materials of glass, steel, aluminum and decomposed granite would provide resistance to ignitions from embers. Understory fuels would be maintained at roughly six inches, so ignitions in the ground cover from embers would produce a fast moving, but low intensity fire through the highly compartmentalized fuel modification areas beneath the PV modules. Further, six 10-gallon water storage tanks with fire department connections would be provided on site, with one tank at each entrance and one tank near the substation.

While the Proposed Project has been designed to minimize the risk of fire hazards to the extent feasible and will have minimal occupation during operation, the Project does propose new electrical equipment that could exacerbate wildfire risks and thereby expose project occupants to a risk of loss, injury or death involving wildland fires. Therefore, the Proposed Project's operational-related impacts are considered **potentially significant (Impact HAZ-1)**.

Construction and Decommissioning

An increase in the risk of wildland fire on the Project site would occur during construction and decommissioning when there is the largest amount of fuel on the site and increased activity

combined with a greater number of ignition sources on the site. Potential ignition sources during construction and decommissioning related activities include the following:

- Earth-moving equipment – create sparks, heat sources, fuel or hydraulic leaks, etc.
- Chainsaws – may result in vegetation ignition from overheating, spark, fuel leak, etc. Chainsaws should be fueled and maintained only in areas away from combustible fuels.
- Vehicles – heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders – open heat source may result in metallic spark coming into contact with vegetation
- Wood chippers – include flammable fuels and hydraulic fluid that may overheat and spray onto vegetation with a hose failure
- Compost piles – large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders – sparks from grinding metal components may land on a receptive fuel bed
- Torches – heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- Other human-caused accidental ignitions – ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others.

All Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line that would be owned and operated by SDG&E. All decommissioning would occur within the development footprint and disturbance limits of the Proposed Project. The aboveground (detachable) equipment and structures would be disassembled and removed from the site. Detachable elements include all PV modules and support structures, battery storage units, inverters, transformers, and associated controllers. Removal of the fencing, substation, and aboveground conductors on the transmission facilities would also be implemented. Similar to construction of the Proposed Project, during decommissioning of the Project, there would be increased human activity and ignition sources, including equipment that could create spark, be a source of heat, or leak flammable materials on the Project Site.

Thus, impacts exposing project occupants to potential risk of loss, injury or death involving wildland fires during construction and decommissioning of the Proposed Project would be **potentially significant (Impact HAZ-2).**

Switchyard

The switchyard component of the Proposed Project is located adjacent to the on-site collector substation and would be an un-staffed facility, except in cases of maintenance and repair activities. At the end of the construction phase, the operation and maintenance of the switchyard would be transferred to SDG&E, where the switchyard would be subject to fire prevention measures consistent with SDG&E. In addition, a robust fire prevention program that focuses on minimizing the potential for fire ignitions would be followed.

While the switchyard operation would be designed to minimize the risk of wildfire to the extent feasible, the amount of electrical equipment that would be present of the site would be increased as compared to existing conditions. Therefore, the operational impacts to expose project occupants to risk of loss, injury or death involving wildland fires would be **potentially significant (Impact HAZ-1**) during the switchyard's operation. In addition, during the switchyard's construction, the amount of ignition sources on the switchyard site would be increased and impacts exposing project occupants to risk of loss, injury or death involving wildland fires would be **potentially significant (Impact HAZ-2)**.

2.6.4 Cumulative Impact Analysis

The cumulative study area for potential contamination impacts is limited to the areas immediately surrounding the Project site (approximately a 1,000-foot buffer); however, regarding the transport, storage, and use of hazardous materials, the cumulative study area would be all of rural southern San Diego. For airport hazards the cumulative study area would be the general region and would include any other project that has the potential to impede flight paths, restrict emergency response via aircraft, or interfere with navigable airspace (taller than 200 feet). For emergency response, the cumulative study area would be the SDCFA and/or CAL FIRE jurisdictional boundaries.

2.6.4.1 Listed Hazardous Sites

As discussed in Section 2.6.3.1, Listed Hazardous Sites, the Project site is not located on a hazardous material site listed under Government Code Section 65962.5 or a FUDS site. Additionally, the Project site is not impacted by nearby sites. Therefore, the Proposed Project would not result in exposure to contaminated soils or groundwater exceeding federal or state screening levels. Cumulative projects would be required to identify any hazardous sites Compliance would be required by other nearby cumulative projects with potentially hazardous existing contamination, which would be handled on a project-by-project basis. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** related to hazardous sites.

2.6.4.2 Landfill Hazards

The Proposed Project would not develop structures for human occupancy within 1,000 feet of an open, abandoned, or closed landfill or within 250 feet of the boundary of a parcel identified as containing burn ash. No evidence suggests that the Project site has been used for historic waste disposal or burning of trash. Cumulative projects would be required to identify any landfill hazards and comply with any applicable laws. Therefore, the Proposed Project **would not contribute to a cumulatively considerable contribution** related to landfill hazards.

2.6.4.3 Hazardous Materials

Potential hazards identified on or adjacent to the Project site include hazardous building materials (asbestos and lead-based paint), a nearby gasoline station with known groundwater contamination, and storage of large quantities of hazardous materials (during operation of the Proposed Project). Existing environmental conditions (i.e., local depth to groundwater greater than 70 feet bgs), and strict adherence to federal, state, and local regulatory requirements for asbestos and lead-based paint abatement make these potential hazards less than significant.

Other cumulative projects, including each of those listed in Table 1-4, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects (Chapter 1), would similarly be required to survey for potential areas of hazardous contamination, and if such areas were found, would be required to manage contaminated areas in accordance with applicable federal, state, and local regulations whereas to not impact nearby areas. Therefore, the Proposed Project would not have a cumulatively considerable contribution to any potential cumulative impact related to hazardous sites contamination.

Additionally, as stated previously, during construction, operation and maintenance, and demolition of the Proposed Project, hazardous materials, such as petroleum products and maintenance chemicals, would be brought to and used on the sites. Numerous federal, state, and local regulations exist that require strict adherence to specific guidelines regarding the use, transportation, and disposal of such hazardous materials. Compliance with applicable laws and regulations would reduce the risk of an accidental release of a hazardous material, and the use of hazardous materials on the solar facility site for their intended purpose is not expected to pose a hazard to the public or environment. The cumulative projects listed in Table 1-4 (Chapter 1) would also be subject to all applicable laws and regulations governing the use, storage, and disposal of hazardous materials. Other renewable energy projects in the area pose similar risks associated with handling, use, transportation, storage, and disposal of hazardous materials as the Proposed Project. The Proposed Project, as with all other cumulative projects, would comply with applicable laws and regulations intended to minimize the risk and threat to public health from the accidental release of hazardous materials. With adherence to all applicable laws, the risk of an accidental release of a hazardous material from the Proposed Project and cumulative projects would not pose a hazard to the public or environment, and **impacts would not be cumulatively considerable**.

The Project site is not located within 0.25 miles of a school and would not include the use of a regulated substance subject to CalARP risk management plan requirements (per 19 CCR Division 2, Chapter 4.5). Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** relative to emissions of regulated substances subject to CalARP risk management plan requirements.

2.6.4.4 Airport Hazards

Cumulative projects would be required to ensure that airport and aircraft safety is provided, with FAA notifications as necessary. Where potential hazards are identified, projects would be modified or required to include markings and/or lighting adornments. None of the cumulative projects are located within the Jacumba AIA, therefore, they would not cumulatively contribute to airport hazards. In addition, none of the cumulative projects would be considered noise-sensitive land uses that would be exposed to airport noise; therefore, the projects would not result in excessive noise for people residing or working in the Project area. With compliance with FAA regulations through Form 7460-1, the Proposed Project would not result in any safety hazard impact associated with air traffic in the area and would not result in excessive noise for people working in the area; therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** associated with airport hazards.

2.6.4.5 Hazards Associated with Interference with Emergency Responses

Cumulative projects in the nearby area would have the potential to impair existing emergency and evacuation plans during construction. This could occur from any of the following: (1) an increase in population that is induced from cumulative projects which are unaccounted for in emergency plans; (2) an increase in population that emergency response teams are unable to service adequately in the event of a disaster; or (3) evacuation route impairment if multiple development projects concurrently block multiple evacuation or access roads, such as during construction, resulting in impaired emergency response times.

For emergency response, the cumulative study area would be the SDCFA and CAL FIRE jurisdictional boundaries. The Project and other and other development in the cumulative study area would increase the ignition sources in the Project area, but would not result in substantial permanent increases in population. The impacts **would not be cumulatively considerable** in regard to interference with emergency responses.

2.6.4.6 Demolition of Hazardous Material–Containing Structures

The Proposed Project includes demolition of existing structures. Asbestos Building Inspection and Lead-Based Paint Testing was conducted for existing structures and determine that some structures contained asbestos and/or lead. State and local regulations require the removal of these materials

by a certified abatement contractor, thus impacts would be less than significant. Similar compliance would be required by other nearby cumulative projects with potentially hazardous existing contamination, which would be handled on a project-by-project basis. Therefore, the impacts **would not be cumulatively considerable.**

2.6.4.7 Wildland Fire Hazards

The wildfire risk in the vicinity of the Project site has been analyzed and it has been determined that wildfires are likely occurrences, as discussed in the Project's FPP (Appendix N). It is also possible that construction schedules for other projects, should they be approved, would overlap with the Proposed Project's construction schedule. As described above, Proposed Project construction and operation introduces potential ignition sources and additional electrical equipment that does not currently exist on the Project site. Equipment on the Project site that may be ignition sources during the Proposed Project's construction, operation, and decommissioning represents a risk of sparking or igniting nearby fuels, particularly with off-site flammable vegetation and during high wind conditions. Therefore, the Proposed Project, in combination with cumulative projects, **would result in a cumulatively considerable impact to wildfire hazards** (**Impact HAZ-CU-1**).

2.6.5 Significance of Impacts Prior to Mitigation

Listed Hazardous Sites

This analysis of hazardous materials sites is based on the Phase I ESAs in Appendix G for the Project site. While the Phase I ESAs found that the Project site is adjacent to listed contaminated sites, it is not expected that, due to environmental conditions, groundwater gradient, and characteristics of the off-site contamination, these off-site sources have affected or will affect the Project site. Therefore, the implementation of the Proposed Project would result in **less than significant impacts** associated with hazardous materials.

Landfill Hazards

No impacts would occur related to proximity to open, abandoned, or closed landfill, or trash burn sites; therefore, the impact would be **less than significant**.

Hazardous Materials

The Proposed Project would comply with hazardous substance regulations, would not expose persons to hazardous materials, and would not handle regulated substances within 0.25 miles of an existing or proposed school or daycare facility. Previously identified asbestos and lead-based paint would be removed by a certified abatement contractor in accordance with CalOSHA, California Department of

Public Health, and San Diego County Air Pollution Control District. Therefore, these materials would be abated in accordance with federal, state, and local regulations prior to demolition or construction on the Project site. With the exception of mineral oil storage and the battery energy storage system, the Proposed Project would not handle or store hazardous substances in excess of the threshold quantities listed in H&SC Chapter 6.95. Mineral oil reservoirs in the step-up transformer would be 6,000-gallon capacity, and would therefore require an HMBP. Should the battery storage system trigger requirements of H&SC Chapter 6.95, they too would be included in the HMBP. Within inclusion of the HMBP, the Proposed Project would be in compliance with all applicable hazardous substance regulations. The Proposed Project would be in compliance with applicable hazardous substance regulations and would not generate hazardous waste regulated under H&SC Chapter 6.5, and/or store hazardous substances in underground storage tanks regulated under H&SC Chapter 6.7. The Proposed Project would not be located within 0.25 miles of a school or daycare facility. Therefore, impacts would be **less than significant**.

Airport Hazards

As discussed above, the Proposed Project is located adjacent to the Jacumba Airport, and is subject to the ALUCP, FAA regulations. The Proposed Project would comply with FAA regulations through Form 7460-1 and would not conflict with the ALUCP. The Proposed Project may result in brief periods of glare potential immediately west of the facility shortly after sunrise and immediately east of the facility shortly before sunset at specific times of the year. The solar facility would be directed southwards toward the sun and include PV technology that is designed to maximize absorption and avoid reflectivity of solar light to realize the greatest potential conversion to electricity. The proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. Potential glare visible from the proposed solar operations would be limited to the Jacumba Airport Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than one hour per day. Based on the analysis in the Glare Study (Appendix A to Appendix B, Visual Resources Report), the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, Proposed-Project-generated glare impacts would be less than significant. In addition, the Proposed Project would not result in excessive noise for people residing or working in the Project area due to proximity to the Jacumba Airport. Therefore, the Proposed Project impact on airport hazards or air traffic in the area would be **less than significant**.

Hazards Associated with Interference with Emergency Responses

The Proposed Project would not conflict with an adopted emergency response plan or evacuation plan; thus, there would be **no impact** to an adopted plan. Further, the Proposed Project would be an unmanned facility and the increase in up to 500 workers and vehicles on site would be

temporary during the construction period. In addition, the Proposed Project would not exceed emergency response objectives identified in the Safety Element of the County General Plan; therefore, the project's impacts to the emergency response objectives identified in the Public Facilities Element of the County General Plan as a result of the Proposed Project would be **less than significant**. Finally, the Proposed Project does include five 70- to 115-foot-high transmission poles; thus there would be a structure 100 feet or greater in height; however, the poles are not located on a peak, ridgeway or other location where no structures or towers of similar height already exist. The poles would be located immediately south of the existing transmission corridor that contains several 150-foot-high-plus transmission towers and poles. Further, the Proposed Project would comply with FAA regulations through notification and Form 7460-I, and as a result, the Proposed Project would not cause hazards to emergency response aircraft resulting in interference with the implementation of an emergency response and impacts would be **less than significant**.

Demolition of Hazardous Material-Containing Structures

Existing structures on a parcel within the Project site (APN 661-060-12) were tested for lead paint and asbestos (Appendix H). Per the findings of the Asbestos Building Inspection and Lead-Based Paint report, there are numerous areas within and around the existing structures that tested positive for asbestos and lead-based paint. In accordance with CalOSHA, California Department of Public Health, and San Diego County Air Pollution Control District the removal of these materials by a certified abatement contractor is required, reducing potential impacts below levels of significance. Therefore, impacts related to hazardous materials as a result of demolition of on-site structures would be **less than significant**.

Wildland Fire Hazards

While the Proposed Project has been designed to minimize the risk of fire hazards to the extent feasible and will have minimal occupation during operation, the Project does propose new electrical equipment that could exacerbate wildfire risks and thereby expose project occupants to a risk of loss, injury or death involving wildland fires. Therefore, the Proposed Project's operational-related impacts are considered **potentially significant (Impact HAZ-1)** and mitigation would be required.

In addition, during construction and decommissioning impacts exposing project occupants to potential risk of loss, injury or death involving wildland fires would be **potentially significant (Impact HAZ-2)** and mitigation would be required**.**

Cumulative Impacts

Compliance would be required by other nearby cumulative projects with potentially hazardous existing contamination, which would be handled on a project-by-project basis. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** related to hazardous sites.

The Project site is not located within 0.25 miles of a school and would not include the use of a regulated substance subject to CalARP risk management plan requirements. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact**

With compliance with FAA regulations through Form 7460-1, the Proposed Project would not result in any safety hazard impact associated with air traffic in the area and would not result in excessive noise for people working in the area; therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** associated with airport hazards.

The Project and other and other development in the cumulative study area would increase ignition sources in the Project area, but would not result in substantial permanent increases in population. The impacts **would not be cumulatively considerable** in regard to interference with emergency responses.

Compliance would be required by other nearby cumulative projects with potentially hazardous existing contamination, which would be handled on a project-by-project basis. Therefore, the impacts **would not be cumulatively considerable.**

The Project, in combination with cumulative projects, would result in a **cumulatively considerable impact to wildfire risk (Impact HAZ-CU-1**).

2.6.6 Mitigation Measures

Mitigation measures to reduce the significant impacts identified in this Hazards and Hazardous Materials analysis include **M-WF-1** (FPP), **M-WF-2** (CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement). Please refer to Section 2.12 Wildfire (Section 2.12.6) for the full text of these mitigation measures.

2.6.7 Conclusion

This section provides a synopsis of the conclusion reached in each of the impact analyses, and the level of impact that would occur after mitigation measures are implemented.

Listed Hazardous Sites

The Project site is not included on the Cortese List per Government Code 65962.5. A FUDS site is located within 1,000 feet of the Project site. A former LUST site is located 0.25 miles from the Project site. The LUST case was closed by San Diego County; however, residual contamination in groundwater could potentially impact the Project site if local groundwater flow direction changes. However, given the former LUST site is more than 2,000 feet from the nearest groundwater production well, and that the local depth to water of at least 40 feet bgs, it is not expected that potential migration of impacted groundwater to the Project site would create adverse conditions (e.g., vapor intrusion) for Project site workers/occupants. In addition, compliance with

existing regulations such as implementation of a SWPPP and applicable General Waste Discharge Requirements, would further ensure that impacts remain **less than significant**.

Landfill Hazards

The nearest open, abandoned, or closed landfill is the Jacumba Burn Dumps I and II site. The case was closed in 2010. As such, the Proposed Project would not be within 1,000 feet of an open, abandoned, or closed landfill, and the Proposed Project would not be within 250 feet of a parcel containing burn ash. **No impact** would occur.

Hazardous Materials

Hazardous building materials (asbestos and lead-based paint), currently present on the Project site, could cause a potentially significant impact during the Proposed Project's demolition of on-site structures. However, compliance with state and local regulations would be required. The demolition and removal of hazardous material containing structures would be handled by a certified abatement contractor as required by CalOSHA, the California Department of Public Health, and the San Diego County Air Pollution Control District. Therefore, hazardous building materials as a result of demolition of on-site structures would result in less-than-significant impacts. All other remaining elements of the Proposed Project would also be in compliance with all applicable federal, state, and local laws and regulations, and would be **less than significant**.

Airport Hazards

As described above, the Project site is adjacent to the Jacumba Airport, and is subject to FAA regulations. The Proposed Project would comply with FAA regulations through Form 7460-1 and would not conflict with the ALUCP. In addition, during the construction period and when routine maintenance is being performed, the Proposed Project would not result in excessive noise for people residing or working in the Project area. As such, the Proposed Project would have **less-than-significant impacts** on airports or air traffic in the area.

Hazards Associated with Interference with Emergency Responses

The Proposed Project would not interfere with an adopted emergency response or evacuation plan. The Project would meet the emergency response objectives identified in the Safety Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives. The 70- to 115-foot-tall 138 kV transmission line structure that is part of the Proposed Project would not be located on a ridgeline or peak, and it would be located where there is a number of existing steel transmission towers and poles of similar height. Further, the Proposed Project would not result in significant risks associated with aviation activities for emergency response as proposed towers are adjacent to existing towers of similar height. Impacts would therefore be **less than significant**.

Demolition of Hazardous Material-Containing Structures

Impacts related to hazardous materials as a result of demolition of on-site structures would be **less than significant**.

Wildland Fire Hazards

As presented in Section 2.6.3.7, Wildland Fire Hazards, anticipated impacts to wildfire risk during Project operations (**Impact WF-1**) would be potentially significant. With the implementation of **M-WF-1** (FPP) and **M-WF-3** (Fire Protection and Mitigation Agreement), as discussed further below, potential impacts to operational wildfire risk would be **less than significant**.

The FPP (Appendix N) would ensure compliance with applicable fire codes and wildfire-related regulations and provides fire protection measures to minimize fire risk. Further, a Technical Report for Fire Personnel has been developed and is included as Appendix G of the FPP. This Report provides information about the Proposed Project such that responding fire agency personnel and other first responders have an understanding of potential hazards associated with PV solar facility. The Report provides basic facility information for responding personnel so that they understand the potential site risks and what strategies, tools and equipment, and precautions are required for safely responding to emergencies.

The Project Developer will be required to participate in a Fire Protection and Mitigation Agreement with San Diego County/SDCFA. Fire Protection and Mitigation Agreements ensure funding for firefighting and emergency resources to comply with General Plan Safety Element Policy S-6.3 for new development, which requires development projects to contribute fair-share funding toward fire services. Funding provided by projects result in capital that can be used toward firefighting and emergency response improvements so that the County's firefighting agencies are able to perform their mission into the future at levels consistent with the General Plan.

Anticipated impacts during construction and decommissioning of the Proposed Project would be potentially significant (**Impact WF-2**). Implementation of mitigation measure **M-WF-2** (CFPP) would reduce this impact to **less than significant**. The CFPP is included as Appendix A of the FPP (Appendix N). The specific risk reduction measures and daily fire prevention measures to be implemented are listed in **M-WF-2**.

Cumulative Impacts

The Proposed Project **would not contribute to a cumulatively considerable impact** related to hazardous sites, landfill hazards, airport hazards, or demolition of hazardous material containing structures.

As presented in Section 2.6.4.7 above, the Project, in combination with cumulative projects, would result in a cumulatively considerable impact to wildfire hazard (**Impact HAZ-CU-1**). With implementation of mitigation measures **M-WF-1** (FPP), **M-WF-2** (CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement), the Project would result in a **less than significant cumulative impact.**

Table 2.6-1
Online Database Listings

Database	Details
California Environmental Protection Agency (CalEPA) Regulated Site Portal https://siteportal.calepa.ca.gov/nsite/	The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. Data sources include California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxics Release Inventory (TRI).
Department of Toxic Substances Control (DTSC) EnviroStor https://www.envirostor.dtsc.ca.gov/	The DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons for further investigation.
Regional Water Quality Control Board (RWQCB) GeoTracker http://geotracker.waterboards.ca.gov/	The California RWQCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, various unregulated projects, and permitted facilities. Sites include LUST, Department of Defense, Cleanup Program, Irrigated Lands, Oil and Gas Production, Permitted USTs, and Land Disposal Sites.
National Pipeline Mapping System (NPMS) https://www.npms.phmsa.dot.gov/	The NPMS Public Map Viewer is a web-based application designed to assist the general public with displaying and querying data related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation Pipeline and Hazardous Material Safety Administration jurisdiction.

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Project Boundary
Safety Zones
Zone 1
Zone 2
Zone 4
Zone 5
Zone 6
Airport Influence Area
Review Area 1
Review Area 2
Parcels

SOURCE: ALUCP 2018; SANGIS 2019

DUDEK

0 750 1,500 Feet

FIGURE 2.6-1

Project Location in Jacumba Airport Influence Area

Jacumba Valley Ranch Solar Energy Park Project EIR

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2.7 Hydrology and Water Quality

This section of the Environmental Impact Report (EIR) discusses potential impacts to hydrology, water quality, and groundwater resources resulting from the implementation of the JVR Energy Park Project (Proposed Project). The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical reports prepared for this Proposed Project:

- Drainage Study - JVR Energy Park Project (Appendix I)
- Groundwater Resources Investigation Report - JVR Energy Park Project (Appendix J)
- Groundwater Monitoring and Mitigation Plan (Appendix A of the Groundwater Investigation Report)
- Stormwater Management Plan - JVR Energy Park Project (Appendix K)

These technical reports were prepared consistent with the County of San Diego (County) Guidelines for Determining Significance and Report Format and Content Requirements: Hydrology (Hydrology Guidelines; County of San Diego 2007a), Guidelines for Determining Significance and Report Format and Content Requirements: Surface Water Quality (Surface Water Quality Guidelines; County of San Diego 2007b), and Guidelines for Determining Significance and Report Format and Content Requirements: Groundwater Resources (County of San Diego 2007c).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding groundwater overdraft, adverse effects of pumping on off-site wells, and the cumulative effects of groundwater extraction from other projects in the basin. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.7.1 Existing Conditions

This section describes the existing setting in the Proposed Project area and identifies the resources that could be affected by the Proposed Project. The scope of the hydrologic setting reflects the significance thresholds contained in the County's Hydrology, Surface Water Quality, and Groundwater Resources Guidelines (County of San Diego 2007a, 2007b, 2007c), which address issues such as surface and groundwater quality, stormwater drainage, and groundwater resources. Information in this section is derived from a variety of sources, including maps and surveys from the U.S. Geological Survey, the U.S. Department of Agriculture, the County General Plan (County of San Diego 2011), the aforementioned County significance guidelines, and the previously listed Project-specific technical reports.

Regional Climate

The Project area experiences warm summer months and cool winters. Average temperatures vary greatly within the region. Mean maximum temperatures in the summer months reach the high-80s to low-90s degrees Fahrenheit. Temperatures may fall below freezing in the winter, with snow levels occasionally below 2,500 feet (WRCC 2019). According to historical precipitation data recorded from 1963 to 2011 from the Jacumba rain gauge, the average annual precipitation is approximately 9.64 inches per year, with 85% of precipitation occurring between October and April (Allan 2013).

Regional Hydrology and Drainage

The Project site is located within the Jacumba Valley Hydrologic Subarea (HSA; 722.72) of the Jacumba Hydrologic Area (HA; 722.70), all within the Anza Borrego Hydrologic Unit (HU; 722.00) of the Colorado River Basin (RWQCB 2017). These RWQCB Hydrologic Units are shown in Figure 2.7-1 of this Hydrology and Water Quality section. The contributing subwatersheds to the Project site cover approximately 71,040 acres (111 square miles) in the Upper Carrizo Creek watershed, with 76% located in Baja California, Mexico (Kimley Horn 2020). These subwatersheds are shown in Figure 2.7-2 of this EIR. The majority of flow from Mexico north into the Jacumba Valley is derived from the Flat Creek subwatershed, which includes Blue Angel Peak and an unnamed subwatershed. The subwatersheds predominantly located in the United States are the Boundary Creek and Walker Canyon-Carrizo Creek subwatersheds.

Surface water flows into the Jacumba Valley from the west through Boundary Creek and from the east through the Carrizo Wash (USGS 2018). Both Boundary Creek and Carrizo Wash are ephemeral waterways, which have mapped extents terminating on the Project site (USGS 2018). Surface water flows north over the Project site where it eventually drains through a narrow constriction at the north terminus of the Jacumba Valley (USGS 1979). After exiting the Jacumba Valley, surface water flows by way of Carrizo Creek through Carrizo Gorge where it eventually drains onto the desert flood plain in Carrizo Valley and terminates at the Salton Sea (USGS 1979). Surface water flows either as sheet flow or through ephemeral drainages or channels, which convey runoff during and/or shortly after rain events (Kimley Horn 2020) (Appendix I).

For purposes of the drainage study completed for the Proposed Project (Appendix I), the 111 square-mile watershed was broken into four distinct subbasins referred to as the south, west, east, and mid basins (Appendix I). Subbasins are defined by the drainage areas contributing to off-site streams that eventually make it onsite. Basin #1 (South) contains the drainage area that is contributing from Mexico. This flow would concentrate and then sheet flow across the southern portion of the Project site. Basin #2 (West) contains the drainage area from Boundary Creek. Basin #3 (East) contains the drainage area for runoff traveling from the east. Basin #4 (Mid) contains the west and north drainage areas, along with additional on-site drainage area (Kimley Horn 2020). These drainage areas are shown in Figure 2.7-3 of this Hydrology and Water Quality section.

Surface Water Quality

The beneficial uses of the surface water bodies in the Project area have been designated by the Colorado River Regional Water Quality Board (RWQCB) in the Water Quality Control Plan for the basin (otherwise known as the Basin Plan). The beneficial uses provide the basis for determining appropriate water quality objectives that are needed to maintain the beneficial uses of these water bodies and are discussed further under Section 2.7.2, Regulatory Setting. The beneficial uses for water bodies affected by the Proposed Project are shown in Table 2.7-1, Beneficial Uses of Waters within the General Vicinity of the Proposed Project, and definitions are provided in Table 2.7-2, Definitions of Beneficial Uses of Surface Waters. The Basin Plan for each region also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make up the water quality standards for the region.

The objective of the federal Clean Water Act (CWA) is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. There are no water bodies occurring within the Proposed Project area that are listed on the CWA 303(d) List (impaired water bodies) (SWRCB 2016). The Project is not in a watershed with a high receiving water risk, as defined in the Construction General Permit (CGP) Guidance (SWRCB 2018). High risk watersheds are mapped Hydrologic Unit Code (HUC) Level 12 watersheds that drain to waterbodies that are either 1) CWA 303(d) listed as being impaired for sediment/siltation, 2) have a U.S. Environmental Protection Agency-approved, sediment-related Total Maximum Daily Load, or 3) have the existing beneficial uses of SPAWN, MIG, and COLD according to the Basin Plan (RWQCB 2019).[1]

Groundwater Resources

The Proposed Project lies outside of the San Diego County Water Authority in a region consisting of small communities, large-lot rural residences, tribal lands, and public open space (e.g., California State Park and federal Bureau of Land Management). Water service in the region consists exclusively of groundwater wells—either private, tribal, state, federal, or part of small community water districts. Groundwater is the primary source of water supply for land uses in the Proposed Project area, and most residences rely on Jacumba Community Services District (JCSD) groundwater wells for their source of water. Groundwater users in the area of the Project site include the JCSD, Jacumba Valley Ranch Water Company (formerly the Ketchum Ranch Water Company), domestic users, and the Jacumba Valley Ranch (the location of the current Project site). Groundwater extraction has varied based on need and land use.

[1] The Water Quality Control Plan for the Colorado River Basin only lists COLD beneficial uses. Cold Freshwater Habitats (COLD) are uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

The Project site is located within the Department of Water Resources (DWR) Bulletin-118-defined Jacumba Valley Groundwater Basin (Basin), DWR Basin No. 7-47 (DWR 2016). This groundwater basin is shown in Figure 2.7.4 of this Hydrology and Water Quality section. DWR has designated the Basin as very low priority (DWR 2019). No groundwater management agency currently oversees groundwater management in the Basin.

The Basin consists of two primary aquifer units. The upper alluvial aquifer unit (Jacumba Valley alluvial aquifer) reaches up to 175 feet in thickness and consists of Holocene-age gravels, sands, and clays (Dudek 2016; DWR 2016). In some areas, this aquifer unit is underlain by the Jacumba volcanics, which reportably act as a semi-confining to confining unit to the lower aquifer. The lower aquifer consists of the Tertiary-age Table Mountain Formation, described as medium- to coarse-grained sandstone and conglomerate, and may reach up to 600 feet in thickness (Swenson 1981). The Table Mountain Formation lies unconformably on top of crystalline basement (DWR 2016). Groundwater in the region is also extracted from fractures within the crystalline basement rock.

The proposed source of groundwater for the Project is the Jacumba Valley alluvial aquifer, which underlies the majority of the Project site (Figure 2.7-4). The Jacumba Valley alluvial aquifer extends across the United States border into Mexico. This unconfined aquifer has been estimated to have specific yields ranging from 5% to 10% (Swenson 1981) and 15% to 20% (Roff and Franzone 1994). Production wells screened in the Jacumba Valley alluvial aquifer have been reported to produce more than 1,000 gallons per minute (gpm) (Roff and Franzone 1994). Groundwater in storage has been estimated to range from 3,200 to 6,400 acre-feet (AF) by Swenson (1981) and 9,600 to 16,000 AF by Roff and Franzone (1994). The Proposed Project would use two on-site groundwater wells, which were previously used as agricultural wells for the Jacumba Valley Ranch and Bornt Farms (Dudek 2019). These wells are identified as Well #2 and Well #3 on Figure 2.7.4. Both wells have been tested and documented to produce adequate water supply for the Project (see Appendix J). The impacts to groundwater resources from Project groundwater use are discussed in Section 2.7.3.4.

Groundwater Quality

The availability of groundwater quality data from the major unconfined alluvial aquifers of San Diego County vary based on use. Existing water quality data for large highly utilized unconfined alluvial aquifers is continually collected by state and local water agencies as well as the California Department of Public Health and the DWR. Of California's approximately 16,000 public-supply wells, 80% are in groundwater basins designated by the DWR and characterized as unconfined alluvial aquifers (USGS 2011). The County's Groundwater Resources Guidelines do not identify the Project area as being within a specific groundwater problem area (such as an overdrafted basin or areas with high levels of naturally occurring radioactive elements) (County of San Diego 2007c).

Groundwater quality data for the aquifer underlying the Proposed Project and surrounding region is available from a number of sources, including a June 2020 sampling effort for wells to be used to supply the Proposed Project (i.e., Well #2 and Well #3), as well as routine submittals of groundwater quality data to the State Water Resources Control Board (SWRCB) by off-site potable water systems such as JCSD (i.e., Park and Highland Center Wells, and Wells #7 and 8). The Jacumba Valley Ranch Water Company samples groundwater in accordance with requirements set forth by the County of San Diego Department of Environmental Health for a Transient Non-Community water system. In addition, less frequent or one-time groundwater quality sampling has occurred near the Project site for leaking underground storage tank cleanup sites (SWRCB 2019).

JCSD currently supplies non-potable water from the Park and Highland Center Wells, and potable water from Wells #7 and #8. A water quality sample collected from the Highland Center Well in 2016 had a measured total dissolved solids concentration of 400 milligrams per liter (mg/L). A wide range of constituents, including general minerals, inorganic minerals, and volatile organic compounds, were analyzed. Laboratory results indicated that no volatile organic compounds were detected and that groundwater produced from the Highland Center Well is suitable for construction water supply.

As discussed above, the Project proposes to use water from Well #2 and Well #3. Since the Project would use groundwater for non-potable use, water quality samples were not collected from on-site wells as part of the Groundwater Resources Investigation Report but were sampled in June 2020 to verify suitability for non-potable use. Well #2, the Central Irrigation Well and Well #3 had measured total dissolved solids concentrations of 760 mg/L, 630 mg/L and 950 mg/L, respectively.

Flood Hazards

The Project site and the surrounding area is identified by the Federal Emergency Management Agency (FEMA) as being within Zone D, which indicates that flood risk is undetermined because the agency has not conducted a flood hazard analysis (FEMA 2012). The Project site is not downstream of a dam and thus would not be subject to inundation in the event of a dam failure; nor is the site subject to seiche or tsunami (due to the great distance to the ocean or large body of water). In addition, the Project site is not within any County-identified flood hazard areas (e.g., alluvial fan flooding area) (County of San Diego 2007a).

The Drainage Study of the Project site prepared by Kimley Horn (2020; see Appendix I) has estimated flood depths during a 100-year flood event of greater than of six feet concentrated primarily between Stations 20 and 68, and average flood depth of two feet to three feet across the portion of the Project site subject to flooding.

2.7.2 Regulatory Setting

Federal

The following federal regulations pertaining to hydrology and water quality would apply to the Proposed Project.

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The RWQCB adopts and implements a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code, Sections 13240–13247). The Proposed Project area is located within the jurisdiction of the Colorado River RWQCB.

Beneficial Use and Water Quality Objectives (CWA Section 303)

The Colorado River RWQCB is responsible for the protection of the beneficial uses of waters within the Proposed Project area of eastern San Diego County. The RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for Colorado River region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The existing and potential

beneficial uses designated in the Basin Plan for the surface water bodies in or downstream from the Project area are identified in Table 2.7-1. The existing uses of groundwater in the vicinity of the Proposed Project area, which includes the Anza-Borrego Hydrologic Unit, include municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); Groundwater Recharge (GWR); Water Contact Recreation (REC-1); Non-Water Contact Recreation (REC-2); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Rare, Threatened, or Endangered Species (RARE) (Colorado River RWQCB 2019). These uses are defined in Table 2.7-2. The Basin Plan also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make up the water quality standards for the region.

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. There are no impaired waters within or near the Project vicinity, although surface waters would eventually discharge indirectly to the Salton Sea, which has several identified impairments. CWA Section 303(d) impairments associated with the Salton Sea include arsenic, selenium, nutrients, salinity, chlorpyrifos, DDT, and enterococcus; these are impairments typically associated with agricultural activities, ranching, and/or surface mining (SWRCB 2016). A total maximum daily load defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. No total maximum daily loads have been established for the aforementioned pollutants/stressors (SWRCB 2016).

Water Quality Certification (CWA Section 401)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers (ACOE) Section 404 permit) obtain certification from the state that the discharge would comply with other provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. Section 404 of the CWA requires a permit from the ACOE prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA Section 404. For the Project area, the Colorado River RWQCB must provide the water quality certification required under Section 401 of the CWA. As discussed in Section 2.3, Biological Resources, there are no direct impacts to federally regulated waters an ACOE Section 404 permit is not expected to be required for the Proposed Project site. Water quality certification under Section 401 of the CWA, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

National Pollutant Discharge Elimination System Program (CWA Section 402)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. In November 1990, the U.S. Environmental Protection Agency (EPA) published final regulations that also establish stormwater permit application requirements for discharges of stormwater to waters of the United States from construction projects that encompass 5 or more acres of soil disturbance. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1 acre and less than 5 acres (small construction activity). The regulations also require that stormwater discharges from small municipal separate storm sewer systems (MS4s) be regulated by an NPDES permit.

On September 2, 2009, the SWRCB issued a new NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), that became effective July 1, 2010. For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (i.e., CGP) in order to avoid and minimize water quality impacts attributable to such activities.[2] The CGP applies to all projects where construction activity disturbs 1 or more acres of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The CGP requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify best management practices (BMPs) designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the Section 303(d) list for sediment (which the Project site does not).

The Colorado River RWQCB has permitting authority over the Proposed Project site. Because the Colorado RWQCB has not adopted a municipal permit for the Project area, the Proposed Project would be subject to the Post Construction Standards in the CGP, as well as the County of San Diego's Jurisdictional Urban Runoff Management Plan.

[2] SWRCB Order 2009-0009-DWQ (as amended by SWRCB Order 2010-0014-DWQ), NPDES Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

In either case, dischargers are required to submit a Notice of Intent in order to obtain coverage under the CGP, at the discretion of the SWRCB and the applicable RWQCB. Dischargers are responsible for notifying the relevant RWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected.

The CGP requires a risk-based permitting approach, dependent upon the likely level of risk imparted by a project. To ensure compliance and protection of water quality, the permit implements monitoring, reporting, and training requirements for management of potential stormwater pollutants. The permit contains several compliance items, including (1) mandatory BMPs to reduce erosion and sedimentation, which may include incorporation of vegetated swales, setbacks and buffers, impervious surface disconnection, bioretention cells, implementation of pollution/sediment/spill control plans, training, and other structural and nonstructural actions; (2) sampling and monitoring for non-visible pollutants; (3) effluent monitoring and annual compliance reports; (4) development and adherence to a Rain Event Action Plan; (5) requirements for the post-construction period; (6) numeric action levels and effluent limits for pH and turbidity; (7) monitoring of soil characteristics on site; and (8) mandatory training under a specific curriculum.

The Proposed Project would disturb more than 1 acre of soil and would thus be subject to the provisions and requirements of the CGP. The applicant would submit a Notice of Intent to the SWRCB and obtain coverage under, and comply with, the CGP. As summarized previously, the preparation of a SWPPP would be required in accordance with the CGP. The SWPPP would include, but not be limited to, relevant measures, conditions, and obligations, which would reduce or eliminate the impacts of construction activities on stormwater and receiving water quality and quantity. The CGP also contains requirements for the post-construction period. The Proposed Project would need to obtain approval for their post-construction plans from both the County and the Colorado RWQCB. The Project is not classified as facility requiring coverage under the General Permit for Storm Water Discharges Associated With Industrial Activities.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the federal regulation, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

Safe Drinking Water Act

The Federal Safe Drinking Water Act (SDWA), established in 1974, sets drinking water standards throughout the country and is administered by the EPA. The drinking water standards established in the SDWA, as set forth in the Code of Federal Regulations, are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143).

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is administered by FEMA, a component of the U.S. Department of Homeland Security. The NFIP is a federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories by producing flood hazard boundary maps, flood insurance rate maps, and flood boundary and floodway maps.

Executive Order 11988, Floodplain Management. Executive Order (EO) 11988 directs all federal agencies to avoid the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct or indirect support of floodplain development wherever there is a practical alternative.

EO 11990, Protection of Wetlands. EO 11990 directs all federal agencies to avoid to the maximum extent possible the long-term and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative.

State

The following state regulations pertaining to hydrology and water quality would apply to the Proposed Project.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (codified in the California Water Code, Section 13000 et seq.) is the basic water quality control law for California. As mentioned above, it is implemented by the SWRCB and the nine RWQCBs. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs' operations. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state could cause pollution or nuisance, including impacts to public health and the environment. Evident from the preceding regulatory discussion, the Porter-Cologne Act and the CWA overlap in many respects, as the

entities established by the Porter-Cologne Act are, in many cases, enforcing and implementing federal laws and policies. However, there are some regulatory tools that are unique to the Porter-Cologne Act, as described below.

Dredge/Fill Activities and Waste Discharge Requirements

Actions that involve, or are expected to involve, discharge of waste are subject to water quality certification under Section 401 of the CWA (e.g., if a federal permit is being sought or granted) and/or waste discharge requirements (WDRs) under the Porter-Cologne Act. Chapter 4, Article 4 of the Porter-Cologne Act (California Water Code, Sections 13260–13274), states that persons discharging or proposing to discharge waste that could affect the quality of waters of the state (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as isolated wetlands), WDRs are required and are issued exclusively under state law. WDRs typically require many of the same BMPs and pollution control technologies as required by NPDES-derived permits. Further, the WDRs' application process is generally the same as for CWA Section 401 water quality certification, though in this case it does not matter whether the particular project is subject to federal regulation.

General WDRs for Discharges to Land with a Low Threat to Water Quality in the Colorado RWQCB Region

In SWRCB Order 2003-0003-DWQ, the SWRCB adopted General Waste Discharge Requirements (General WDRs) for discharges to land that are considered to be a low threat to water quality and are of low volume with minimal pollutant concentrations. All WDRs must implement the Basin Plan and require dischargers (e.g., the applicant) to comply with all applicable Basin Plan provisions and water quality objectives. The General WDRs establish minimum standards and monitoring requirements with respect to a few specific categories of discharge, including boring waste discharge, small dewatering projects (e.g., temporary dewatering during construction excavation activity), and miscellaneous discharges such as small, inert solid waste disposal operations.

As discussed in the environmental setting, the Proposed Project is unlikely to encounter shallow groundwater. However, the actual presence or absence of shallow groundwater is dependent on local geologic and climatic conditions, and thus it is possible that locally perched groundwater could be encountered. In this case, any dewatering activity that would discharge to the land surface would need to comply with the provisions of these General WDRs (or, alternatively, the applicant

and/or its contractor would need to obtain an individual WDR). Accordingly, to obtain coverage under these General WDRs and ensure compliance with the applicable Basin Plan, the applicant and/or its contractor would submit the following to the RWQCB: a Notice of Intent to comply with these General WDRs, which include, but may not be limited to a Project map, evidence of California Environmental Quality Act (CEQA) compliance, the requisite fee, a discharge monitoring plan, and any additional information requested by the applicable RWQCB. RWQCB staff would determine whether coverage under the applicable General WDRs is appropriate and, if so, would notify the applicant by letter of coverage. In the event of any conflict between the provisions of the General WDRs and the Basin Plan, the more stringent provision would prevail.

State Maximum Contaminant Levels

As part of the California Safe Drinking Water Act, the State Department of Health Services sets primary and secondary standards for drinking water supplies. Maximum contaminant levels set by the Department of Health Services are either as stringent as or more stringent than federal maximum contaminant levels.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) is intended to achieve sustainable management of groundwater resources for long-term reliability for multiple benefits while avoiding undesirable results. The SGMA directed the DWR to assign priority ratings to groundwater basins throughout the state. All counties and cities that draw water from basins identified as "high" or "medium" priority must comply with the SGMA. The SGMA identifies two compliance options for "high" or "medium" priority basins: form a groundwater sustainability agency and adopt a groundwater sustainability plan, or submit a groundwater sustainability plan alternative if basin conditions demonstrate that the basin has operated under sustainable yield for the past 10 years. While the Proposed Project site does overlie a DWR Bulletin 118–defined groundwater basin, the Jacumba Valley Groundwater Basin (DWR 7-047), this basin has been designated a very low priority basin (DWR 2019). Based on this determination, a groundwater sustainability agency is not required to be formed and a groundwater sustainability plan is not required (per SGMA) to be prepared for the Jacumba Valley Groundwater Basin.

Local

The following local/regional regulations pertaining to hydrology and water quality would apply to the Proposed Project.

County of San Diego Code of Regulatory Ordinances Sections 67.801–67.821, Watershed Protection, Stormwater Management, and Discharge Control Ordinance

The County's Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO) was adopted in March 2008 and revised in February 2016. The purpose of the WPO is to protect water resources and improve water quality by controlling the non-stormwater discharges to the stormwater conveyance system and receiving waters, to cause the use of management practices by the County and its citizens that would reduce the adverse effects of polluted run-off discharges on waters of the state, to secure benefits from the use of stormwater as a resource, and to ensure the County is compliant with state and federal law. The WPO establishes standards and requirements that are legally enforceable by the County within the County's jurisdiction. Projects that require a permit (e.g., administrative permit, major use permit, grading permit) are required to demonstrate compliance with the WPO. Section 67.804, for example, specifically addresses waste discharge and prohibits the discharge of pollutants to the stormwater system unless they are permitted through the NPDES program. Section 67.806 identifies minimum required construction and post-construction water quality BMPs applicable to all dischargers.

County of San Diego BMP Design Manual

The County's 2019 BMP Design Manual provides guidance for land development projects to comply with the 2013 MS4 Permit. It is focused on project design requirements and related post-construction requirements, not on the construction process itself. The BMP Design Manual addresses, and provides guidance for complying with, updated post-construction stormwater requirements for Standard Projects and Priority Development Projects (PDPs), and provides updated procedures for planning, preliminary design, selection, and design of permanent stormwater BMPs based on the performance standards presented in the MS4 Permit and the County WPO. The Proposed Project is located east of the Pacific/Salton Divide. Because of this, the Proposed Project is exempt from classification as a priority development project. Requirements apply to all projects including Standard Projects include implementation of source control and site design BMPs as described in Chapter 4 of the BMP Design Manual. Detailed submittal requirements including documentation of each selected BMP are provided in Chapter 8 of the BMP Design Manual.

County of San Diego Grading Ordinance

The County Code Title 8, Division 7, Grading, Clearing and Watercourses,[3] echoes protections at the federal level by prohibiting any actions or development that would impede water flows, and addresses

[3] The ordinance defines a watercourse as any surface water body (including any arroyo, canal, channel, conduit, creek, culvert, ditch, drain, gully, ravine, reservoir, river, stream, wash, waterway, or wetland), in which waters from a tributary drainage area of 100 acres or larger flow in a definite direction or course, either continuously or intermittently, and any area adjacent thereto which is subject to inundation from a 100-year flood.

grading and clearing near watercourses. The Grading Ordinance requires that projects involving more than 200 cubic yards of grading, clearing, and/or removal of natural vegetation obtain a grading permit (see Section 1.5.1, Project Approvals/Permits). Grading permits are discretionary and require compliance with CEQA. Additional information specific to grading permit requirements is discussed in Section 2.5, Geology, Soils, and Seismicity.

Chapter 6 of the ordinance exists to protect persons and property against flood hazards by prohibiting the alteration of the surface of land so as to reduce the capacity of a watercourse and prohibit any action that impairs, impedes, or accelerates the flow of water in a watercourse in such a manner that adversely affects adjoining properties. The ordinance prohibits any land alteration or construction of structures in, upon, or across a watercourse without first obtaining a permit. Enforcement occurs at the time that grading plans or improvement plans are reviewed during the grading permit process. The County Official shall not approve the grading plans or improvement plans unless he or she determines that the proposed grading does not create an unreasonable hazard of flood or inundation to persons or property. Even though the Project site is not within an identified flood hazard area, as defined by either FEMA or the County, the provisions of this ordinance would apply to the Proposed Project because they would result in land alteration and construction of structures within a watercourse as defined in the ordinance.

San Diego County Groundwater Ordinance

The County adopted the San Diego County Groundwater Ordinance in 1991; it was last amended in 2013. The ordinance establishes regulations for the protection, preservation, and maintenance of groundwater resources. The purpose of the ordinance is to ensure that development would not occur in groundwater-dependent areas of the County unless adequate supplies are available to serve both existing and proposed uses. Section 67.722 (All Other Projects) regulates all areas within the unincorporated County outside Borrego Valley. For applicable discretionary permit applications, the following findings must be made: (1) For projects using greater than 20 AF per year or 20,000 gallons per day, that groundwater resources are adequate to meet the groundwater demands both of the project and the groundwater basin if the basin were developed to the maximum density and intensity permitted by the General Plan, and (2) for all other projects, that groundwater resources are adequate to meet the groundwater demands of the project.

San Diego County General Plan

Updated (and adopted) in August 2011, the San Diego County General Plan guides future growth in the unincorporated areas of the County and considers projected growth anticipated to occur within various communities.

Land Use Element

The Land Use Element includes a requirement to encourage sustainable use of groundwater and properly manage groundwater recharge areas (LU-8). Specifically, Goal LU-8 includes the following policies:

- **Policy LU-8.1:** Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.
- **Policy LU-8.2:** Require development to identify adequate groundwater resources in groundwater dependent areas, as follows:
    - In dependent areas within currently identified groundwater overdrafted basins, prohibit new development from exacerbating overdraft conditions, and
    - In areas without current overdraft groundwater conditions, evaluate new groundwater-dependent development to assure a sustainable long-term supply of groundwater is available that will not adversely impact existing groundwater users.
- **Policy LU-8.3:** Discourage development that would significantly draw down the groundwater table to the detriment of groundwater-dependent habitat.

Conservation and Open Space Element

The Conservation Element identifies and describes the natural resources of the County of San Diego and includes policies and action programs to conserve those resources. The Conservation and Open Space Element identifies policies necessary to achieve (a) long-term viability of the County's water quality and supply through a balanced and regionally integrated water management approach (Goal COS-4), and (b) protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high-quality water resources (Goal COS-5).

Public Safety Element

The Public Safety Element was developed to introduce safety considerations into the planning and decision-making processes in order to reduce the risk of injury, loss of life, and property damage associated with the hazards identified in the element. The Public Safety Element identifies policies necessary to (a) minimize personal injury and property damage losses resulting from flood events (Goal S-9), and (b) ensure that floodways and floodplains that have acceptable capacity to accommodate flood events (Goal S-10). These goals are achieved through policies encouraging the improvement and development of floodplain maps, regulating the types of development that can occur in floodplains, and ensuring that development outside of floodplains employ proper stormwater design and management practices necessary to increase the volume of stormwater

entering waterways. The element also proposes policies and recommendations aimed at hazard mitigation, disaster preparedness, and emergency response. Chapter 3 of the element, Geologic Hazards, addresses non-seismic hazards, specifically slope instability/erosion and landslides, which can cause flooding.

2.7.3 Analysis of Project Effects and Determination as to Significance

The Proposed Project consists of a solar energy generation and storage project in southeastern San Diego County. For the purposes of this EIR, the Proposed Project is analyzed at a project level to discuss potential impacts as determined in the Initial Study.

The Proposed Project includes a switchyard that would be transferred to SDG&E once constructed. For the purposes of this analysis, the switchyard (as described in Chapter 1.2.2 of this EIR) is a component of the project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

2.7.3.1 Hydrology and Drainage Patterns

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Hydrology Guidelines (County of San Diego 2007a) apply to both the direct impact analysis and the cumulative impact analysis. These significance guidelines have been developed by the County to address question (c) in the CEQA Guidelines, Appendix G (14 CCR 15000 et seq.). A significant impact would result if:

- The project would increase water surface elevation in a watercourse within a watershed equal or greater than 1 square mile, by 1 foot or more in height and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River, and Otay River, 2/10 of a foot or more in height.

- The project would result in increased velocities and peak flow rates exiting the project site that would cause flooding downstream or exceed the stormwater drainage system capacity serving the site.
- The project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

Question (c) of Appendix G, Hydrology and Water Quality, of the 2019 CEQA Guidelines determines whether the project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would (i) result in a substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or, (iv) impede or redirect flood flows.

Analysis

To analyze the potential impacts of the Proposed Project in relation to the hydrology and drainage patterns threshold, watershed hydrologic run-off calculations were performed for the 100-year storm event using the San Diego County Unit Hydrograph Program (SDUH). Additionally, an analysis of the 100-year flood level was conducted using the ACOE Hydrologic Engineering Centers River Analysis System (HEC-RAS) software (Appendix I).

The contributing watershed, which flows from south to north, includes the Boundary Creek subwatershed, Blue Angels Peak subwatershed, an unnamed subwatershed in Mexico, and portions of the Walker Canyon – Carrizo Creek subwatershed, with approximately 2/3 of the watershed being located in Mexico. Rainfall for the Project area was determined to be 3 inches for the 100-year, 6-hour (P_6) storm and 5 inches for the 100-year, 24-hour (P_{24}) storm based on the San Diego County Hydrology Manual (County of San Diego 2003).

Contributing watershed soils were determined to be composed of approximately 65% Hydrologic Soil Group D (least-permeable), 29% Group A (most-permeable) and 1% Group B and 5% Group C. Major existing watershed land cover includes desert shrub/scrub, field crops, herbaceous grassland, and woody wetlands to the north. Project conditions following construction are estimated to increase impervious surface by approximately 1.9 acres (of the 60,200 acres in the contributing watershed). Grading on the Project site would not change the overall drainage pattern. Stormwater runoff would flow overland across the Project site in a similar manner as it does in the pre-developed state.

The only element of the project that might locally alter drainage patterns and/or block or redirect flood flows is the perimeter fencing, which would cross ephemeral washes at a perpendicular angle, and potentially trap sediment and detritus during heavy rainfall. Sediment, detritus and/or other debris that becomes trapped on one side of the perimeter fencing during high flows could cause flow to back-up behind the impediment, potentially redirecting and/or concentrating flow outside the boundaries of currently mapped washes. It could result in additional scour and/or sedimentation that would not have otherwise occurred absent the perimeter fencing. For this reason, the impact of the Proposed Project (perimeter fencing element) with respect to alteration of drainage patterns **would be potentially significant (Impact HYD-1)**.

The 100-year inundation flood limit would remain unaltered by development of the Proposed Project (Appendix I). Flow and flooding of the 100-year storm was modeled using existing and Project conditions to compare the effects of construction of the Project facilities upon drainage and flooding. The current land cover consists primarily of undeveloped land. Project construction would involve clearing and grubbing of the existing vegetation within the 643-acre development footprint. Grading would be required throughout the development footprint. Grading is expected to be balanced on site, with approximately 264,000 cubic yards of cut redistributed across the site. It was determined that the Project would add 1.9 acres (0.0030 square miles) of impervious surface, an amount not large enough to significantly affect runoff. Grading on the Project site would not change the overall drainage pattern (Appendix I). There are no proposed site improvements to pass the 100-year storm, and thus the flow pattern of runoff would maintain its current state. For these reasons, the Proposed Project would not increase water surface elevation in a watercourse within a watershed equal or greater than 1 square mile and would not result in increased velocities and peak flow rates exiting the Project site.

Per the Construction General Permit (CGP), a Storm Water Pollution Prevention Plan (SWPPP) must be prepared and implemented during the construction phase. The SWPPP would include the Proposed Project risk determination, identification of site run-off sampling locations, discussion of potential site pollutants, minimum best management practices (BMPs), construction site monitoring plan and the water pollution control drawings. The exact location and type of temporary BMPs to be installed during construction would depend on site-specific conditions, the construction schedule, and proposed activities, all of which would be outlined in the construction SWPPP. Typical BMPs for similar projects include energy dissipaters, silt fences, fiber rolls, gravel/sandbags, construction road stabilization, and stabilized construction entrances. As the project-specific SWPPP is prepared, the location, type, and number of specific BMPs may be refined based on the final designs to most effectively achieve the objective of reducing turbidity and other pollutant loads in stormwater runoff. The provisions of the CGP would ensure that site-specific conditions are taken into consideration when developing the construction SWPPP, that personnel developing and implementing the construction SWPPP are qualified, and that BMPs are adequately monitored and maintained.

Permanent water quality BMPs to be installed and maintained on the Project site, per the County of San Diego's BMP Design Manual, are also identified in the Project Standard Storm Water Quality Management Plan (SWQMP) (Appendix K). Private development projects are required to implement measures to ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable; and receiving water quality objectives are not violated throughout the life of the Project. The Standard SWQMP includes details of construction and post-construction BMPs to address potential and anticipated water quality impacts. Control measures to reduce the discharge of stormwater pollutants to the maximum extent practicable would include:

- Implementation of site design and source control BMPs
- Inclusion of low-impact development features that conserve natural features, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff
- Compliance with requirements for construction-phase controls on sediment and other pollutants
- Outlet protection (e.g., energy dissipaters and velocity dissipation devices)
- Inclusion of infiltration swales where feasible to reduce localized increases in peak runoff

Velocity dissipaters would include lining the outlet of ditches and swales with coarse rocks and boulders, to protect the natural banks from scour and increase the roughness of the channel to slow the velocity of flows exiting the site. In addition, infiltration swales may be installed within certain sub-basins within the Project site to accommodate small, localized increases in peak flow under a 100-year storm event. These measures would be effective at minimizing the potential adverse effects of all Project-related increases in localized peak flow rates (i.e., around the base of solar panels).

Stormwater runoff would flow overland across the Project site after construction just as it does in the pre-developed state. The 100-year inundation flood limit and elevation would remain unaltered by implementation of the Proposed Project (Appendix I). As such, impacts to water surface elevation in a watercourse are **less than significant**.

The existing condition and proposed condition peak flows calculated for the 100-year, 24-hour storm event using the SDUH for each of the Project subbasins previously described indicates that there would not be an increase in peak discharge or peak velocities (Appendix I). As such, impacts that result from increased velocities and peak flow rates exiting the Project site that would cause flooding downstream or exceed the stormwater drainage system capacity are **less than significant**.

Because implementation of the Standard SWQMP (and the construction and operational BMPs described therein) is a condition of the major use permit, adverse impacts associated with hydrology would be **less than significant.**

Switchyard

The switchyard is located adjacent to the on-site collector substation. Consistent with the other solar facilities, the switchyard would be subject to rainfall of 3 inches for the 100-year, 6-hour (P_6) storm and 5 inches for the 100-year, 24-hour (P_{24}) storm based on the San Diego County Hydrology Manual. The switchyard would be located outside of the 100-year flood inundation limits. Drainage from the switchyard would flow overland to an existing channel located north of the switchyard. Energy dissipating devices would be used to prevent erosion where drainage from the switchyard flows into the channel. Project conditions following construction of the switchyard are estimated to increase impervious surface by approximately 0.1 acre (of the 60,200 acres in the contributing watershed). On-site grading would not change any of the existing flow patterns and stormwater runoff would flow overland across the Proposed Project site just as it does in the pre-developed state. The 100-year inundation flood limit would remain unaltered by the Proposed Project (Appendix I).

As previously described, a SWPPP would be implemented during the construction phase of the switchyard that would include construction and permanent water quality BMPs to control erosion and sedimentation. Permanent water quality BMPs would be installed and maintained on the switchyard site, per the County of San Diego's BMP Design Manual, and would also be identified in the Project Standard SWQMP developed for the switchyard. The SWQMP would include all BMPs and measures to ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable; and receiving water quality objectives are not violated throughout the life of the Project.

The switchyard has been located outside of the 100-year flood inundation limits which would remain unaltered as a result of Project construction. (Appendix I). As such, impacts to water surface elevation in a watercourse would be **less than significant** for the switchyard.

The existing condition and proposed condition peak flows calculated for the 100-year, 24-hour storm event using the SDUH for each of the Project subbasins previously described indicates that there would not be an increase in surface runoff onsite (Appendix I). An individual analysis was not performed specifically for the switchyard. Based on the Project-level analysis, impacts that result from increased velocities and peak flow rates exiting the switchyard site that would cause flooding downstream or exceed the stormwater drainage system capacity are **less than significant**.

The drainage facilities constructed at the switchyard would include armoring of surfaces and swales to protect critical infrastructure from erosion but not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

Because implementation of the Standard SWQMP and the construction and operational BMPs would be provided for the switchyard, and the switchyard has been designed to maintain existing drainage patterns, adverse impacts associated with hydrology and drainage patterns would be **less than significant**.

2.7.3.2 Flood Hazards

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Hydrology Guidelines (County of San Diego 2007a) apply to both the direct impact analysis and the cumulative impact analysis. These significance guidelines have been developed by the County to address question (d) in the CEQA Guidelines, Appendix G. No projects within the existing unincorporated County are likely to be inundated by a tsunami or seiche. Therefore, the County has not adopted guidelines for tsunami or seiche, and the project can be considered to have no impact with respect to seiche or tsunami.

A significant impact would result if:

- The project would result in placing housing, habitable structures, or unanchored impediments to flow in a 100-year floodplain area or other special flood hazard area, as shown on a FIRM [Flood Insurance Rate Map], a County Flood Plain Map, or County Alluvial Fan Map, which would subsequently endanger health, safety, and property due to flooding. Flooding includes mudflows and debris flows.
- The project would place structures within a 100-year flood hazard or alter the floodway in a manner that would redirect or impede flow resulting in any of the following: a) alter the Lines of Inundation resulting in the placement of other housing in a 100-year flood hazard, or b) increase water surface elevation in a watercourse with a watershed equal to or greater than 1 square mile by 1 foot or more in height and, in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River, and Otay River, 2/10 of a foot or more in height.

Question (d) of Appendix G, Hydrology and Water Quality, of the 2019 CEQA Guidelines determines whether the project would risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

Analysis

Flood hazard analysis has not been conducted by FEMA for the Project site and thus, a federally established flood risk has not been determined. Flow and flooding related to the Project developed upon existing conditions were modeled in relation to the 100-year flood using the SDUH and HEC-RAS (Appendix I). On-site flood depths estimated for a 100-year flood event are greater than six

feet for an area concentrated primarily between Stations 20 and 68, with an average depth of two to three feet across the portion of the Project site subject to flooding. Due to the lack of significant Project alterations of existing hydrological conditions as discussed above, Project development is not projected to substantially increase site nor downstream flooding as documented by the Drainage Study (Appendix I). Furthermore, the project does not propose housing, habitable structures, or public access that would place occupants or the general public at any increased risk of flooding. Thus, **no impacts** would occur.

The Project site is not downstream of a dam and thus would not be subject to inundation in the event of a dam failure; nor is the site subject to seiche or tsunami (due to the great distance to the ocean or large body of water). In addition, the Project site is not within any County-identified flood hazard areas (e.g., alluvial fan flooding area) (County of San Diego 2007a). Thus, **no impacts** would occur.

A Project Design Feature (**PDF HYD-1**), as described in Section 2.7.6, has been be incorporated into the Proposed Project design to ensure that solar panel structures, inverter/transformer platforms, battery storage containers and other electrical components would not be impediments to flow. This Project Design Feature would also avoid damage to Project components.

The only element of the Proposed Project that might locally alter drainage patterns and/or block or redirect flood flows is the perimeter fencing, which would cross ephemeral washes at a perpendicular angle, and potentially trap sediment and detritus during heavy rainfall. Sediment, detritus and/or other debris that becomes trapped on one side of the perimeter fencing during high flows could cause flow to back-up behind the impediment, potentially redirecting and/or concentrating flow outside the boundaries of currently mapped washes. It could result in additional scour and/or sedimentation that would not have otherwise occurred absent the perimeter fencing. For this reason, the impact of the Proposed Project (perimeter fencing element) with respect to altering drainage patterns and/or blocking or redirecting flood flows **would be potentially significant (Impact HYD-1)**.

Switchyard

The switchyard would be located adjacent to the on-site collector substation on the solar facility outside the area identified as being subject to inundation under the 100-year, 24-hour storm. The switchyard site covers approximately 3.2 acres. On-site flood depths estimated for a 100-year flood event are greater than six feet for an area concentrated primarily between Stations 20 and 68, with an average depth of two to three feet across the site. The switchyard has been specifically located outside of areas on the Project site subject to inundation. Based on the Project-level analysis, the switchyard would not result in significant alterations of existing hydrological conditions. The switchyard's development is not projected to increase site nor downstream flooding. As described

in **PDF-HYD-1**, the components of the switchyard have been located above or outside of the 100-year inundation flood limit, and on-site electrical equipment would be placed above or outside this limit. No habitable structures are proposed for the switchyard. The switchyard site is not downstream of a dam and thus would not be subject to inundation in the event of a dam failure; nor is the switchyard site subject to seiche or tsunami (due to the great distance to the ocean or large body of water). In addition, the switchyard site is not within any County-identified flood hazard areas (e.g., alluvial fan flooding area) (County of San Diego 2007a). Therefore, the switchyard component of the Project would not result in the alteration of a floodway or an increase flood depth, nor would it place any habitable structures nor unanchored impediments to flow in a 100-year floodplain area. Therefore, with the implementation of **PDF-HYD-1** the switchyard impacts would be **less than significant**.

2.7.3.3 Surface Water and Groundwater Quality

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Surface Water Quality Guidelines and Groundwater Resources Guidelines (County of San Diego 2007b, 2007c) apply to both the direct impact analysis and the cumulative impact analysis. The following significance guidelines have been developed by the County to address question (a) in the CEQA Guidelines, Appendix G. A significant impact would result if:

- The project is a development project listed in County of San Diego, Code of Regulatory Ordinances (Regulatory Ordinances), Section 67.804(g), as amended and would not comply with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67.
- The project would drain to a tributary of an impaired water body listed on the CWA Section 303(d) List, and would contribute substantial additional pollutant(s) for which the receiving water body is already impaired.
- The project would drain to a tributary of a drinking water reservoir and would contribute substantially more pollutant(s) than would normally run off from the project site under natural conditions.
- The project would contribute pollution in excess of that allowed by applicable state or local water quality objectives or would cause or contribute to the degradation of beneficial uses.
- The project would not conform to applicable federal, state, or local "Clean Water" statutes or regulations including but not limited to the federal Water Pollution Control Act; California

Porter-Cologne Water Quality Control Act; and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance.

- The project would exceed the primary state or federal maximum contaminant levels in groundwater for applicable contaminants.

Question (a) of Appendix G, Section X. Hydrology and Water Quality, of the 2019 CEQA Guidelines determines whether the project would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Analysis

Construction

Construction of the Project would have the potential to result in substantial additional sources of polluted runoff that would have short-term impacts on surface water quality through activities such as clearing and grading, stockpiling of soils and materials, concrete pouring, painting, and asphalt surfacing. Typically, solar facility construction includes equipment such as bulldozers, graders, water trucks, rollers, backhoe/trenching machine, excavator, heavy-duty rock trench, truck-mounted drilling rig, concrete trucks/concrete pumps, cranes, dump trucks, flatbed and low-bed trucks, pickup trucks, small hydraulic cranes, and rough-terrain cranes/forklifts. Pollutants associated with these construction activities that would substantially degrade water quality include soils, debris and other materials generated during clearing, fuels and other fluids associated with the equipment used for construction, paints, concrete slurries, asphalt, and other hazardous materials.

Pollutants associated with construction would degrade water quality if they are mobilized by stormwater or non-stormwater flows into surface waters. Sediment is often the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. Sediment that is washed off site can result in turbidity in surface waters, which can impact aquatic species. In addition, when sediment is deposited into receiving water it can smother species, alter the substrate and habitat, and alter the drainage course. Hydrocarbons such as fuels, asphalt materials, oils, and hazardous materials such as paints and concrete slurries discharged from construction sites could also impact aquatic plants and animals downstream. Debris and trash could be washed into existing storm drainage channels to downstream surface waters and could impact wildlife and aesthetic value. However, as stated in Section 2.7.1 Existing Conditions, the average annual precipitation for the Project area is low at 9.64 inches per year. Therefore, runoff from the Project site is anticipated to be minimal during construction and would likely be concentrated in the ephemeral Boundary Creek, where planned construction is minimal. Though it is recognized that infrequent floods have the potential to inundate portions of the Project site.

Under the NPDES CGP permit program, SWPPPs are prepared and the BMPs identified in the SWPPPs are implemented for construction sites greater than 1 acre to reduce the occurrence of pollutants in surface water. In compliance with applicable construction permits, the Project would implement BMPs that minimize disturbance, protect slopes, reduce erosion, and limit or prevent various pollutants from entering surface water runoff.

The Project's grading plans shall include details on the location and type of BMPs necessary to reduce the potential for Project-induced erosion and scour, including temporary BMPs to be implemented during construction (per the statewide CGP), and permanent BMPs to be installed and maintained (per the County SWQMP). The exact location and type of temporary BMPs to be installed during construction depend on site-specific conditions, construction schedule, and proposed activities, all of which are outlined in the construction SWPPP that has been prepared for the Project. Typical temporary BMPs used for similar projects include energy dissipaters, silt fences, fiber rolls, gravel/sand bags, construction road stabilization, and stabilized construction entrances. As the Project-specific SWPPP is prepared, the location, type, and number of specific BMPs may be refined based on the final designs to most effectively achieve the objective of reducing turbidity and other pollutant loads in stormwater runoff. The provisions of the CGP ensure that site-specific conditions are taken into consideration when developing construction SWPPPs, that personnel developing and implementing construction SWPPPs are qualified, and that BMPs are adequately monitored and maintained.

As stated above, private development projects are required to implement permanent water quality BMP measures to ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable, and receiving water quality objectives are not violated throughout the life of the Project. The Proposed Project's SWQMP would include details of construction and post-construction BMPs to address potential and anticipated water quality impacts. By implementing the pollution control measures to be included in the SWPPP and SWQMP, as well as the appropriate monitoring program included there within, the Proposed Project would limit the possibility of contributing contaminants that might exceed local water quality objectives or contribute to the degradation of beneficial uses. The Project would comply with County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, and the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67.

Impaired Water Body

As discussed in Section 2.7.2, Regulatory Setting, there are no impaired water bodies in the vicinity of the Project site. However, the Project is within the watershed of the Salton Sea, which is an impaired water under CWA Section 303(d). CWA Section 303(d) impairments associated with the Salton Sea include chloride, low dissolved oxygen, nitrogen/ammonia, toxicity, arsenic, nutrients, salinity, chlorpyrifos, DDT, and enterococcus. These are impairments typically associated with

agricultural activities, ranching, and/or surface mining (SWRCB 2016). Stormwater runoff and non-stormwater discharges associated with construction and operation of the Project are unlikely to cause or contribute to water quality impairments related to these impairments as listed on the CWA 303(d) List of Water Quality Limited Segments.

Conceptually, the Project site is hydrologically connected to the Salton Sea because it is within its watershed. However, due to the arid climate and the site's distance away from the Salton Sea (approximately 40 miles), stormwater runoff from the Project site is unlikely to reach these features before infiltrating into the ground or evaporating. The Project would also not likely contribute to sediment loads since the stormwater and authorized non-stormwater discharges from the Project site would represent a negligible fraction of the watershed. Release of trash, sediment, and other construction-related pollutants from the Project site would be controlled and minimized through preparation and implementation of a construction SWPPP and a Standard SWQMP, as previously described.

Drinking Water Reservoirs

The Project site does not drain into a drinking water reservoir. As discussed above, the Project would implement measures to minimize adverse effects to water quality runoff exiting the Project site. Regardless, the amount of water discharged from the Project site in response to local rainfall is negligible when considered in the context of the total discharge from the entire watershed. Therefore, the Project's contribution of pollutants to a hypothetical drinking water reservoir, if any, would not be substantial enough to exceed primary state or federal maximum contaminant levels.

Stormwater Quality

As discussed under Section 2.7.2, the "Regional Hydrology and Drainage" subheading, a range of state and local water quality regulations and ordinances apply to the Project that require the applicant to submit and implement a Project-specific SWPPP during construction and a Standard SWQMP for operation and maintenance activities.

Because the Project would consist of more than one acre, the applicant would be required to submit a Notice of Intent to the SWRCB to obtain approval to carry out construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction-phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the Colorado River RWQCB. The SWPPP would apply to the Project as a whole and would include reference to the major construction areas, temporary materials staging areas, access roads, and work associated with generation tie-line facilities. BMPs to be

implemented in accordance with the SWPPP and the Standard SWQMP would address alteration of drainage patterns, velocity and peak flow rates, and erosion control.

Non-stormwater Discharges

Non-stormwater discharges during construction would include periodic application of water for dust control. Since the practice of dust control is necessary during windy and dry periods to prevent wind erosion and dust plumes, water would be applied in sufficient quantities to wet the soil, but not so excessively as to produce runoff from the construction site. Water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. This means that water applied for dust control is unlikely to appreciably affect groundwater or surface water features, and thus would not cause or contribute to exceedances of water quality objectives contained in the Basin Plan. The proposed use of water from on-site Well #2 and #3 for dust control and grading would occur on an as-needed basis. The majority of the demand would be required during site clearing and grading. The Project is not classified as facility requiring coverage under the General Permit for Storm Water Discharges Associated With Industrial Activities.

Operation and Maintenance

During operations and maintenance activities, non-stormwater discharges would mainly include solar panel washing as well as occasional water application for dust suppression and irrigation of proposed landscaping. As previously described, water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. Similarly, water applied for panel washing would be sufficient to remove accumulated dust from the Project panels. At a rate of 3 AF, four times per year, applied over the solar facility's approximate 643 developed acres, however, this would amount to less than a thousandth of an inch of wash water that might reach the soil. Such a small quantity would most likely not be sufficient to infiltrate to groundwater and would, instead, evaporate from the wetted soil. Landscaping would include native and drought-resistance plants, irrigated by an automated drip irrigation system to limit excess water use. Thus, water applied for panel washing, dust control and irrigation is unlikely to appreciably affect groundwater or surface water features, and thus would have little to no potential to cause or contribute to exceedances of water quality objectives.

The Standard SWQMP prepared as part of the Project includes a description of these activities, their potential to generate non-stormwater discharges, and measures to ensure compliance with the Colorado River Basin Plan, and would be part of obtaining required coverage under WDRs. Therefore, these activities would not violate Basin Plan standards, or otherwise cause a significant threat to water quality.

U.S. Army Corps of Engineers Section 404 Waters

Issues regarding land disturbance within jurisdictional waters and wetlands (i.e., requiring an ACOE Section 404 permit) are discussed in Section 2.3, Biological Resources, of this EIR.

Conclusion

For the previously stated reasons, the Proposed Project would not violate applicable water quality objectives or WDRs, and would comply with all federal, state, and local laws addressing water quality in stormwater and non-stormwater discharges. Therefore, the Project would not exceed the significance thresholds identified earlier, and impacts would be **less than significant**.

Switchyard

Construction of the switchyard would have the potential to result in substantial additional sources of polluted runoff that would have short-term impacts on surface water quality through activities such as clearing and grading, concrete pouring, painting, and asphalt surfacing. Construction equipment would include bulldozers, graders, water trucks, rollers, backhoe/trenching machine, excavator, heavy-duty rock trench, truck-mounted drilling rig, concrete trucks/concrete pumps, cranes, dump trucks, flatbed and low-bed trucks, pickup trucks, small hydraulic cranes, and rough-terrain cranes/forklifts. Pollutants associated with these construction activities that would substantially degrade water quality include soils, debris and other materials generated during clearing, fuels and other fluids associated with the equipment used for construction, paints, concrete slurries, asphalt, and other hazardous materials. Pollutants associated with construction would degrade water quality if they are washed by stormwater or non-stormwater into surface waters. Sediment that is washed off site can result in turbidity in surface waters, which can impact aquatic species. In addition, when sediment is deposited into receiving water it can smother species, alter the substrate and habitat, and alter the drainage course. Hydrocarbons such as fuels, asphalt materials, oils, and hazardous materials such as paints and concrete slurries discharged from construction sites could also impact aquatic plants and animals downstream. However, as stated in Section 2.7.1, Existing Conditions, the average annual precipitation for the Project area is 9.64 inches per year. Therefore, runoff from the switchyard site is anticipated to be minimal during construction and would be concentrated in the ephemeral Boundary Creek, where planned construction is minimal.

The switchyard site is included as a component of the SWPPP prepared for the Project site. The SWPPP identifies all BMPs for the construction that would be implemented to minimize disturbance, protect slopes, reduce erosion, and limit or prevent various pollutants from entering surface water runoff.

The switchyard site is also included in the grading plans prepared for the larger Project site. The grading plans include details on the location and type of BMPs necessary to reduce the potential for Project-induced erosion and scour, including temporary BMPs to be implemented during construction (per the statewide CGP), and permanent BMPs to be installed and maintained (per the County SWMP). Permanent water quality BMP measures would ensure that the development of the switchyard component would not produce pollutant discharges and runoff flows to the maximum extent practicable, and receiving water quality objectives are not violated throughout the life of the Project. The Proposed Project's SWQMP would include details of construction and post-construction BMPs to address potential and anticipated water quality impacts on the switchyard site.

As discussed in Section 2.7.2, Regulatory Setting, there are no impaired water bodies in the vicinity of the Project site. However, the switchyard site is within the watershed of the Salton Sea, which is an impaired water under CWA Section 303(d). Stormwater runoff and non-stormwater discharges associated with construction and operation of the switchyard component of the Project are unlikely to cause or contribute to water quality impairments related to these impairments as listed on the CWA 303(d) List of Water Quality Limited Segments. Also, due to the arid climate and the site's distance away from the Salton Sea (approximately 40 miles), stormwater runoff from the site is unlikely to reach these features before infiltrating into the ground or evaporating.

The switchyard site does not drain into a drinking water reservoir and would implement measures to minimize adverse effects to water quality runoff exiting the site. Therefore, the switchyard's contribution of pollutants to a hypothetical drinking water reservoir, if any, would not be substantial.

As discussed above, the applicant would submit and implement the project-specific SWPPP during construction and a Standard SWQMP for operations and maintenance activities for the Proposed Project. The switchyard component of the Project is included in the SWPPP and Standard SWQMP and would be part of the required Notice of Intent to the SWRCB that the applicant would submit to obtain approval to carry out construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction-phase impacts related to stormwater (and some non-stormwater) discharges, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the SWRCB. BMPs to be implemented in accordance with the SWPPP and the Standard SWQMP would address alteration of drainage patterns, velocity and peak flow rates, and erosion control on the switchyard site.

Non-stormwater discharges during construction would include periodic application of water for dust control. Water applied for dust control would either quickly evaporate or locally infiltrate into

shallow surface soils. This means that water applied for dust control is unlikely to appreciably affect groundwater or surface water features, and thus would have little to no potential to cause or contribute to exceedances of water quality objectives contained in the Basin Plan. The proposed use of water from on-site Wells #2 and #3 for dust control and grading would occur on an as-needed basis. The majority of the demand would be required during site clearing and grading.

During operational and maintenance activities, non-stormwater discharges would include occasional water application for dust suppression. As previously described, water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. The Standard SWQMP prepared for the Proposed Project would include the switchyard component of the Project and would include a description of these activities, their potential to generate non-stormwater discharges, measures to ensure compliance with the Colorado River Basin Plan, and would be part of obtaining required coverage under WDRs. Therefore, these activities would not violate Basin Plan standards, or otherwise cause a significant threat to water quality. The impacts would be **less than significant**.

2.7.3.4 Groundwater Resources

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Groundwater Resources Guidelines (County of San Diego 2007c) apply to both the direct impact analysis and the cumulative impact analysis. The following significance guidelines have been developed by the County to address question (b) in the CEQA Guidelines, Appendix G.

A significant impact would result if:

- The project would reduce the level of groundwater in storage to 50% or less as a result of groundwater extraction, as shown using a soil moisture balance, or equivalent analysis, conducted using a minimum of 30 years of precipitation data, including drought periods.
- For wells installed within an alluvial aquifer, the project would result in a decrease in water level of 5 feet or more in off-site groundwater wells after a 5-year projection of drawdown. If site-specific data indicates alluvium exist which substantiate a saturated thickness greater than 100 feet in off-site wells, a decrease in saturated thickness of 5% or more in the off-site well(s) would be considered a significant impact.
- To evaluate impacts to groundwater-dependent habitat, the project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.
- Question (b) of Appendix G, Hydrology and Water Quality, of the 2019 CEQA Guidelines

determines whether the project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

- Groundwater resources for proposed projects requiring a potable water source must not exceed the Primary State or Federal maximum contaminant levels for applicable contaminants.

The County's significance guidelines applicable to residential projects or subdivision projects involving multiple owners are not included in the analysis below because the Project is a nonresidential project. Furthermore, the Project does not require a potable water source; therefore, the potable groundwater quality guidelines are not applicable. Finally, the Jacumba Valley Groundwater Basin has not been demonstrated to be in overdraft condition; therefore, significance thresholds related to groundwater overdraft conditions are not applicable to the Proposed Project.

Analysis

The total water demand for Project construction is expected to be approximately 140 AF. Annual Project operating demand, post-construction, would be up to 11 acre-feet per year (AFY), with an operational life of 38 years. Additionally, Project decommissioning would require 50 AF at the end of the useful life for dust abatement, equipment washing and compaction.

The source of Project water would be on-site groundwater Well #2 and Well #3 (see Figure 9, Onsite and Offsite Wells in the Groundwater Investigation Report), which produce groundwater from the alluvial aquifer within the Jacumba Valley Groundwater Basin, as discussed in the Project's Groundwater Resources Investigation (Appendix J). Water-bearing formations in the Jacumba Valley include alluvium and the underlying Table Mountain Formation (DWR 2016). The alluvial material consists of unconsolidated gravel, sand, and clay deposits; and the Table Mountain Formation consists of medium to coarse-grained sandstone and conglomerate overlying crystalline bedrock (DWR 2004; Swenson 1981). The main sources of recharge to the Basin are stream recharge, rainfall recharge, and applied water return flows. Recharge from runoff in Flat Creek and Boundary Creek was calculated to be approximately 2,700 AFY by Swenson (1981).

JCSD relies solely on groundwater as a source of water supply and is responsible for the community of Jacumba's domestic water system, which currently provides service to approximately 239 homes and commercial properties. At present, JCSD's potable water system has two existing domestic water supply wells in use, Well #7 and Well #8. Based on the number of connections and an estimated 0.5 AFY per connection, JCSD potable water demand is estimated to be 119.5 AFY. This estimate roughly coincides with average historical water demand from 1991 to 1995 (average 119 AFY), and conservatively overestimates more recent production data from 2013, 85 AF. In addition to JCSD potable water demand, the Groundwater Resources Investigation

assumed a consumptive use of 3 AFY for unidentified private domestic wells located in the basin (Appendix J).

JCSD also supplies non-potable water for commercial sale. Historically, JCSD has supplied non-potable water from Well #6, a fractured rock well not screened in the Jacumba Valley alluvium. Beginning in 2016, JCSD began supplying non-potable water from the Highland Center Well and the Park Well, both screened in the Jacumba Valley alluvium. Maximum annual groundwater extraction from the Jacumba Valley alluvial aquifer by JCSD for non-potable water use is 53.6 AFY.

Based on a constant rate pumping test conducted by Dudek in December 2018, the estimated production rate for Well #2 is approximately 317 gpm (Appendix J). A constant rate pumping test conducted by Geosyntec in 2012 estimated the production rate for Well #3 at approximately 350 gpm (Geosyntec 2012).

County Threshold of 50% Reduction in Groundwater Storage

An updated estimate of groundwater in storage was completed, based on previous work conducted by Roff and Fanzone (1994) and Swenson (1981). The updated analysis including methodology, calculations and results are presented in greater detail in the Groundwater Resources Investigation Report for the Proposed Project prepared by Dudek in 2020 (Appendix J to this EIR). Based on these calculations in Appendix J, current groundwater in storage within the Jacumba Valley alluvial aquifer is estimated to be 9,005 AF. This falls between the estimates of Roff and Fanzone (2004; 9,600 to 16,000 AF) and Swenson (1981; 3,200 to 6,400 AF). This shows that, even in a year with no recharge, the total depletion in groundwater in storage as a result of Project construction would be 1.6% of total storage, which is substantially less than the 50% reduction in storage County threshold. The maximum estimated demand of all known groundwater extractors, including the Proposed Project, from the alluvial aquifer is 442 AF, or 4.9% of estimated storage. This would be a one-time amount, which includes the construction water for the Proposed Project. Future ongoing water demand from the alluvial aquifer is estimated to be only 30.3 AFY following Project construction since the completion of JCSD Wells No. 7 and 8 which will draw from the fractured rock aquifer.

Assuming a Project water use horizon of 40 years (1 year of construction, 38 years of operations and maintenance, and 1 year of decommissioning), the Proposed Project would use 619 AF of water. This equates to a 6.8% reduction in storage from Project groundwater extraction over 40 years, conservatively assuming no recharge to the aquifer, which would not exceed the County threshold of 50% reduction in groundwater storage (Appendix J).

Well Interference and Groundwater-Dependent Ecosystems

A pumping rate of 317 gpm from the Well #2 aquifer test and of 350 gpm from the Well #3 aquifer test were used to predict Project drawdown using each well's maximum pumping rate (Appendix J) These pumping rates equate to maximum annual production of approximately 511 AFY from Well #2 and 564 AFY from Well #3, which are significantly greater than the Project water demand of 140 AF of water during Project construction (1 year), 11 AFY for ongoing operations and maintenance (38 years), and 50 AF for decommissioning and dismantling (1 year).

To assess the potential for Project groundwater extraction to draw down the groundwater table to the detriment of nearby groundwater-dependent habitat, or to cause well interference, projected drawdown within a 0.5-mile radius of Well #2 and Well #3 was estimated using the Theis equation. Periods of 90 days, 1 year, and 5 years were used to calculate the potential long-term impacts to nearby groundwater dependent habitats and domestic and public pumping wells. Pumping rates for each well were adjusted to reach total Project construction demand at the end of 90 days, 1 year, and 5 years.

Based on the drawdown calculations performed, drawdown at the closest off-site groundwater well to Well #2 , the Highland Center Well, after 90 days, 1 year, and 5 years of pumping is predicted to be 1.08 feet, 0.34 feet, and 0.08 feet, respectively. Drawdown at the nearest groundwater-dependent habitat to Well #2 (located approximately 1,820 feet south) after 90 days, 1 year, and 5 years of pumping is predicted to be 1.08 feet, 0.34 feet, and 0.08 feet, respectively.

No groundwater wells are located within a 0.5-mile radius of Well #3. The nearest off-site production well is Well KM, located 3,548 feet (greater than 0.5 miles) southwest of Well #3. The projected drawdown at Well KM from Well #3 pumping after 90 days, 1 year, and 5 years is predicted to be 0.15 feet, 0.17 feet, and 0.08 feet, respectively. Drawdown at the nearest groundwater-dependent habitat to Well #3(located approximately 140 feet west) after 90 days, 1 year, and 5 years of pumping is predicted to be 3.66 feet, 0.17 feet, and 0.08 feet, respectively.

Current groundwater levels near Well #2 and Well #3 are at least 12 feet higher than the historical low groundwater level recorded in the Jacumba Valley alluvial aquifer (see Appendix J, specifically Exhibit 2, Well K3). Drawdown related to pumping from Well # 2 and Well #3 is not expected to exceed 3 feet from the historic low.

Based on these methods, the effects of Project pumping on nearby groundwater-dependent vegetation and off-site domestic and public pumping wells are anticipated to be less than significant. Project pumping is not anticipated to adversely impact nearby groundwater-dependent vegetation or cause well interference. Additionally, the analysis performed is a conservative approach, since it likely overestimated predicted drawdown. This is because the calculations

assumed no rainfall recharge to occur over the time periods tested. Recharge would offset groundwater-level decline related to groundwater extraction during periods of above-average annual rainfall (non-drought conditions).

Since actual conditions during groundwater extraction may vary from theoretical analysis, a Groundwater Monitoring and Mitigation Plan (GMMP) is a typical condition of approval for by the County for utility scale renewable projects that are groundwater dependent. The GMMP ensures that pumping does not significantly impact existing well users and groundwater dependent habitat. Thus, the Proposed Project includes a GMMP as project design feature **PDF-HYD-2** (see Section 2.7.6 and Appendix A of the Groundwater Investigation Report). With the implementation of **PDF-HYD-2**, the total volume and rate of groundwater extracted from Well #2 and Well #3 would be monitored and documented throughout the duration of the Proposed Project pumping. The implementation of **PDF-HYD-2** would also provide for monitoring of the overall groundwater level in the Proposed Project area.

Groundwater Conclusion

During operation of the Project, water demand would not exceed the threshold of 50% reduction in groundwater storage, nor would the Project result in well interference above significance criterion or significantly impact groundwater-dependent ecosystems. In addition, a GMMP has been prepared and included in the Proposed Project as **PDF-HYD-2**. The GMMP details groundwater thresholds for off-site well interference and groundwater-dependent habitat, so with the implementation of **PDF-HYD-2**, groundwater-level monitoring would be performed in several wells to record groundwater levels during groundwater extraction. Therefore, impacts to groundwater as a result of the Proposed Project would be **less than significant**.

Switchyard

The switchyard component of the Proposed Project would be constructed along with the other components of the Project; therefore, this component is part of the approximately 140 AF that would be required for the Project's construction. As discussed above, the Groundwater Resources Investigation Report (Appendix J) found that the current groundwater in storage within the Jacumba Valley alluvial aquifer is estimated to be 9,005 AF, and that the total depletion in groundwater in storage as a result of the Proposed Project's construction would be substantially less than the 50% reduction in storage County threshold even assuming no recharge to the aquifer.

Annual switchyard operating demand, post-construction, would be approximately 0.01 AF of water annually, which is such a minimal amount of AF that it would not exceed the County threshold of 50% reduction in groundwater storage assuming no recharge to the aquifer. The pumping rates from onsite wells equate to maximum annual production of approximately 511 AFY

from Well #2 and 564 AFY from Well #3, which are significantly greater than the switchyard's water demand of 0.01 AF of water for ongoing operations and maintenance. In addition, the effects of switchyard's operation on nearby groundwater-dependent vegetation and off-site domestic and public pumping wells is so minimal that it is anticipated that it would not interfere or impact groundwater-dependent ecosystems. Therefore, impacts to groundwater as a result of the proposed switchyard component of the Project would be **less than significant**.

2.7.3.5 Water Planning

Guidelines for the Determination of Significance

The 2019 updates of the CEQA Guidelines contain an additional threshold in the Hydrology and Water Quality section that did not exist at the time of the establishment of the County of San Diego Guidelines. Thus, for the purpose of this EIR, question (e) of Appendix G of the 2019 CEQA Guidelines shall be applied to both the direct impact analysis and the cumulative impact analysis. Question (e) of Appendix G, of the 2019 CEQA Guidelines determines whether the Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Analysis

The Project site overlies the Jacumba Valley Groundwater Basin, DWR Basin No. 7-47 (DWR 2016). DWR, however, has designated the Basin as very low priority (DWR 2019). Thus, the Basin and groundwater extracted from the Basin would not be subject to a groundwater sustainability plan, mandated by the Sustainable Groundwater Management Act for DWR basins determined to be of medium to high priority.

As noted above, the Project is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from leaving the site by runoff. Through compliance with RWQCB requirements and a NPDES permit, implementation of a SWPPP, and coordination with the ACOE for any applicable permits, the Project would not conflict with or obstruct implementation of the Colorado River Basin Water Quality Control Plan (Basin Plan). Impacts would be **less than significant**.

Switchyard

The switchyard component of the Project overlies the Jacumba Valley Groundwater Basin, DWR Basin No. 7-47 (DWR 2016). As discussed above, DWR has designated the Basin as very low priority (DWR 2019). Thus, the Basin and groundwater extracted from the Basin would not be subject to a groundwater sustainability plan, mandated by the Sustainable Groundwater Management Act for DWR basins determined to be of medium to high priority. The switchyard component of the Project is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential

contaminants from leaving the site by runoff. Through compliance with RWQCB requirements and a NPDES permit, and implementation of a SWPPP, the switchyard would not conflict with or obstruct implementation of the Colorado River Basin Water Quality Control Plan (Basin Plan). Impacts from the switchyard would be **less than significant**.

2.7.4 Cumulative Impact Analysis

The geographic scope of cumulative effects on hydrology and water quality differs somewhat depending on the issue being addressed. The geographic scope for surface water quality and hydrology is typically watershed-based, whereby projects contributing flow to the same water bodies as the Proposed Project would be considered. For groundwater impacts, the geographic scope of cumulative effects would be the groundwater aquifer affected by the Proposed Project.

Project impacts to both surface water and groundwater resources were found to be less than significant. In the cumulative context, for wells within the same sub-basin, each well's extraction adds to the cumulative drawdown of the basin as a whole, even if the volume relative to total basin storage is negligible or minor. Projects considered in the cumulative scenario include other known utility-scale renewable energy projects supplied non-potable water by JCSD.

2.7.4.1 Hydrology, Drainage Patterns, and Water Quality

In the absence of regulatory controls, the primary impact of the Proposed Project in the cumulative scenario would be alteration of the natural hydrology of the region through increases in the area covered by impervious surfaces, development of access driveways and utility corridors, and the release of non-point-source pollutants (e.g., motor fuels, trash, sediment). The typical impact of substantial increases in impervious surfaces is that peak flows within the watershed's drainages are greater in magnitude, shorter in duration, and more responsive to storm events, since a greater portion of precipitation is carried by surface runoff rather than percolated into the soil. New roads and/or transmission line corridors can often block or redirect stormwater flows if improperly designed. These impacts are undesirable with respect to flood hazards, water quality, and habitat quality.

However, the Drainage Report (Appendix I) determined that the Proposed Project would produce approximately 1.9 acres (0.0030 square miles) of impervious area. The impervious area would include the proposed photovoltaic tracker pile areas, inverter skid platforms, the battery energy storage areas and the additional substation and switchyard pads. The proposed all weather access road would remain pervious. The Drainage Report determined that the additional impervious area represents 0.0027% of the watershed that is contributing to the stream passing through the proposed site. This increase in impervious area constitutes a small enough area that would not change the overall drainage pattern. The water runoff would flow overland across the Project site in a similar manner as it does in the pre-developed state. Thus, the additional impervious area would have minimal to no impact on existing watershed hydrologically (Appendix I).

In addition, the Proposed Project, along with other projects occurring in the area, would be required to comply with applicable federal, state, and local water quality regulations. The Proposed Project, along with other projects of greater than one acre (which includes most of the projects in the cumulative scenario), would be required to obtain coverage under the NPDES CGP, which requires project proponents to identify and implement stormwater BMPs that effectively control erosion and sedimentation and other construction-related pollutants. Further, nearly all projects identified in the cumulative scenario would meet the definition of "new development and redevelopment projects" under the San Diego County MS4 Permit. Such projects are required to implement site design; source control; and, in some cases, treatment control BMPs to control the volume, rate, and water quality of stormwater runoff from the Project during long-term operations. This is implemented locally by the County by requiring new development projects to submit and implement a SWQMP. In addition, the only potential impact caused by the Proposed Project (potential alteration of drainage patterns and flood flows by the perimeter fence)) is localized in nature and would not compound any other watershed impacts.

Therefore, the hydrology, drainage patterns and water quality impacts **would not be cumulatively considerable**.

2.7.4.2 Flood Hazards

Flood hazard analysis has not been conducted by FEMA for the Project site, nor much of the surrounding areas, and thus, a federally established flood risk has not been determined. The Project site is not located within a 100-year floodplain area or other special flood hazard area as shown on a Flood Insurance Rate Map, a County Flood Plain Map, or County Alluvial Fan Map. In addition, no dams located upstream of the Proposed Project site nor surrounding project sites have been identified and thus these projects would not be subject to inundation in the event of a dam failure. Also, these sites would not be subject to seiche or tsunami (due to the great distance to the ocean or large body of water).

Flood hazard of the Proposed Project was evaluated in the Drainage Report (Appendix I) using SDUH and HEC-RAS to estimate on-site flood inundation limits and depths for a 100-year flood 24-hour storm. The report determined that depths for a 100-year flood event are greater than six feet for an area concentrated primarily between Stations 20 and 68, with an average depth of two to three feet across the portion of the Project site subject to flooding. The Proposed Project would implement **PDF-HYD-1** which avoids localized impediments to flow and damage to Project components by placing on-site electrical equipment above or outside the limit of the 100-year flood hazard zone. Therefore, with the implementation of **PDF-HYD-1**, the Proposed Project would not contribute to any cumulative alteration of a floodway or increase flood depths and would not place any habitable structures nor unanchored impediments to flow in a 100-year floodplain area. In addition, the only potential impact caused by the Proposed Project (potential alteration of drainage

patterns and flood flows by the perimeter fence)) is localized in nature and would not compound any other watershed impacts. Therefore, the Proposed Project, along with other projects occurring in the area, would not cumulatively contribute to the alteration of a floodway, nor increased flood depth, and impacts **would not be cumulatively considerable**.

2.7.4.3 Surface Water and Groundwater Quality

The various NPDES permits required are aimed at maintaining the beneficial uses of the water bodies discussed in the RWQCB Basin Plan, and meeting water quality objectives associated with specific pollutants of concern. Because adverse water quality and major hydrologic alterations are linked to large-scale development projects and industrial and agricultural land uses, the provisions within the various NPDES permits seek to address cumulative conditions. Additionally, depending on the location and nature of individual projects in the cumulative scenario, they would be required to comply with County ordinances, as described in the Regulatory Setting above. These federal, state, and local regulations would ensure that the Proposed Project's impacts to hydrologic resources and water quality **would not be cumulatively considerable**.

2.7.4.4 Groundwater Resources

According to the County Groundwater Guidelines, off-site well interference would be considered a significant impact if, after a 5-year projection of drawdown, the results indicate a decrease in water level of 5 feet or more in off-site wells (County of San Diego 2007c). As detailed in Appendix J of this EIR, the total estimated drawdown after 5 years with 1 year of construction pumping and 4 years of operations and maintenance pumping was estimated at 0.08 feet at the nearest off-site well to Well #2 and 0.08 feet for Well #3. Therefore, groundwater extraction interference with off-site wells **would not be cumulatively considerable**

The analysis completed in the Groundwater Resource Investigation Report to evaluate the cumulative impacts of pumping to supply construction water included all current and future projects with an appreciable water demand within the watershed study area, and therefore constitutes a cumulative impact analysis (Appendix J). The groundwater resources analysis incorporated historical climate data, which includes historical periods of increased rainfall and periods of extended drought. The results of this analysis concluded that reduction in groundwater storage, well interference impacts, and impacts to groundwater-dependent habitat and water quality would be less than significant. In addition, other renewable projects occurring in the area, would be required to prepare a GMMP similar to the Proposed Project that would ensure that groundwater-level monitoring would be performed in groundwater wells and that groundwater levels would be recorded during groundwater extraction. Therefore, the Proposed Project, along with other projects occurring in the area, **would not be cumulatively considerable**.

2.7.4.5 Water Planning

The Project site overlies the Jacumba Valley Groundwater Basin, which would not be subject to a groundwater sustainability plan, mandated by the SGMA. As noted above, the Proposed Project is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from leaving the site by runoff. All projects in the general vicinity of the Proposed Project would equally be required to comply with these regulations and standards and thus, through compliance with RWQCB requirements and a NPDES permit, implementation of a SWPPP, and coordination with the ACOE for any applicable permits, the Project would cumulatively conflict with or obstruct implementation of the Colorado River Basin Water Quality Control Plan (Basin Plan).

For these reasons, impacts of the Project on applicable water planning document (i.e., Basin Plan and/or groundwater sustainability plan) **would not be cumulatively considerable**.

2.7.5 Significance of Impact Prior to Mitigation

Hydrology and Drainage Patterns

The Proposed Project would result in an increase of 1.9 acres of impervious surfaces, and thus would not result in substantial changes to the rate, volume, and location of stormwater runoff. The Proposed Project would avoid the Carrizo Wash and Boundary Creek watercourses that run through the Project site. The Project would also implement the required Standard SWQMP, SWPPP, and requirements to obtain permits from the ACOE and RWQCB pursuant to the CWA.

Impacts to water surface elevation in a watercourse are **less than significant**. Impacts that result from increased velocities and peak flow rates exiting the Project site that would cause flooding downstream or exceed the stormwater drainage system capacity are also **less than significant**. Because implementation of the Standard SWQMP (and the construction and operational BMPs described therein) is a condition of the major use permit, adverse impacts associated with hydrology would be **less than significant.**

The only element of the Proposed Project that might locally alter drainage patterns, is the perimeter fence which would cross ephemeral washes at a perpendicular angle, and potentially trap sediment and detritus during heavy rainfall. Sediment, detritus and/or other debris that becomes trapped on one side of the perimeter fencing during high flows could cause flow to back-up behind the impediment, and potentially alter drainage patterns (**Impact HYD-1**).

Flood Hazards

The Project site is not located within a 100-year floodplain area or other special flood hazard area as shown on a Flood Insurance Rate Map, a County Flood Plain Map, or County Alluvial Fan Map. In addition, the Project site is not downstream of a dam or located in an area likely to be affected by mudflows or debris flows. The Project also does not propose any habitable structures. Thus, under this guideline, **no impacts** would occur.

A Project Design Feature (**PDF HYD-1**), as described in Section 2.7.6, has been be incorporated into the Proposed Project design to ensure that solar panel structures, inverter/transformer platforms, battery storage containers and other electrical components would not be impediments to flow. The only element of the Proposed Project that might locally alter drainage patterns and/or block or redirect flood flows is the perimeter fencing, which would cross ephemeral washes at a perpendicular angle, and potentially trap sediment and detritus during heavy rainfall. Sediment, detritus and/or other debris that becomes trapped on one side of the perimeter fencing during high flows could cause flow to back-up behind the impediment, potentially redirecting and/or concentrating flow outside the boundaries of currently mapped washes. It could result in additional scour and/or sedimentation that would not have otherwise occurred absent the perimeter fencing. For this reason, the impact of the Proposed Project (perimeter fencing element) with respect to altering drainage patterns and/or blocking or redirecting flood flows **would be potentially significant (Impact HYD-1)**.

Surface Water and Groundwater Quality

The Proposed Project would have a less than significant impact with respect to water quality because (1) the Proposed Project would not directly discharge to an impaired water body; (2) construction and operational sources of pollutants, including sediment, trash, and fuels, would be addressed through implementation of both a SWPPP and a Standard SWQMP for the Proposed Project; (3) the Project site does not drain to a drinking water reservoir in the United States; (4) the potential non-stormwater discharges associated with the Proposed Project would require approval from the Colorado River RWQCB or the SWRCB (General WDRs for Discharges to Land with a Low Threat to Water Quality); and (5) adverse effects to groundwater quality would not occur because potential threats to groundwater quality as a result of construction, operation, and maintenance of the Proposed Project would be addressed through compliance with a construction SWPPP during construction and an operational SWPPP during the operating life. Therefore, with compliance of existing regulations the Proposed Project would result in **less-than-significant impacts** to surface water and groundwater quality.

Groundwater Resources

During operation of the Project, water demand would not exceed the threshold of 50% reduction in groundwater storage, nor would the Project result in well interference above significance criterion or significantly impact groundwater-dependent ecosystems. In addition, a GMMP has been prepared and included in the Proposed Project as **PDF-HYD-2**. The GMMP details groundwater thresholds for off-site well interference and groundwater-dependent habitat, so with the implementation of **PDF-HYD-2**, groundwater-level monitoring would be performed in several wells to record groundwater levels during groundwater extraction. Therefore, impacts to groundwater as a result of the Proposed Project would be **less than significant**.

Water Planning

The Project site overlies the Jacumba Valley Groundwater Basin, DWR Basin No. 7-47 (DWR 2016). DWR, however, has designated the Basin as very low priority (DWR 2019). Thus, the Basin and groundwater extracted from the Basin would not be subject to a groundwater sustainability plan, mandated by the Sustainable Groundwater Management Act for DWR basins determined to be of medium to high priority.

The Project is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from leaving the site by runoff. Through compliance with RWQCB requirements and a NPDES permit, implementation of a SWPPP, and coordination with the ACOE for any applicable permits, the Project would not conflict with or obstruct implementation of the Colorado River Basin Water Quality Control Plan (Basin Plan). Impacts would be **less than significant**.

Cumulative Impacts

All cumulative impacts would **not be cumulatively considerable**.

2.7.6 Mitigation Measures and Project Design Features

Mitigation Measures

M-HYD-1 Prior to approval of final design plans, the applicant shall demonstrate to the satisfaction of the County DPW Flood Control through hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that the design features for the perimeter fencing avoids the blockage and/or redirection of storm flows resulting from the accumulation of debris and/or detritus at wash crossings. This can be accomplished through a number of means such as a) use of breakaway fencing perpendicular to flood flows, b) use of fencing that spans washes (without

posts) above the anticipated peak flow depth, c) or an alternative design measure that would avoid accumulations of detritus at perimeter fence wash crossings, subject to County approval.

Documentation: The applicant shall show the proposed fencing design or alternative design measure on the Final Grading Plans. The associated Drainage Study shall contain hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that model the proposed fencing and/or design measures and demonstrate that the fencing will not cause alteration of drainage patterns and/or flood hazards from pre-project conditions. The Drainage Study shall be in compliance with the County Hydrology Manual and the County Hydraulic Design Manual.

Timing: Prior to the approval of any grading and/or improvement plans and issuance of Grading or Construction Permits, the Drainage Study and Plans shall be approved.

Monitoring: The County DPW Flood Control shall review and approve the hydrologic and hydraulic analyses contained in the Drainage Study and the final fencing design and layout to ensure the flood flow is fully mitigated to pre-project conditions.

Project Design Features

PDF-HYD-1: Prior to approval of final design plans, the County DPW shall verify that all project components located within the 100 year floodplain shall comply with the County of San Diego Flood Damage Prevention Ordinance, County Hydrology Manual, and County Hydraulic Design Manual, which includes elevating all solar panels at maximum tilt, inverter/transformer platforms, battery storage containers, and all electrical components one (1) foot above base flood elevation.

PDF-HYD-2 **Groundwater Monitoring and Mitigation Plan.** During groundwater extraction for the Proposed Project's construction and operation, the applicant shall implement the groundwater production and groundwater-level monitoring, groundwater mitigation criteria and, if necessary, the groundwater-habitat monitoring procedures outlined in the Groundwater Monitoring and Mitigation Plan that has been prepared for the Proposed Project

2.7.7 Conclusion

Hydrology and Drainage Patterns

Impacts to water surface elevation in a watercourse and impacts that result from increased velocities and peak flow rates would be **less than significant**. Because implementation of the Standard SWQMP (and the construction and operational BMPs described therein) is a condition of the Major Use Permit, adverse impacts associated with hydrology would be **less than significant.**

Sediment, detritus and/or other debris that becomes trapped on one side of the proposed perimeter fencing during high flows could cause flow to back-up behind the impediment, and potentially alter drainage patterns (**Impact HYD-1**). With implementation of mitigation measure **M-HYD-1** (perimeter fence design), this impact would be reduced to **less than significant**.

Flood Hazards

The Project site is not located within a 100-year floodplain area or other special flood hazard area as shown on a Flood Insurance Rate Map, a County Flood Plain Map, or County Alluvial Fan Map. In addition, the Project site is not downstream of a dam or located in an area likely to be affected by mudflows or debris flows. The Project also does not propose any habitable structures. Thus, under this guideline, **no impacts** would occur.

A Project Design Feature (**PDF HYD-1**), as described in Section 2.7.6, has been be incorporated into the Proposed Project design to ensure that solar panel structures, inverter/transformer platforms, battery storage containers and other electrical components would not be impediments to flow. The only element of the Proposed Project that might locally alter drainage patterns and/or block or redirect flood flows is the perimeter fencing. The impact of the perimeter fencing element with respect to altering drainage patterns and/or blocking or redirecting flood flows would be potentially significant **(Impact HYD-1)**. With implementation of mitigation measure **M-HYD-1**, this impact would be reduced to **less than significant.**

Surface Water and Groundwater Quality

The Proposed Project would not violate applicable water quality objectives or WDRs, and would comply with all federal, state, and local laws addressing water quality in stormwater and non-stormwater discharges. Therefore, the Project would not exceed the significance thresholds identified earlier, and impacts would be **less than significant**.

Groundwater Resources

During operation of the Project, water demand would not exceed the threshold of 50% reduction in groundwater storage, nor would the Project result in well interference above significance criterion or significantly impact groundwater-dependent ecosystems. In addition, a GMMP has been prepared and included in the Proposed Project as Project Design Feature **PDF-HYD-2**. The GMMP details groundwater thresholds for off-site well interference and groundwater-dependent habitat, so with the implementation of **PDF-HYD-2**, groundwater-level monitoring would be performed in several wells to record groundwater levels during groundwater extraction. Therefore, impacts to groundwater as a result of the Proposed Project would be **less than significant**.

Water Planning

Through compliance with RWQCB requirements and a NPDES permit, implementation of a SWPPP, and coordination with the ACOE for any applicable permits, the Project would not conflict with or obstruct implementation of the Colorado River Basin Water Quality Control Plan (Basin Plan). Impacts would be **less than significant**.

Cumulative Impacts

All cumulative impacts would **not be cumulatively considerable**.

Table 2.7-1
Beneficial Uses of Waters within the General Vicinity of the Proposed Project

	MUN[a]	AGR	IND	GWR	REC 1	REC 2	WARM	WILD	RARE
Surface Water									
Carrizo Creek		X		X	X	X	X	X	X
Boundary Creek	P	X		X	X	X	X	X	
Unlisted Perennial and Intermittent Streams	P			I X	I PX	I X	I X	I X	[b]
Washes (ephemeral streams)				I	I	I	[c]	I	
Groundwater									
Anza-Borrego Hydrologic Unit	X[d]	X	X						

Source: Colorado River RWQCB 2017.

Notes: X = existing beneficial uses; P = potential uses; I = intermittent uses.

[a] Refer to Table 2.7-2 for definition of abbreviations.

[b] Rare, endangered, or threatened wildlife may exist in or utilize some of these waterways. If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Wildlife on its own initiative and/or at the request of the applicable RWQCB; and such substantiation must be provided within a reasonable time frame as approved by the RWQCB.

[c] Use, if any, to be determined on a case-by-case basis.

[d] An "X" placed under the MUN in this table for a particular hydrologic unit indicates only that at least one of the aquifers in that unit currently supports a MUN beneficial use. For example, the actual MUN usage of the Anza-Borrego hydrologic unit is limited only to a small portion of that ground water unit.

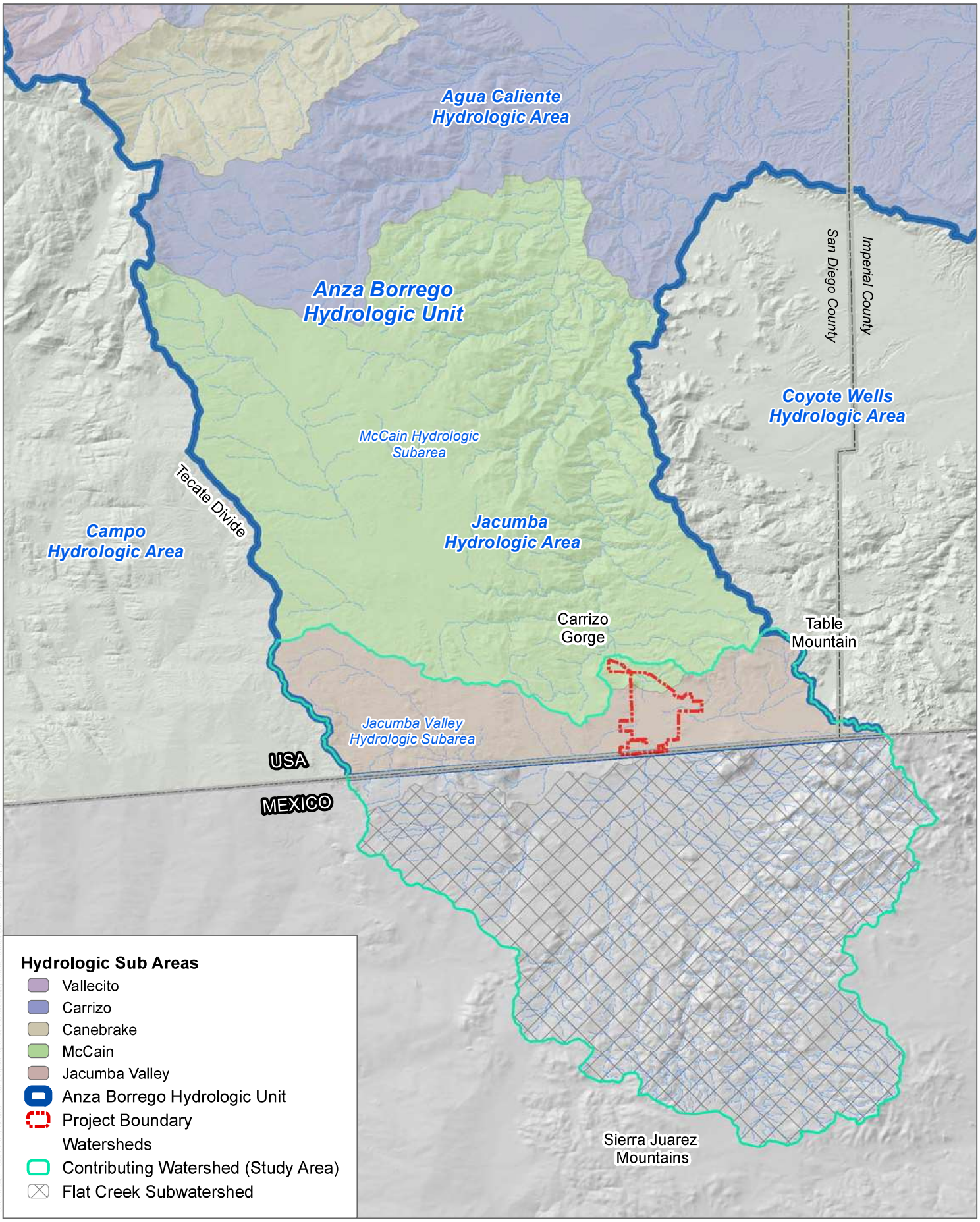
Table 2.7-2
Definitions of Beneficial Uses of Surface Waters

Beneficial Use	Description
Municipal and Domestic Supply (MUN)	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Agricultural Supply (AGR)	Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
Industrial Service Supply (IND)	Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
Groundwater Recharge (GWR)	Uses of water for natural or artificial recharge or groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
Water Contact Recreation (REC 1)	Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white-water activities, fishing, or use of natural hot springs.
Non-contact Water Recreation (REC 2)	Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
Warm Freshwater Habitat (WARM)	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

Table 2.7-2
Definitions of Beneficial Uses of Surface Waters

Beneficial Use	Description
Wildlife Habitat (WILD)	Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Rare, Threatened, or Endangered Species (RARE)	Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

Source: Colorado River RWQCB 2017.



SOURCE: RWQCB

DUDEK

0 2 4 Miles

FIGURE 2.7-1

RWQCB Hydrologic Areas

Environmental Impact Report - JVR Energy Park

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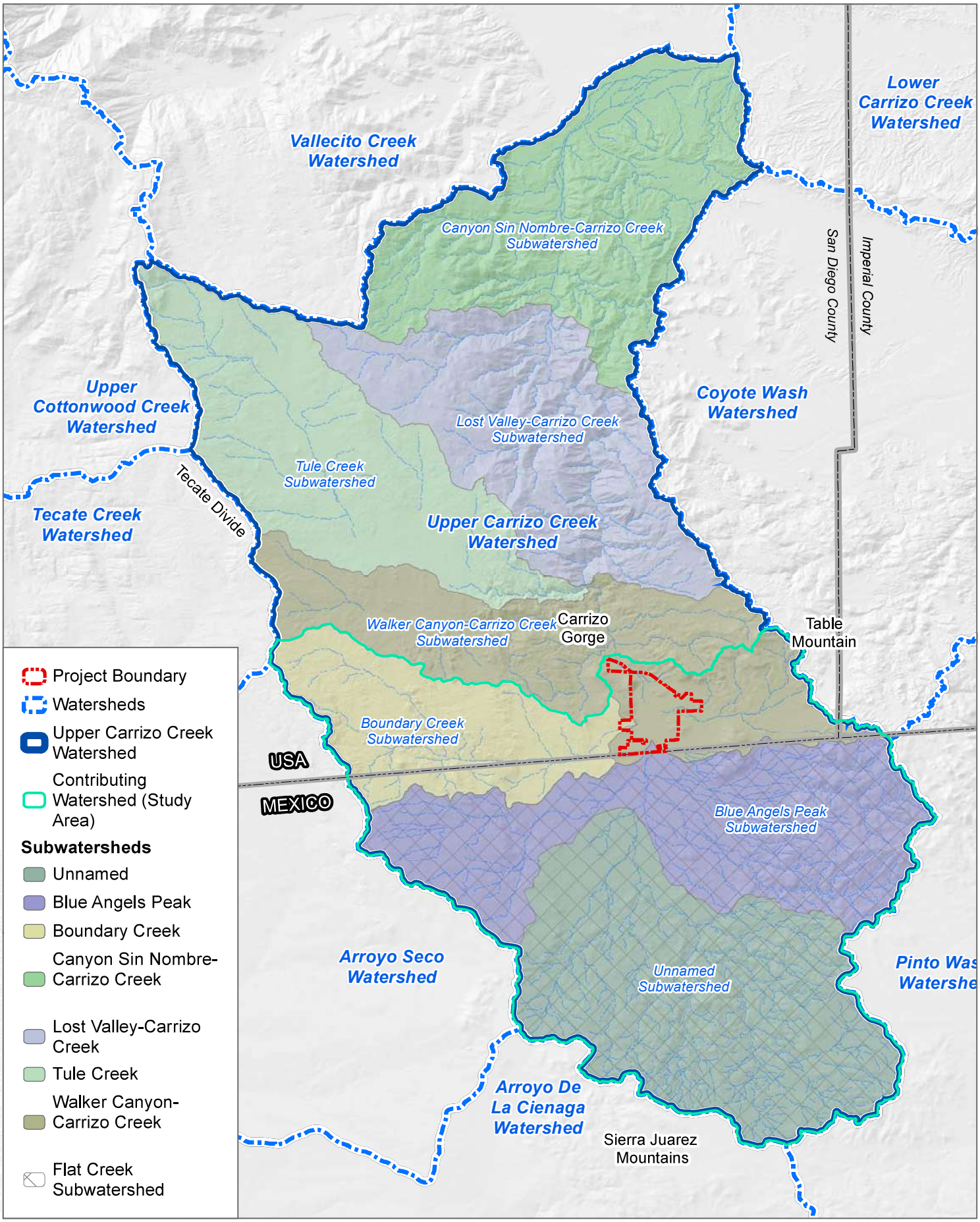

SOURCE: USGS

DUDEK

0 2 4 Miles

FIGURE 2.7-2

USGS Watersheds

Environmental Impact Report - JVR Energy Park

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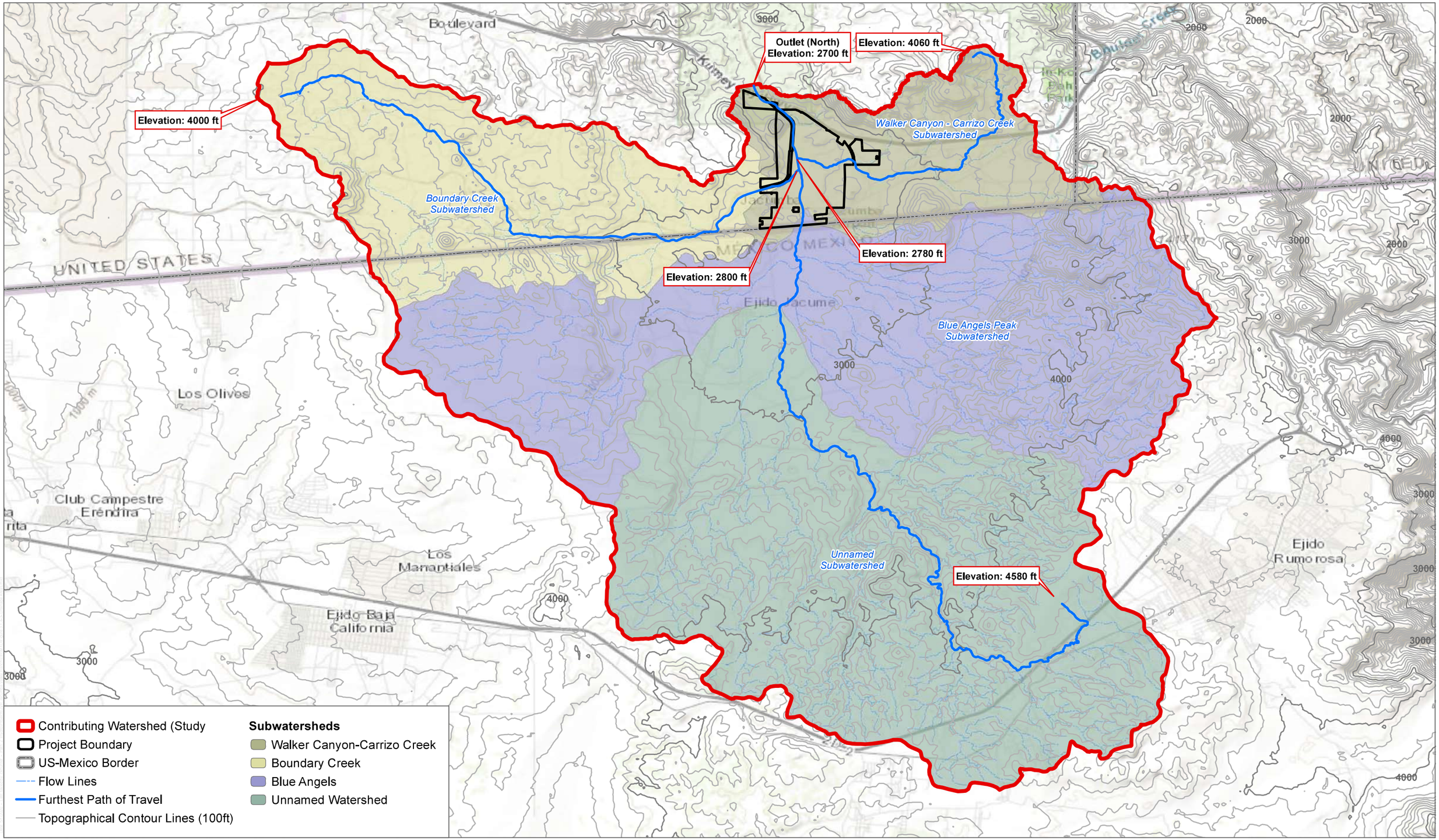

SOURCE: USGS

DUDEK

0 4,200 8,400 Feet

FIGURE 2.7-3

Drainage Areas

Groundwater Resources Investigation - JVR Energy Project

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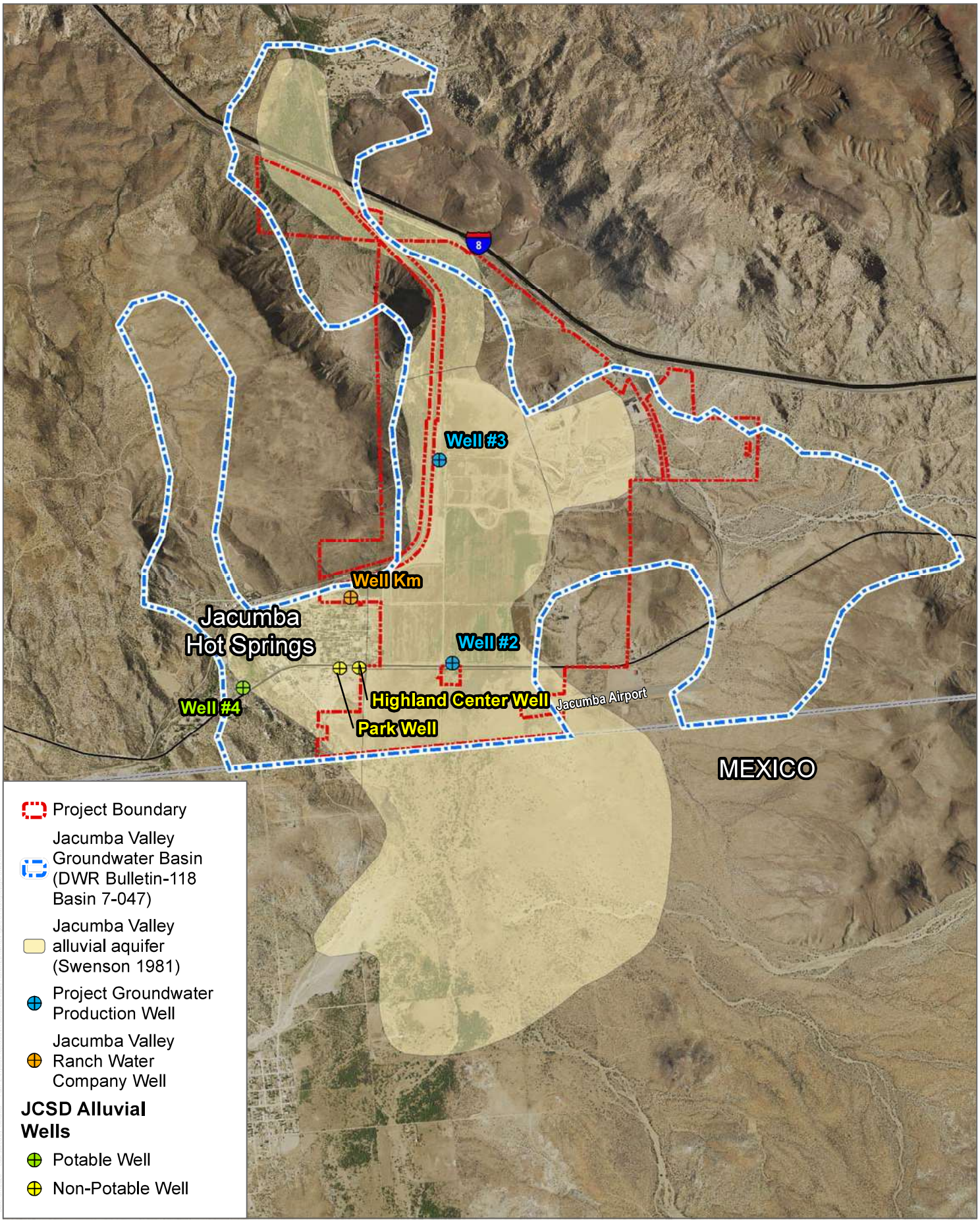

SOURCE: DWR, Swenson

DUDEK

0 0.5 1 Miles

FIGURE 2.7-4

Hydrogeologic Units

Environmental Impact Report - JVR Energy Park

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2.8 Mineral Resources

This section describes the existing setting of the Project site, identifies associated regulatory requirements, and evaluates potential impacts to mineral related to implementation of the JVR Energy Park Project (Proposed Project). Potential impacts to mineral resources of the Proposed Project were evaluated based on a review of existing resources, technical data, and applicable laws, regulations, guidelines, and standards, as well as the following technical reports prepared for the Proposed Project:

- Mineral Resource Technical Report - JVR Energy Park (Appendix L to this EIR)

There were no comments received in response to the Notice of Preparation (NOP) regarding mineral resources. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.8.1 Existing Conditions

Topographical Setting

Topography on the 1,356-acre Proposed Project site ranges from gently sloping valley floor to moderately steep existing natural slopes approaching 1:1 (horizontal to vertical) slope inclinations along the western and eastern boundaries of the site. Two northerly flowing active drainages transect the site ultimately converging into a broad drainage near the middle of the site which flows in a northerly direction eventually becoming Carrizo Gorge before discharging into the desert area. Within the central valley portion of the Proposed Project site, the existing elevations range from a high of approximately 2,800 feet above mean sea level (AMSL) in the south to a low of approximately 2,700 feet in the north.

Site Geology

The Proposed Project site is located in the lower Peninsular Range Region of San Diego County, a subset of the greater Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges Geomorphic province is approximately bounded to the east by Elsinore Fault Zone, to the north by the Transverse Ranges, the south by Baja California, and to the west by the Pacific Ocean.

The Project site is underlain by Tertiary volcanic rocks, Tertiary sandstone, Cretaceous plutonic rocks, and Jurassic metamorphic rocks. The plutonic and metamorphic basement rocks are non-conformably overlain by relatively undisturbed sedimentary rocks consisting of older minor terrace deposits and generally unconsolidated Holocene alluvium consisting of clayey sand with scattered gravels.

Surficial units onsite include undocumented artificial fill (unmapped), topsoil/colluvium (unmapped), young alluvium (map symbol Qa), and terrace deposits (map symbol Qfg), Tertiary sandstone (Ta), and bedrock units (Tbl and Qd). Refer to Appendix L for detailed information regarding these surficial units.

Bedrock units onsite include Jacumba Volcanics (Tbl) and Basement Complex (Qd). The Jacumba Volcanics consist of predominantly basalt flows in the Proposed Project area. The basalt flows are largely alkali and tholeiitic with breccia and pyroclastic rocks. These rocks include the cinder cone (Round Mountain) located in the northwestern portion of the Proposed Project site. The Basement Complex (Qd) units consist of migmatite and schist of Stephenson Peak along the western portion of the Proposed Project site and tonalite of the La Posta along the eastern portion. Refer to Appendix L for detailed information regarding these bedrock units.

Land Uses

The total Proposed Project site encompasses approximately 1,356 acres, of which approximately 643 acres are proposed for the solar facility development. A portion of the proposed development footprint was previously used for agricultural operations. Most of the proposed development footprint site is covered with fallow agriculture.

The Proposed Project site is primarily undeveloped. An existing easement for the San Diego and Arizona Eastern Railway enters the southwestern portion of the Project site at the western boundary, running generally east/west then turning northward and exiting the northwestern corner of the property near I-8. An existing San Diego Gas & Electric (SDG&E) easement also traverses the central portion of the site from east to west. Several large-scale SDG&E transmission towers are present within this easement. Old Highway 80 traverses the southern portion of the Project site.

The majority of the lands surrounding the Project site are largely undeveloped. The town of Jacumba Hot Springs is located southwest of the Project site and consists of residential uses and small-scale commercial uses. The southwestern portion of the Project site is adjacent to residential lands uses. The Jacumba Valley Airport is located just south of Old Highway 80, and directly south and east of the southernmost portion of the Project site. The U.S./Mexico international border lies just south of the Project site. Two gas stations are located along Carrizo Gorge Road, adjacent to the northeastern property boundary and south of I-8.

Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones were established based on the presence or absence of significant sand and gravel deposits and crushed rock source areas (i.e., products used in the production of cement).

The classification system emphasizes Portland Cement Concrete aggregate, which is subject to a series of specifications to ensure the manufacture of strong, durable concrete. The following guidelines are presented in the mineral land classification for the region (CGS 1982 and 1996b):

- MRZ-1 – Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2 – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence.
- MRZ-3 – Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4 – Areas where available information is inadequate for assignment to any other MRZ zone.

The Proposed Project site is located within southeastern San Diego County which includes no mapped Mineral Resource Zones. Specifically, it should be noted that the Proposed Project site does not contain MRZ-2 zones within or adjacent to the boundaries; the closest MRZ-2 zone to the Proposed Project is located to the southeast roughly 39 miles away. The Proposed Project site also does not contain MRZ-3 zones. Refer to Figure 3 in Appendix L.

The Proposed Project site is a predominantly volcanic rock site, with fine-grained alluvial clay and clayey sand deposits overlying the volcanic rock. In addition, the Proposed Project site is located east and outside of the County mapped P-C Boundary which is an uncategorized zone. Further, the site is not located in an area near existing aggregate production areas. The nearest production areas within San Diego County are at least 39 miles away. Closer production areas located in Imperial County are at least 13 miles away.

Documented historical aggregate extraction operations have been identified on the Proposed Project site. A minor rock quarry was also previously located in the northeastern portion of the site, which was apparently utilized for gravel production in the past. Based on review of the physical pit excavation, the quality of the volcanic rock making up the pit is considered substandard for aggregate use, in particular for use in aggregate for concrete (Appendix L). Based on site reconnaissance and geologic mapping, we found that the volcanic rock within the pit and at the site consists of highly fractured and strongly to moderately weathered, weak, basalt. The preferred rock for aggregate production in San Diego County generally consists of fresh crystalline rock or metavolcanic rock.

2.8.2 Regulatory Setting

Federal Regulations

There are no federal regulations, authorities, or administering agencies pertaining to mineral resources that regulate the Proposed Project.

State Regulations

California Surface Mining and Reclamation Act

Sections 2762 and 2763 of the California Surface Mining and Reclamation Act (SMARA) require that jurisdictions issue a Statement of Reasons when projects would result in the elimination of the potential to extract minerals in the areas containing regionally significant mineral resources. However, the Project would not result in the elimination of the potential to extract minerals and therefore is not subject to the Statement of Reasons.

Additionally, Sections 2762 and 2763 of SMARA require that jurisdictions issue a Statement of Reasons for projects that include the elimination of the potential for extraction in areas of regionally significant minerals resources. SMARA requires that the County decision makers consider this elimination of extraction potential in their decision on land use. The Statement of Reasons lists potential reasons to approve the proposed project and to include elimination of the potential for extraction of all of this resource; decision makers may adopt or modify any of these. The Statement of Reasons must be submitted to the State Geologist and California State Mining and Geology Board for their review for a period of 60 days in conjunction with the environmental review of the proposed project.

Integrated Waste Management Act

Assembly Bill 939, the Integrated Waste Management Act, mandates that each jurisdiction reduce the amount of waste entering landfills each year. This is beneficial in lengthening the lifespan of available mineral resources within the County by recycling materials from demolished buildings, roadways, or other facilities.

Local Regulations

County of San Diego General Plan

The Conservation and Open Space Element of the General Plan includes a Mineral Resources section, which identifies goals and policies intended to assure an adequate supply of mineral resources to support the economic activity projected to occur under the General Plan and to assure compliance with the requirements of the SMARA with regard to the conservation of mineral

resources, and the permitting and reclamation of mining sites. The following goals and policies are identified:

- **Goal COS-10: Protection of Mineral Resources.** The long-term production of mineral materials adequate to meet the local County average annual demand, while maintaining permitted reserves equivalent to a 50- year supply, using operational techniques and site reclamation methods consistent with SMARA standards such that adverse effects on surrounding land uses, public health, and the environment are minimized.
    - **Policy COS-10.1 Siting of Development.** Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas. Design development or uses to minimize the potential conflict with existing or potential future mining facilities. For purposes of this policy, incompatible land uses are defined by SMARA Section 3675.
    - **Policy COS-10.2 Protection of State-Classified or Designated Lands.** Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.
    - **Policy COS-10.3 Road Access.** Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA Section 2764.a.
    - **Policy COS-10.4 Compatible Land Uses.** Discourage the development of land uses that are not compatible with the retention of mining or recreational access to non-aggregate mineral deposits. See Policy COS-10.1 for a definition of incompatible land uses.
    - **Policy COS-10.6 Conservation of Construction Aggregate.** Encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities consistent with the goal to establish permitted aggregate resources that are sufficient to satisfy 50 years of County demand.
    - **Policy COS-10.7 Recycling of Debris.** Encourage the installation and operation of construction and demolition (C&D) debris recycling facilities as an accessory use at permitted (or otherwise authorized) mining facilities to increase the supply of available mineral resources.

- **Policy COS-10.8 New Mining Facilities.** Develop specific permit types and procedures for the authorization of new mining facilities that recognize the inherent physical effects of mining operations and the public necessity for available mineral resources adequate to meet local demand, in accordance with PRC Section 2762.
- **Policy COS-10.9 Overlay Zones.** Provide zoning overlays for MRZ-2 designated lands and a 1,300-foot-wide buffer area adjacent to such lands. Within these overlay zones, the potential effects of proposed land use actions on potential future extraction of mineral resources shall be considered by the decision makers.

San Diego County Zoning Ordinance, Sections 2820–2835, S82 Extractive Use Regulations

San Diego County Zoning Ordinance, Section 2820 et seq., are known as the S82 Extractive Use Regulations and are intended to identify and create areas within the County where mining, quarrying, or oil extractive uses are permitted. Typically, the S82 Extractive Use Regulations would be applied to areas of mineral deposits to signify the presence of such deposit and notify adjacent or affected properties of the intention to allow extraction of minerals within the zone. They would be used to preserve areas with valuable mineral deposits until extraction can take place.

San Diego County Zoning Ordinance, Sections 6550–6556, Extractive Use Regulations

San Diego County Zoning Ordinance, Section 6550 et seq., is known as the Extractive Use Regulations and provides the means for public review and regulation of mineral extraction and associated on-site processing operations.

County of San Diego Code of Regulatory Ordinances Sections 87.701–87.714, Surface Mining

In 2003, the Board of Supervisors added Sections 87.701 through 87.714, entitled Surface Mining, to the County of San Diego Code of Regulatory Ordinances to regulate all surface mining operations in the unincorporated area of the County, as authorized by the San Diego County Zoning Ordinance and SMARA to ensure that:

a) The continued mining of minerals will be permitted in a manner which will protect the public health and safety and will provide for the protection and subsequent beneficial use of mined and reclaimed land;

b) The possible adverse effects of surface mining operations on the environment, including air pollution, impedance of groundwater movement, water quality degradation, damage to

aquatic or wildlife habitat, flooding, erosion and sedimentation, will be prevented or minimized; and

c) The production and conservation of minerals will be encouraged while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

This Ordinance is intended to implement the minimum requirements of SMARA and to specify local requirements. County Code Sections 87.701 through 87.714 require that no person conduct surface mining unless a Major Use Permit is obtained, a Reclamation Plan is approved as provided by the Zoning Ordinance and SMARA, and financial assurances for reclamation have been approved by the County. Grading performed pursuant to such a Major Use Permit or Reclamation Plan must be in accordance with a plot plan and conditions approved therewith.

2.8.3 Analysis of Project Effects and Determination as to Significance

The Proposed Project is a solar energy facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the SDG&E Switchyard (as described in Section 1.2.1 of this EIR), is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the Switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the Switchyard.

Direct, indirect, and cumulative impacts pertaining to mineral resources are evaluated based on specified thresholds identified in the CEQA Guidelines, Appendix G and in the County of San Diego's Guidelines for Determining Significance, including the following:

- County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Mineral Resources
- County of San Diego Report Format and Content Requirements, Mineral Resources

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

Guidelines for the Determination of Significance

For the purposes of this section, the County's Guidelines for Determining Significance and Report Format and Content Requirements – Mineral Resources (County of San Diego 2008) guide the evaluation of whether a significant impact to mineral resources will occur as a result of project implementation. A project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it will generally not be considered to have a significant effect on mineral resources, absent specific evidence of such an effect.

1. The project site is:
    - On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or
    - On land classified as MRZ-3; or
    - Underlain by Quaternary alluvium; or
    - On a known sand and gravel mine, quarry, or gemstone deposit;

AND

The project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;

AND

The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):

- Construction materials (sand and gravel, crushed rock): $12,500,000
- Industrial and chemical mineral materials (limestone, dolomite, and marble [except where used as construction aggregate]; specialty sands, clays, phosphate, borates; and gypsum, feldspar, talc, building stone and dimension stone): $2,500,000
- Metallic and rare minerals (precious metals [gold, silver, platinum], iron and other ferroalloy metals, copper, lead, zinc, uranium, rare earths, gemstones and semi-precious materials, and optical–grade calcite): $1,250,000

2. The project would 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.

Analysis

Guideline 1

With respect to Guideline 1, the Proposed Project site is not zoned MRZ-3. In addition, the Proposed Project site is not located on or within 1,300 feet of land classified as MRZ-2 and is not on a known gemstone deposit. However, it is acknowledged that the Proposed Project site is partially underlain by Quaternary alluvium and an existing abandoned rock quarry.

The Proposed Project site is underlain by quaternary alluvium and volcanic rock. The Project's solar facilities would be constructed on top of 330.7 acres of this alluvium and volcanic rock. Figure 2.8-1, Potential Mitigation Land Map, shows the boundary of the alluvium with the Proposed Project site.

The proposed solar facility (with the exception of the switchyard) would be decommissioned at the end of its term (conservatively estimated to be 35 years). Therefore, the proposed solar facility would not result in the permanent loss of availability of a known mineral resource within the development footprint because mineral resources underlying the development footprint would be available for extraction after the solar facilities is decommissioned. Thus, the development of the solar facilities, with the exception of the switchyard, would not result in a permanent loss of availability of a mineral resource.

The switchyard, which would be transferred and operated by SDG&E, would be permanent use. Therefore, the switchyard would result in a permanent loss of the availability of known mineral resources underneath the switchyard (3.2 acres).

In addition, the Proposed Project's impacts to biological resources require habitat preservation as mitigation (Refer to **M-BI-3** in Section 2.3, Biological Resources). In total, through **M-BI-3**, Habitat Preservation, the Project applicant will place up to 435 acres into biological open space easements within the Proposed Project site. This open space easement would preserve sensitive vegetation communities, special-status plant species, and habitat for special-status species, and facilitating wildlife movement. These open space easements overlie up to 188 acres of potential mineral resources and will not be removed after the life of the Project (Refer to Figure 2.8-1). Therefore, the mitigation for the Proposed Project's impacts would result in the permanent loss of availability of 188 acres of potential mineral resources.

It should also be noted that surrounding incompatible land uses include the residential development southwest of the Proposed Project site and the commercial development to the northeast, which

typically requires a separation of 1,300 feet. The railroad tracks, electrical transmission lines, commercial airport, and County and State roadways, are shown with a setback of 100 feet or more for purposes of this report. Refer to Figure 2.8-1 for setbacks. Therefore, portions of the Proposed Project site are effectively already a lost mineral resource because the resources are located within buffer zones of existing adjacent residential, commercial and public facility developments.

Available site specific data indicates much of the mapped alluvium and volcanic rock underlying the Proposed Project site is not considered a processable, minable and marketable resource since the alluvium predominantly consists of clays and clayey sands, with a lack of significant gravels, and the volcanic rock is highly fractured and generally weak and is therefore not suitable for aggregate due to poor strength quality. As discussed in Appendix L, the resources are estimated to have a high waste value of 40%, meaning much of the resource underlying the site is unusable and the generally high quantity of silt and clay within the alluvial deposit would need to be removed using physical methods in order to market the product. Given these conditions and the estimated 40% waste factor for these resources (most commercial mining operations use a 20% waste factor as an economic feasibility threshold), outside of the 3.2 acre switchyard, the mineral resources under the proposed solar facility, outside of the 3.2 acre switchyard, are not considered processable, mineable and marketable, and would be uneconomic to develop.

However, site specific studies have shown that the alluvium underlying the 3.2 acre switchyard may be of better quality with a lower percentage of fines, and therefore, it is conservatively assumed that the resources underlying the switchyard are minable, processable, and marketable. Assuming the permanent loss of availability of mineral resources underlying the switchyard, it is conservatively assumed that such resources would be minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. As discussed in Appendix L, the potential sand and aggregate underlying the 3.2 acre switchyard is estimated to amount to a value of approximately $3,679,949. Assuming a price of $20.00 per ton, a density of 0.055 tons per cubic foot and a waste factor of approximately 40 percent, the value of material would be roughly $3,679,949, which would not exceed the County's minimum value threshold of $12,500,000 for the County's definition of a significant impact.

In regard to the 188 acres of biological open space easement, boring logs are unavailable for the potential mineral resources. Accordingly, it is conservatively assumed that this area contains mineral resources of a similar quality as the resources underlying the switchyard, The 188 acres of potential mineral resources underlying the Proposed Project's open space easements would result in the permanent loss of availability of resources. It is assumed these resources would be minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. The 188 acres of potential mineral resources underlying the open space easements roughly amounts to 18,006,833 tons of potential sand and aggregate. Assuming a price of $20.00 per ton, a density of 0.055 tons per cubic foot and a waste

factor of approximately 40 percent, the value of material would be roughly $216,081,994, which would exceed the threshold ($12,500,000) for the County's definition of a significant impact.

In conclusion, it is conservatively assumed that there would be a permanent loss of availability of mineral resources underlying the 3.2 acre switchyard and 188 acres of biological open space easement, which is required as mitigation for the Proposed Project's impact to biological resources. Despite boring logs and sieve analysis that suggest much of the resources within the Proposed Project site would have high waste factors and poor quality, the resources underlying the open space easements and switchyard are located in drainages and are conservatively assumed to be marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. Therefore, it is conservatively assumed that 188 acres of open space easement and the 3.2 acre switchyard could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Proposed Project site, which in combination exceed the County's minimum value threshold. Accordingly, the Proposed Project would result in a **potential significant impact** under Guideline 1 (**Impact MR-1**).

Switchyard

As discussed above, the switchyard by itself would not result in a significant impact under Guideline 2 because the estimated value of the mineral resources within the 3.2-acre switchyard site would not exceed the County's minimum value threshold. Thus, the switchyard alone would result in a **less than significant impact**.

Guideline 2

With regard to County Guideline 2, the Proposed Project site is not within a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. The County's Guidelines state that Guideline 2 "addresses projects which would result in the loss of availability of mineral resources on lands zoned as S82 by the Extractive Land Use Overlay, or General Plan Extractive Land Use Designation (25) and Impact-Sensitive Land Use Designation (24)." The Proposed Project site is not zoned S82 by the Extractive Land use Overlay or designated General Plan Extractive Land Use or Impact-Sensitive Land Use. Therefore, the Proposed Project would have **no impact** on a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use.

Switchyard

The switchyard is not located on any locally important mineral resource recovery sites delineated on any local general plan, specific plan or other land use plan. The switchyard site is not zoned S82 by the Extractive Land use Overlay or designated General Plan Extractive Land Use or Impact-Sensitive

Land Use. Therefore, the switchyard would have **no impact** on a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use.

Further when quantified relative to the entire extent of similar geologic exposures found across eastern San Diego County, the Proposed Project is considered a negligible relative loss of mineral resources, which would not cause a significant impact under either County Significance Guideline 1 or 2.

2.8.4 Cumulative Impact Analysis

As discussed above, much of the mineral resources underlying the Proposed Project site are not considered marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years primarily due to the high waste factors and poor strength quality associated with on-site resources. Further, the Proposed Project, with the exception of the 3.2 acre-switchyard, would be decommissioned at the end of its life (conservatively estimated to be 35 years). As an interim use, the resources would be available after the Proposed Project's decommissioning and there would not be a permanent loss in the availability of mineral resources.

However, the 3.2 acre switchyard would not be removed from the Proposed Project site at the end of the Project's life and would result in a permanent loss of availability of mineral resources. Additionally, the 188 acres of biological open space easements implemented through mitigation measure **M-BI-3**, Habitat Preservation, would cause a potentially significant impact with respect to the permanent loss of availability of the mineral resources, which are conservatively assumed to be minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and are valued at more than $12,500,000.

As growth in the region continues, mining and extraction activities are likely to be directly and indirectly impacted by new development. However, none of the cumulative projects listed in Table 1-4 identify impacts to mineral resources. Accordingly, despite the Proposed Project's mitigation measure causing a potential significant impact to mineral resources, the Proposed Project impact would not result in a cumulative impact because it would not combine with other projects causing similar impacts. Thus, the Proposed Project **would not result in a cumulative impact** with regard to mineral resources.

2.8.5 Significance of Impacts Prior to Mitigation

The Proposed Project components, with the exception of the switchyard, would be decommissioned at the end of the Project life. Therefore, the Proposed Project is considered to be an interim use and and would not result in a permanent loss of mineral resources. In regard to the 3.2-acre switchyard, there would be a permanent loss in the availability of mineral resources, however, the estimated value of resources within the switchyard site does exceed the County's minimum threshold.

However, mitigation for the Proposed Project's impacts to biological resources would require habitat preservation. Biological open space easements would be placed over a portion of the Proposed Project site and would not be removed after the life of the Project. These open space easements overlie up to 188 acres of potential mineral resources. The value of material is estimated to be $216,081,994, which would exceed the threshold ($12,500,000) for the County's definition of a significant impact.

Therefore, the biological open space easements, required as mitigation for biological resource impacts, and the switchyard together would result in a **potentially significant impact** (**Impact MR-1**) under Guideline 1.

With regard to Guideline 2, the Proposed Project would have **no impact** on a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use.

The Proposed Project would **not result in a cumulative impact**.

2.8.6 Mitigation Measures

No feasible mitigation measures have been identified.

2.8.7 Conclusion

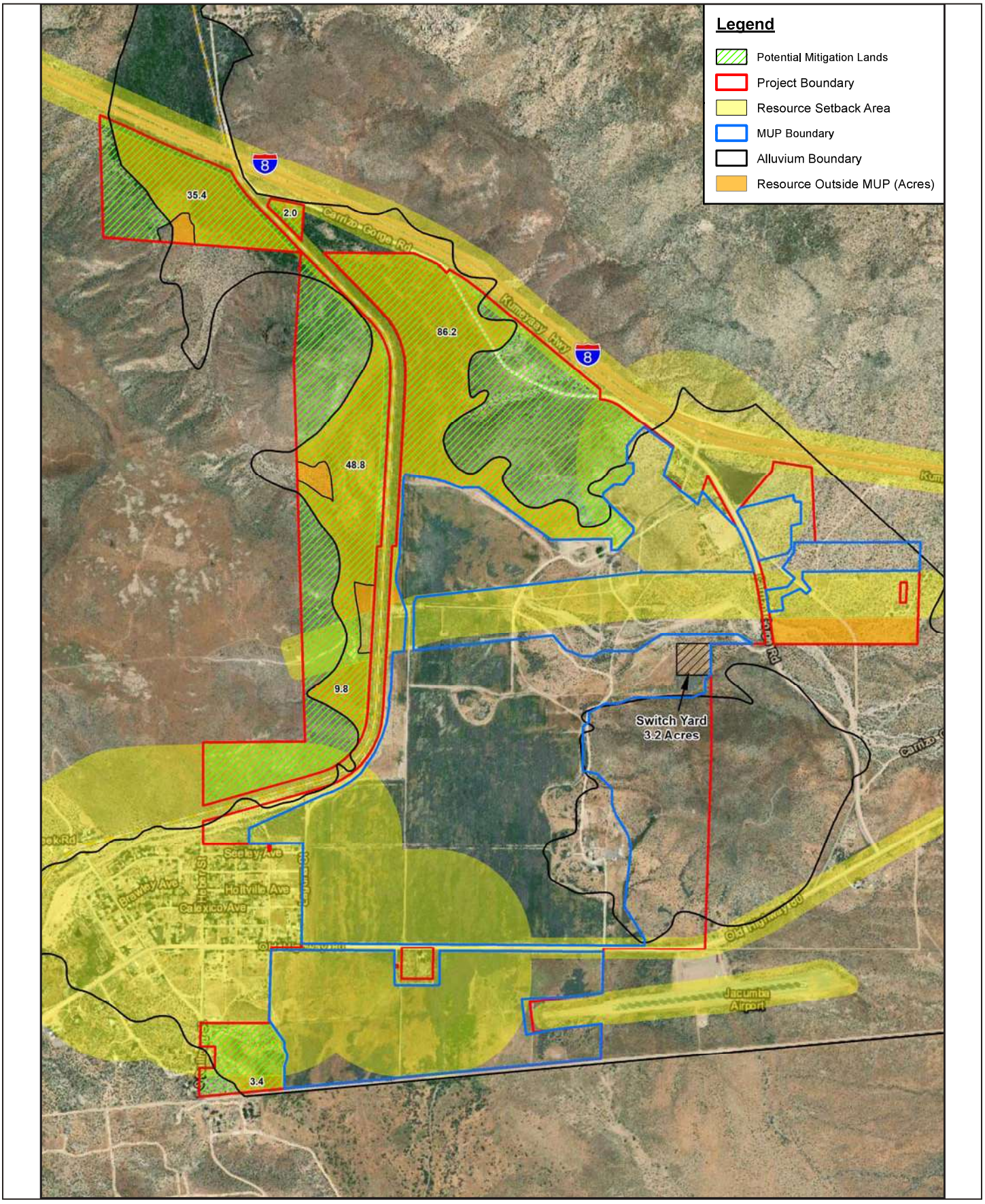
Under Guideline 1, a portion of the biological open space easements (188 acres), required as mitigation for biological resource impacts, and the switchyard would result in the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000. The switchyard, in and of itself, would not exceed the minimum threshold.

The County's Guidelines state that "the only mitigation and design factors appropriate would be to extract the resource and reclaim the site before project approval; to avoid the site, which would only be possible if the project site is large enough to accommodate avoidance and to also not be impacted by future mining of the resource; or to approve only land-uses that can be considered minor or temporary nature." Because the impact to the mineral resources on the Proposed Project site is caused by a portion of the Proposed Project's biological open space easements, these mitigation measures are considered infeasible. The biological open space easements are intended to preserve the biological integrity of the area in perpetuity as mitigation for the Proposed Project's biological impacts, as discussed further in Section 2.3, Biological Resources. The 188-acre portion of the easement contains high biological value with sensitive vegetation types and provides for wildlife habitat and movement. Extracting the resources underlying the open space easements prior to project approval would negate the primary purpose of the biological open space easements.

Other potential measures to mitigate the identified impact relate to policy decisions not under the control of the Proposed Project applicant. The most effective mitigation would be for the County to identify feasible mineral resource extraction areas to implement policies that would avoid resource sterilization (encroachment by development).

Since no feasible mitigation exists to reduce impacts to below a level of significance, impacts to mineral resources (**Impact MR-1**) would remain **significant and unavoidable**.

There would be **no impacts** under Guideline 2. The Proposed Project would n**ot result in a cumulative impact**.



SOURCE: Appendix L

FIGURE 2.8-1

Potential Mitigation Land Map

JVR Energy Park Project

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2.9 Noise

This section of the Environmental Impact Report (EIR) evaluates noise and vibration impacts resulting from development of the JVR Energy Park Project (Proposed Project). Information contained in this section is based on review of existing documentation, including the following:

- Acoustical Assessment Report, JVR Energy Park Project (Appendix M to this EIR)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding construction noise, operational noise, vibration, low frequency noise, noise impacts to biological resources, and cumulative impacts. These concerns are considered in the preparation of this section where applicable. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this EIR.

2.9.1 Fundamentals of Noise and Vibration

The following is a brief discussion of fundamental noise and vibration concepts and terminology.

2.9.1.1 Sound, Noise, and Acoustics

Sound is a process that consists of three components: the sound source, sound path, and sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

2.9.1.2 Sound Pressure Levels, Decibels and A-Weighted Sound Level

Noise is typically defined as unwanted sound. Sounds are perceived based on their loudness (i.e., volume or sound pressure level) or pitch (i.e., tonal or frequency content). The standard unit of measurement for sound pressure levels is the decibel (dB). Sound pressures in the environment have a wide range of values and the sound pressure level was developed to describe this range as a logarithm of the sound pressure. The sound pressure level is the logarithm of the ratio of the unknown sound pressure to an agreed upon reference quantity. To account for the pitch of sounds and the corresponding sensitivity of human hearing to them, the raw sound pressure level is adjusted with an A-weighting scheme based on frequency that is stated in units of decibels (dBA). The A-weighting scale is appropriate because it is a close approximation of the human response to different frequencies of sound and is in broad use across many disciplines that address noise. The

A-weighting scale discounts low-frequency noises in a manner that simulates how human ears attenuate low-frequency sound (for instance, approximately 16 dB reduction for the 125 hertz [Hz] octave band center frequency, which is comparable to the 120 Hz "hum" frequency of sound emission from electrical transformers operating at 60 Hz). The A-weighting scale is the most common weighting scale for environmental acoustics analysis and assessing compliance with applicable noise limits. State and federal agencies that regulate environmental noise throughout the United States rely on the A-weighted decibel, or dBA, as the appropriate metric for assessing human response to noise. San Diego County Code of Regulatory Ordinances Section 36.403, Sound Level Measurement, specifies that sound level measurements "shall be measured with a sound level meter using A-weighting."

While there are weighting scales other than the A-weighting scale, which simulates human response to frequencies of sound, use of other weighting scales produces results that do not reflect how human ears respond to different frequencies of sound. Therefore, they are not used in the context of an environmental acoustics analysis performed to assess compliance with applicable noise limits. C-weighting, for example, is nearly flat for audible frequencies and therefore used to evaluate musical performances or industrial noise sources suspected to have considerable energy in the lower end of the audible spectrum.

Typical A-weighted noise levels are listed in Table 2.9-1, Typical Sound Levels Measured in the Environment and Industry.

2.9.1.3 Noise Descriptors

A given level of noise can be more or less tolerable depending on the sound level, duration of exposure, character, time of day during which the noise is experienced, and activity affected by the noise. For example, noise that occurs at night tends to be more disturbing than that which occurs during the day because sleep has the potential to be disturbed. Additionally, rest at night is a critical requirement in the recovery from exposure to high noise levels during the day. In consideration of these factors, different measures of noise exposure have been developed to quantify the extent of the effects anticipated from these activities. For example, some indices consider the 24-hour noise environment of a location by using a weighted average to estimate its habitability on a long-term basis. Other measures consider portions of the day and evaluate the nearby activities affected by it as well as the noise sources. The most commonly used indices for measuring community noise levels are the equivalent energy level (L_{eq}), and the community noise equivalent level (CNEL).

- **L_{eq},** the equivalent energy level, is the average acoustical or sound energy content of noise, measured during a prescribed period, such as 1 minute, 15 minutes, 1 hour, or 8 hours. It

is the decibel sound level that contains an equal amount of energy as a fluctuating sound level over a given period of time.

- **CNEL,** community noise equivalent level, is an energy-equivalent A-weighted sound level representing varying sound over a 24-hour period. This metric applies predefined dB adjustments to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times: +5 dBA weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m., and a +10 dBA weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m.

2.9.1.4 Sound Propagation

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a single point source such as a piece of mechanical equipment, this geometric divergence means sound decreases by about 6 dB for each doubling of distance from the source. Sound that originates from a linear source, such as a heavily traveled traffic corridor, attenuates by approximately 3 dB per doubling of distance, provided that the surrounding site conditions lack ground effects or obstacles that either scatter or reflect noise.

2.9.1.5 Noise Effects

Noise can have a substantial effect on the quality of life. An individual's reaction to a particular noise depends on many factors, such as the source of the noise, its loudness relative to the background noise level, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dB change in community noise levels is perceivable, while 1 to 2 dB changes generally are not perceived. Although the reaction to noise can vary, it is clear that noise is a significant component of the environment, and excessively noisy conditions can affect an individual's health and well-being. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise can be organized into six broad categories: general annoyance, sleep disturbance, interruption of human performance and behavior, interruption of social interaction of communication, extra-auditory health effects, and permanent hearing loss.

2.9.1.6 Groundborne Vibration Fundamentals

Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may be composed of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hz. The normal frequency range of most groundborne vibration that can be felt

generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz. Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Ambient and source vibration are often expressed in terms of the peak particle velocity (PPV) in inches per second (ips) that correlate with human perception. Guidance from the California Department of Transportation (Caltrans) indicates that 0.035 ips PPV for transient vibration is "barely perceptible", and a vibration velocity level of 0.1 ips PPV from traffic "begins to annoy" receptors of occupied buildings.

2.9.1.7 Vibration-Sensitive Land Uses

Groundborne vibration can disrupt vibration-sensitive land uses by causing movement of buildings, rattling of windows and items inside buildings, rumbling sounds, and even property damage. Vibration-sensitive land uses include buildings where vibration would interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration depends on the specific equipment that would be affected by the vibration. Residential uses are also sensitive to excessive levels of vibration of either a regular or an intermittent nature. According to the Transit Noise and Vibration Impact Assessment (FTA 2006), background vibration level in residential areas is typically 0.001 ips PPV, which is lower than 0.006 ips PPV, the threshold of perception for humans. There are several sources of groundborne vibration in the unincorporated areas of San Diego County, including construction, railroad operations, and extractive mining operations.

2.9.2 Existing Conditions

This section describes the existing setting in the Project area and also identifies the noise sensitive land uses that could be affected by the Proposed Project.

2.9.2.1 Regional and Local Setting

The Project site is located to the south of Interstate 8, immediately to the east of the community of Jacumba Hot Springs and immediately north of the U.S./Mexico international border, as presented in Figure 1-1, Project Location, in Chapter 1, Project Description, of this EIR. Figure 2.9-1, Environmental Setting, illustrates the current General Plan land use designations and zoning for land surrounding the Project site.

Jacumba Hot Springs is a Census-designated place having a population of 561 residents and a population density of 92 people per square mile (USCB 2010). The unincorporated community is located within the Jacumba Valley at an altitude of approximately 2,800 feet.

2.9.2.2 Noise-Sensitive Land Uses

The Proposed Project consists of a solar energy facility with neither dedicated office space nor any related residential components. As such, no portion of the Proposed Project would involve the creation of new noise-sensitive land uses (NSLU). The nearest existing residential NSLU in the community of Jacumba Hot Springs is located approximately 50 feet to the west of the Project site boundary.

2.9.2.3 Airports

The nearest registered airport is Jacumba Airport, located immediately to the south and east of the Project site. The Project site is located within the Jacumba Airport's airport influence area (AIA). Although Jacumba Airport is within 1,000 feet of the southeastern boundary of the Project site, the average aircraft operations frequency of 34 flights per week (AirNav.com 2020), of which only 80% are single-engine powered flight (SDCRAA 2011), suggests that aviation noise is infrequent. The Jacumba Airport Land Use Compatibility Plan (ALUCP) indicates that aviation noise is less than 50 dBA CNEL east of parcels APN 66015005 and APN 6615006 that abut Old Highway 80 and are approximately 1,330 feet west-northwest of the airport's western property boundary (SDCRAA 2011). There are no active private airstrips within the vicinity of the Project site.

2.9.2.4 Noise Measurement Results

Existing outdoor ambient noise level measurements were conducted on January 9, 2019, by a Dudek field investigator. The noise measurements were conducted for 10 minutes at each of the locations depicted as Sites ST1 through ST6 in Figure 2.9-2, Noise Measurement Locations. The measured average, maximum, and minimum noise levels are shown in Table 2.9-2, Measured Outdoor Ambient Noise Levels in Proposed Project Vicinity. The measured average ambient noise levels ranged from approximately 35 dBA L_{eq} at Site ST5, located near the southwest boundary of the Project site, to 49 dBA L_{eq} at Site ST2, located at a noise-sensitive land use (a residence), located in the center of the Project site. At Site ST2 the dominant noise source was traffic from Old Highway 80.

An unattended "long-term" (LT1) continuous 24-hour sound pressure level (SPL) measurement was also conducted at a position near the eastern fence line of the Jacumba Community Park, approximately 400 feet due east of the ST1 field survey location. Measured L_{eq} during nighttime hours, sampled at five-minute intervals, ranged from as low as 31 dBA to as high as 51 dBA. Hourly L_{eq} values calculated from these successive five-minute duration intervals ranged from 33 to 44 dBA. The calculated CNEL value from these sequential L_{eq} intervals over the monitored 24-hour period is 46.4 dBA.

The outdoor ambient sound environment of the Proposed Project vicinity includes contribution from distant highway traffic, construction noise, and barking dogs. Localized acoustical

contributors proximate to a listener may include nearby traffic noise from local roadways, rustling leaves and other wind-induced noise, and the operation of mechanical equipment (e.g., HVAC units) associated with residential and commercial land uses of Jacumba Hot Springs.

2.9.3 Regulatory Setting

The County of San Diego (County) has two principal noise regulations: the Noise Element of the General Plan and the Noise Ordinance. These regulations comprise important aspects of relevant federal and state standards.

2.9.3.1 Federal Regulations and Standards

Federal Highway Administration (FHWA) Standards (23 CFR Chapter 1, Part 772, Section 772.19) override County standards for federally funded road construction projects. The FHWA establishes specific noise standards for different land use categories for federal highway projects. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidance document provides vibration standards that are referenced by the County.

2.9.3.2 State Regulations and Standards

The California Environmental Quality Act (CEQA) (California Code of Regulations, Guidelines for Implementation of CEQA, Appendix G, Title 14, Chapter 3, Sections 15000–15387 and 21000–21178) requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to identify generation of substantial temporary or permanent increase in excess of locally established noise standards or those of other agencies, identify generation of excessive groundborne vibration or groundborne noise levels, and identify excessive noise exposures associated with air traffic to people residing or working in a project area.

The California Health and Safety Code (Sections 46000–46080 of the California Noise Control Act) finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economical damage. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizen through control, prevention, and abatement of noise.

2.9.3.3 Local Regulations and Standards

The County of San Diego has adopted noise policies and standards contained within the County's General Plan Noise Element, the County Noise Ordinance, and subsequent Amendments to the Zoning Ordinance. The County's noise policies and standards are summarized below.

Two main criteria apply to the operation of the Proposed Project:

- From the General Plan, a CNEL dBA limit accounting for exterior noise levels across a 24-hour period (County of San Diego 2011).
- From the County's Noise Ordinance, outdoor hourly L_{eq} dBA limits for daytime and nighttime based on zoned land use.

County of San Diego General Plan, Noise Element

The County's General Plan Noise Element establishes noise and land use compatibility standards and outlines goals and policies to achieve these standards. The Noise Element characterizes the noise environment in the County and provides the context for the County's noise/land use compatibility guidelines and standards. The Noise Element also describes the County's goals for achieving the standards and introduces policies designed to implement the goals (County of San Diego 2011). Under implementation of the General Plan, the County would use the Noise Compatibility Guidelines to determine the compatibility of land uses when evaluating proposed development projects. The Noise Compatibility Guidelines indicate ranges of compatibility and are intended to be flexible enough to apply to a range of projects and environments. The community of Jacumba Hot Springs near the Proposed Project includes single-family residences and mobile homes for which up to 60 dBA CNEL for exterior use areas would be considered "acceptable" ("specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, and the interior noise level obtains 45 dBA CNEL without any special noise insulation requirements" [County of San Diego 2009a]); and, a resort and community park at which a 65 dBA CNEL of the exterior use area would be considered acceptable.

San Diego County Code of Regulatory Ordinances Title 3, Division 6, Chapter 4, Sections 36.401–36.435, Noise Ordinance

Section 36.404 of the County Noise Ordinance contains sound level limits specific to the receiving land uses. It establishes prohibitions for disturbing, excessive, or offensive noise as well as provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance, by way of conducting predictive analyses of anticipated noise levels, supports a reasonable expectation that the noise from a project will not be disturbing, excessive, or offensive. Limits are specified depending on the zoning requirements for the property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between the two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. It is unlawful for any person to cause or allow the creation of any noise that

exceeds the applicable limits of the County Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced.

The sound level limits are in terms of a one-hour average sound level. The allowable noise limits depend upon the County's zoning district and time of day. Section 36.404 of the County's Noise Ordinance reads as follows:

(a) Except as provided in section 36.409 of this chapter, it shall be unlawful for any person to cause or allow the creation of any noise, which exceeds the one-hour average sound level limits in Table 36.404 [included as Table 2.9-3 in this analysis below], when the one-hour average sound level is measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

(b) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit, which authorizes the noise-generating use or activity and the decision making body approving the Major Use Permit determined that those mitigation measures reduce potential noise impacts to a level below significance, implementation and compliance with those noise mitigation measures shall constitute compliance with subsection (a) above.

(c) S88 zones are Specific Planning Areas which allow different uses. The sound level limits in Table 36.404 [included as Table 2.9-3 in this analysis] above that apply in an S88 zone depend on the use being made of the property. The limits in Table 36.404 [included as Table 2.9-3 in this analysis], subsection (1) apply to property with a residential, agricultural or civic use. The limits in subsection (3) apply to property with a commercial use. The limits in subsection (5) apply to property with an industrial use that would only be allowed in an M50, M52 or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.

(d) If the measures ambient noise level exceeds the applicable limit in Table 36.404 [included as Table 2.9-3 in this analysis], the allowable one-hour average sound level shall be the one-hour average ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

(e) The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones. The one-hour average sound level limit applicable to extractive industries, however, including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone in which the extractive industry is located.

(f) A fixed-location public utility distribution or transmission facility location on or adjacent to a property line shall be subject to the sound level limits of this section measured at or beyond six feet from the boundary of the easement upon which the facility is located.

In 2002, the County added note (b) to this section to allow greater compliance flexibility for projects for which a Major Use Permit has been granted. In the ordinance document adopting this amendment, the County explained: "It is the purpose of this ordinance to amend the San Diego County noise control regulations, to permit noise created by a project for which a Major Use Permit has been approved based upon a specific noise study, to be controlled by the noise mitigation conditions of that permit rather than the general standards of the noise ordinance" (County of San Diego 2002).

The Noise Ordinance also regulates temporary noise levels from construction activities. Sections 36.408 through 36.411 of the Noise Ordinance establish additional noise limitations for operation of construction equipment.

Sections 36.408 and 36.409 state that, except for emergency work, in shall be unlawful for any person to operate or cause to be operated, construction equipment:

(a) Between 7 p.m. and 7 a.m.

(b) On a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November and December 25th. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in sections 36.409 and 36.410.

(c) Section 36.409 limits allowable construction noise to no more than 75 dB over an eight-hour period between 7:00 a.m. and 7:00 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410, which regulates sound limitations on impulsive noise, states that in addition to the general limitations on sound levels in Section 36.404 and the limitations on construction equipment in Section 36.409, the following additional sound-level limitations shall apply:

(a) Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410A, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in the measurement period, as described in subsection (c), below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410A are as described in the County Zoning Ordinance.

Table 36.410A
County of San Diego Code Section 36.410, Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA)

Occupied Property Use	Decibels (dBA)
Residential, village zoning or civic use	82
Agricultural, commercial or industrial use	85

(a) Except for emergency work, no person working on a public road project shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410B, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in the measurement period, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410B are as described in the County Zoning Ordinance.

(b) The minimum measurement period for any measurements conducted under this section shall be 1 hour. During the measurement period, a measurement shall be conducted every 1 minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it would be deemed that the maximum sound level was exceeded during that minute.

Table 36.410B
County of San Diego Code Section 36.410, Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA) for Public Road Projects

Occupied Property Use	Decibels (dBA)
Residential, village zoning or civic use	85
Agricultural, commercial or industrial use	90

Jacumba Airport Land Use Capability Plan (ALUCP)

The Jacumba ALUCP identifies 55 dBA CNEL as being a "compatible" exterior noise level for single-family, multi-family and mobile homes (SDCRAA 2011).

2.9.4 Analysis of Proposed Project Effects and Determination as to Significance

Noise and vibration impacts are evaluated based on specified thresholds identified in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and in the County of San Diego's Guidelines for Determining Significance – Noise (County of San Diego 2009a).

For the purposes of this analysis, the switchyard which would be operated by San Diego Gas & Electric (as described in Chapter 1 of this EIR), is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance.

2.9.4.1 Methodology and Noise Calculations

Measurement of Baseline Outdoor Ambient Conditions

SPL measurements were conducted at the Project site boundary and at nearby representative NSLUs on January 9, 2019 to determine the existing outdoor ambient noise levels. These sound level measurements were measured with a sound level meter using the A-weighted and "slow" response, pursuant to the County Noise Ordinance, Section 36.403. The measurements were made using a calibrated Rion NL-52 integrating sound level meter (SLM) equipped with 0.5-inch pre-polarized condenser microphone with a pre-amplifier. This SLM meets the current American National Standards Institute (ANSI) standard for a Type 1 (Precision Grade) SLM. The SLM (serial number [SN] 00553896) was positioned on a tripod at a height of approximately 5 feet above the ground, and fitted with a wind screen. Performance of these measurements in the field by an attending Dudek field investigator was compatible with appropriate portions of International Organization of Standardization's (ISO) Description, Measurement and Assessment of Environmental Noise (ISO 1996, 2003).

Proposed-Project-attributed construction and post-construction operation noise levels at studied NSLUs and property line positions were quantitatively predicted with techniques and reference data as described in the following paragraphs.

Noise Formulas and Calculations

Predicted outdoor noise levels associated with the post-construction operation of the Proposed Project equipment described in the preceding paragraphs have been calculated with a Microsoft Excel workbook that incorporates the following algorithms:

- Point-source sound propagation (i.e., geometric divergence, known casually as the "6 dB per doubling of distance" rule of thumb) for the battery storage containers and inverter/transformer

platforms which would be installed at 25 locations throughout the solar facility, and the planned step-up transformer at the Proposed Project collector substation.

- In addition to aforementioned geometric divergence, attenuation due to atmospheric acoustical absorption (A_{atm}) and ground surface acoustical absorption (A_{grnd}) that are expressed as follows:

  A_{atm} = 4.16*(d_{rcvr}/3280), where d_{rcvr} is the source-to-receiver distance in feet, and assumes the attenuation rate at 1kHz is representative for overall A-weighted broadband sound at standard air conditions (i.e., 10 degrees Celsius, 70% relative humidity, and 1 atmosphere of pressure).

  A_{grnd} = the greater of zero or 4.8–[(h_s+h_r)/(d_{rcvr}/3.28)]*[17+300/(d_{rcvr}/3.28)], where h_s is the average source height, and h_r is the average receiver height.

These above expressions, as well as geometric divergence from point-type sound sources, are described in Noise & Vibration Control Engineering (Beranek & Ver 1992), and A_{grnd} is also referenced in ISO 9613-2 (ISO 1996).

Locations of the sound-emitting sources and the studied NSLU positions were geo-referenced to a common coordinate system (state plane coordinates), which allowed for accurate source-to-receiver distance values (d_{rcvr}) on which the predicted noise levels depend.

2.9.4.2 NSLU Affected by Airborne Noise – Exterior (Non-Construction)

Guidelines for the Determination of Significance

According to Section 4.1.A of the County Guidelines, the Proposed Project would have a significant noise impact if it would result in an exterior noise exposure at an existing or reasonably foreseeable future NSLU in excess of 60 dBA CNEL or an increase of 10 dBA CNEL over preexisting noise. For single-family residential detached NSLUs, exterior noise shall be measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum area:

- Net lot area up to 4,000 square feet: 400 square feet
- Net lot area 4,000 square feet to 10 acres: 10% of net lot area
- Net lot area over 10 acres: 1 acre

For all other projects, exterior noise shall be measured at all exterior areas provided for group or private usable open space.

Analysis

On-site operational noise sources associated with the Proposed Project would include stationary equipment and occasional mobile operational noise associated with PV panel washing. On-site stationary noise sources associated with the Proposed Project would include inverter/transformer platforms and cooling systems for each of three battery storage containers that would be clustered at each of 25 locations within the solar facility layout. The electrical transformer located within the collector substation would also generate a relatively steady-state source of continuous noise. The switchyard equipment is expected to be intermittent, acoustically insignificant compared to the continuously operating substation transformer, and therefore was not included in the predictive operation noise modeling for the Proposed Project. The following subsections discuss the Proposed-Project-attributed operational noise sources.

Stationary Noise Sources

Inverter/Transformer Platforms

Inverters and transformers would be installed at 25 locations within the solar facility. Each location would include up to two inverters and one transformer. The Proposed Project's Noise Acoustical Assessment Report (AAR) (Appendix M) found the combined Sound Pressure Level from an inverter/transformer platform (i.e., two inverters served by a transformer) is 64.2 dBA at 50 feet. Since these inverter/transformer platforms are no closer than 300 feet to the nearest Proposed Project boundary and would operate during daytime hours when electricity is received from the PV panels, noise from individual inverter/transformer platforms would be less than 44 dBA (based on sound propagation with distance) hourly L_{eq} at the nearest residential property line.

Battery Energy Storage System

The proposed battery energy storage system would consist of static equipment installed within containers, each of which features an air conditioning unit for cooling purposes and a self-extinguishing fire system. The containers would be approximately 55 feet long by approximately 10 feet in height, and approximately 19 feet wide. With respect to potential long-term operational noise associated with the battery energy storage system, the HVAC unit for each container would be a primary source of noise generation and expected to operate 24 hours a day, 7 days a week, so as to keep the batteries from overheating. The Proposed Project's AAR assumed that the HVAC unit for each container would be a Daikin Applied Model 025D "quiet" unit or comparably performing unit having the same or lower sound emission level: 56.8 dBA at 50 feet. Since each of the 25 inverter/transformer platform locations on-site will be accompanied by three of these battery storage containers, the logarithmically combined noise level from three Model 025D cooling units would be 61.6 dBA at 50 feet (i.e., 56.8 + 10*LOG[3] = 56.8 + 4.8 = 61.6). At a

distance of no less than 300 feet to the nearest Proposed Project property line, the noise emission from three Model 025D units would be less than 41 dBA hourly L_{eq}.

Collector Substation

The Proposed Project on-site collector substation would include a single 34.5 kV to 135 kV transformer rated to handle 180 Megavolt amperes (MVA) (90 MVA from the aggregate PV solar panel electricity production, plus 90 MVA from the battery storage units). The Proposed Project's AAR (Appendix M) assumed that the estimated SPL from the proposed substation transformer (SPL_{sub}) will be 45.2 dBA at a distance of 492 feet. Since this transformer would be no closer than 650 feet to the nearest Proposed Project boundary, the expected level at that receiving distance would be less than 43 dBA hourly L_{eq}.

Other Stationary Equipment

As described in the AAR (Appendix M), electric motors associated with the planned single-axis PV panel rotation system are expected to exhibit intermittent noise levels (i.e., operating occasionally to help the PV panels track the sun) that are far less than those of the aforementioned inverter/transformer platforms and the battery storage container cooling units.

Combined Stationary Equipment Noise Levels at NSLU

Predicted operation noise levels were evaluated with the afore-described modeling techniques and source sound level input data at each studied NSLU and then compared with appropriate County of San Diego noise impact assessment criteria to determine potential adverse effects and consequential anticipated mitigation need. Table 2.9-4 presents the predicted aggregate operation noise levels from anticipated Proposed Project-attributed operating equipment—both for all stationary equipment, and the collector substation separately. Additionally, Figure 2.9-3, Predicted Project Operation Noise Levels displays anticipated aggregate operation noise level contours of 45 dBA L_{eq}.

At known existing NSLU in the community of Jacumba Hot Springs nearest to the Proposed Project site, noise attributed to normal operations of stationary equipment would not cause the outdoor ambient sound level to exceed 56.4 dBA CNEL, which represents a significant impact level based on the arithmetic sum of the measured existing outdoor ambient CNEL at the long-term ("LT", 24-hour continuous sound level monitoring) plus 10 dBA as allowed by Section 4.1.A.i of the County's Noise Guidelines for Determining Significance. The predicted hourly L_{eq} values, if considered samples of hourly exposure from generally continuous noise emission attributed to normal operation of stationary noise sources associated with the Proposed Project, at nearest NSLU positions R-1, R-2, R-3, R-4, R-5, and R-6 as appearing in Figure 2.9-2 translate into CNEL values ranging between 35.5 dBA and 50.5 dBA for these six locations.

Thus, the predicted noise levels associated with operation of on-site stationary equipment as currently shown in the Proposed Project plot plans, including the PV panel array, inverter/transformer platforms, battery container cooling systems, and the collector substation, received at these NSLU would not result in exceedances of the County's noise standards. However, if the layout and/or types of stationary equipment of the Proposed Project were to change from what is studied herein, the stationary operational noise levels from the Proposed Project may have the potential to exceed the County's noise standards and impacts would be **potentially significant** (**Impact NOI-1**).

Mobile Sources (PV Panel Power-washing)

Regular cleaning of the Proposed Project installed PV panels is anticipated to involve use of a self-propelled powered mechanical system (e.g., MultiOne Solar Panel Washer, Mazaka Solar Cleaner, or comparable motorized equipment [Groundwork Group LLC 2019; MultiOne 2016]) at an anticipated frequency of four times per year. The Proposed Project's AAR (Appendix M) assumed that panel washing could operate as close as 50 feet to the property line adjoining the S80-zoned land south of Old Highway 80 and south of Interstate 8 near the northeastern corner of the Proposed Project, as close as 83 feet to the property line adjoining Jacumba Hot Springs residential uses north of Seeley Avenue, and as close as 100 feet to the adjoining property lines of existing residential uses on the eastern portion of Jacumba Hot Springs located between Holtville Avenue and Seeley Avenue. Additionally, the PV panel washing activity could occur as close as 83 feet to existing commercial land use along Carrizo Gorge Road.

The Proposed Project's AAR (Appendix M) described five PV panel washing scenarios involving usage of a self-propelled powered mechanical system (i.e., resembling a tractor with a mounted wash-roller apparatus) traveling at low velocity along the rows of PV linear panel arrays that are proximate to residentially zoned property lines that adjoin the Proposed Project. The AAR found that the estimated hourly noise levels associated with these activity scenarios using this self-propelled system range from 59 dBA to 67 dBA L_{eq} at the Proposed Project property line.

Alternately, the AAR describes usage of a portable vehicle-mounted or towed IPC Eagle Wash Station (or comparable technology) that would involve a gasoline-powered pressure washer exhibiting noise emission of 81 dBA at 9 feet, transported by a pickup truck (55 dBA at 50 feet [FHWA 2006]). As evaluated in the AAR, and for comparable operation scenarios studied for the self-propelled PV panel washer that consider orientation of the solar panel arrays and the nearest NSLU, the estimated hourly L_{eq} for the portable IPC Eagle Wash station ranges from 46 dBA to 49 dBA at the Proposed Project property line.

As described in the preceding paragraphs, the estimated hourly noise levels associated with self-propelled solar panel washer activity ranges from 59 dBA to 67 dBA L_{eq} at the property line. With respect to existing NSLU proximate to this panel washing activity, Figure 2.9-2 shows locations

R-1 and R-2 are closest to the Proposed Project PV solar arrays. If panel washing is limited to daylight hours (7:00 a.m. to 7:00 p.m.), then estimated CNEL values at these positions would be 60 dBA for R-1 and 57 dBA for R-2. Both of these predicted CNEL values are greater than the aforementioned 56.4 dBA CNEL value that represents the existing measured CNEL plus 10 dB per Section 4.1.A.i of the County's Noise Guidelines for Determining Significance. Therefore, noise from solar panel washing with self-propelled equipment (e.g., a MultiOne, Mazaka, or comparable) would not be compliant with this County expectation at the nearest NSLU and thus would the impact would be **potentially significant (Impact NOI-2**).

Switchyard

The proposed 138 kV switchyard would be located easterly adjacent to the collector substation and be expected to contain circuit breakers, overhead electrical bus work, switches and controls that occasionally produce noise. However, the character and long-duration magnitude of these sources contrasts with the continuous noise emission of the adjoining collector substation step-up transformer. As described in a recent acoustical report for a larger substation/switchyard site, "cycling of the capacitors and associated circuit-breaker and switching operations can also cause short duration audible impulse noise with the magnitude varying with voltage, load, and operation speed. However, the noise generated by the cycling of the capacitors and associated circuit-breaker and switching operations is of very short duration (5 seconds or less), occurs only once or twice a year, and do not significantly contribute to the substation's overall noise level" (Acentech 2015). Furthermore, the multiple 138 kV circuit breakers planned for the switchyard will feature sulfur hexafluoride (SF_6) closed gas circuits that, unlike air blast circuit breakers (ABCB), do not exhaust to the atmosphere and therefore operate at much quieter noise levels. For these reasons, noise emission from the switchyard equipment is expected to be intermittent, acoustically insignificant compared to the continuously operating substation transformer, and therefore not included in the predictive operation noise modeling for the Proposed Project.

Thus, the switching operations at the switchyard would primarily involve capacitors and closed gas circuit breakers that would make noise very infrequently and at sufficiently low magnitudes. Expressed as CNEL values, which energy-average these sounds over an entire 24-hour period, the operation noise attributed to normal functions of the switchyard would result in a **less than significant** impact.

Combined Operation Noise at NSLU

As discussed in the preceding subsections, operation noise from distinct features or activities of the Proposed Project were are not expected to exceed the County's noise standards based on the current layout shown in the plot plans when compared to the 56.4 dBA CNEL threshold for NSLU. The same conclusion can be made for the logarithmic combination of these sources at a common

nearest NSLU. For example, the anticipated operation noise from the inverter/transformer platforms, battery storage container cooling systems, collector substation transformer, switchyard, and solar panel washing activity at R-1 and R-2 would be 55.7 dBA CNEL and 50.9 dBA CNEL, respectively. Both are less than the threshold tied to the existing outdoor ambient CNEL. However, if the type of equipment and layout were to change, there may be an exceedance at NSLU (**Impact NOI-1 and Impact NOI-2**).

2.9.4.3 NSLU Affected by Airborne Noise – Interior (Non-Construction)

Guidelines for the Determination of Significance

According to Section 4.1.B of the County Guidelines (County of San Diego 2009a), the Proposed Project would have a significant noise impact if it would result in an interior noise exposure at an existing or reasonably foreseeable future NSLU in excess of 45 dBA CNEL except for the following situations:

- Rooms which are usually occupied only a part of the day (schools, libraries, or similar facilities), the interior one-hour average sound level due to noise outside should not exceed 50 dB.
- Corridors, hallways, stairwell, closets, bathrooms, or any room with a volume less than 490 cubic feet.

Analysis

Based on the preceding analysis, predicted exterior CNEL levels with the incorporation of the continuous normal operation of the Proposed Project at the four nearest NSLU in the vicinity would not exceed the County's exterior threshold of 56.4 dBA CNEL. The arithmetic difference between this outdoor significance threshold and the interior significance threshold of 45 dBA CNEL is less than 12 dB, which according to the California State Planning Guidelines represents the low end of a "typical range of noise reduction provided by residential dwellings (12 to 18 dB with windows partially open)" (State of California 2017). Hence, one can reasonably expect interior noise level due to Proposed Project operation within these nearest NSLU to be compliant with the interior threshold and thus **less than significant**.

Switchyard

Based on the preceding analysis for the Switchyard, the exterior noise emissions from the switchyard equipment are expected to be intermittent, acoustically insignificant compared to the continuously operating substation transformer. Thus, the switching operations at the switchyard would primarily involve capacitors and closed gas circuit breakers that would make noise very infrequently and at

sufficiently low magnitudes. Expressed as CNEL values, which energy-average these sounds over an entire 24-hour period, the operation noise attributed to normal functions of the switchyard would be compliant with the interior threshold and thus **less than significant** impact.

2.9.4.4 Proposed-Project-Generated Noise, Operation

Guidelines for the Determination of Significance

According to Section 4.2.A of the County Guidelines, noise attributed to normal operation of the Proposed Project would have a significant noise impact if it exceeded daytime (i.e., between 7:00 a.m. and 10:00 p.m.) and nighttime (i.e., between 10:00 p.m. and 7:00 a.m.) hourly L_{eq} thresholds that depend on the zoning district of the receiving property line and/or the property producing the noise per Section 36.404(a) of the County's Noise Ordinance.

Currently, the Project site's zoning is largely Specific Plan (S-88), which allows for different uses. According to Section 36.404(a) and (c) of the County's Noise Ordinance, the County's noise standards that applies to S-88 zoning depends on the use being made of the property. The current use of the property is largely rural, and the nearest adjoining noise-sensitive receptors to the west of the Project site in Jacumba Hot Springs are either Rural Residential (RR) or Residential Mobile Home (RMH). Thus, both the Project site and these adjoining and surrounding properties apply the same noise standard of 50 dBA hourly L_{eq} during daytime hours and 45 dBA hourly L_{eq} during nighttime hours. Since the Proposed Project equipment may operate during the early morning hours before 7 a.m., it would be subject to the more restrictive nighttime noise standard of 45 dBA during those times at the property boundaries.

Per Section 36.404(e), where the Proposed Project boundary abuts a commercial zone or S-94 property, the applicable nighttime hourly L_{eq} threshold would be 50 dBA: an arithmetic average of the residential and commercial noise limits.

Analysis

Combined Stationary Noise Sources

Section 2.9.4.1, Methodology and Noise Calculations, describes the Proposed Project operation stationary noise sources and details the sound propagation methodology used to predict outdoor noise exposures at nearest NLSU. These stationary noise sources include the inverter/transformer platforms, battery storage units, and collector substation. The same methodology applies to predicting outdoor noise levels at representative Proposed Project property boundary positions B1, B2, and B3 as appearing in Figure 2.9-2 and Table 2.9-4. At all three of these representative boundary positions, predicted noise attributed to normal operations would not exceed the 45 dBA hourly L_{eq} nighttime standard. The 45-dBA hourly L_{eq} is appropriate because the Proposed Project

operation noise sources are expected to be active twenty-four hours a day, seven days per week. Figure 2.9-3 shows the predicted operation noise emission scenario, demonstrating compliance with the nighttime County threshold of 45 dBA L_{eq} at the Proposed Project property lines. Therefore, the Proposed Project, as designed, is anticipated to comply with the County's Noise Ordinance; however, if the layout and/or design for the Proposed Project is changed, the Proposed Project has the potential to have operational noise impacts (**Impact NOI-1**).

Mobile Sources (PV Panel Power-washing)

Section 2.9.4.2 summarized that solar panel washing scenarios involving usage of a self-propelled powered mechanical system (i.e., resembling a tractor with a mounted wash-roller apparatus) traveling at low velocity along the rows of linear solar panel arrays proximate to residentially zoned property lines range from 59 dBA to 67 dBA L_{eq} hourly L_{eq} at the property line. At these predicted levels, the County's Noise Ordinance (per Section 36.404) daytime noise threshold of 50 dBA hourly L_{eq} would be exceeded and result in a significant impact. But for cleaning solar panel rows that are more distant from the Proposed Project boundary, this powered mechanical system could be used as long as the average distance between the equipment and the residentially zoned property line over an hour period is at least 450 feet—the distance that yields a predicted hourly noise level of 50 dBA for the solar panel cleansing operation.

On the other hand, an alternative and quieter PV panel washing method involving a portable pressure washer and a pick-up truck is predicted to have a lower range of hourly L_{eq} values: 46 dBA to 49 dBA for the same three studied scenarios as outlined in the AAR (Appendix M). Usage of this alternative equipment would result in levels that are less than the County's daytime threshold of 50 dBA hourly L_{eq}.

Based on these potential noise impact findings that are dependent upon the equipment used to perform the PV panel washing task, the Proposed Project is likely to comply with the County's Noise Ordinance. However, since the Project would exceed the threshold if the self-propelled powered mechanical system is used, the Proposed Project has the potential to have significant operational noise impacts (**Impact NOI-2**).

Switchyard

As summarized in Section 2.9.4.2, NSLU Affected by Airborne Noise – Exterior (Non-Construction), normal expected operation of the switchyard would result in a less than significant impacts. Similarly, infrequent intermittent noise emission from the switchyard closed gas circuit breakers would, energy-averaged over an hour, result in hourly L_{eq} at nearest Proposed Project property lines that are compatible with the County's Noise Ordinance hourly L_{eq} limits and thus be a **less than significant** impact.

2.9.4.5 Proposed-Project-Generated Noise, Low Frequency

The inverter/transformer platforms distributed across the Project site will produce low-frequency noise, which is normal for such equipment involving electrical transformers and related components because they can emit sound at harmonics of the conducted alternating current line frequency. A-weighted noise levels from the inverter/transformer platforms has already been evaluated in Section 2.9.4.2 and includes acoustical contribution from the first harmonic (e.g., 120 Hz) in the "low frequency" range of audible noise defined as being between 20 Hz and 200 Hz. Due to distance, the A-weighted aggregate noise from the proposed operating stationary inverter/transformer platforms is expected to comply with County of San Diego A-weighted thresholds and thus cause a less than significant impact.

But because the A-weighting scale dramatically discounts sound decibels at low frequencies, and in response to some community concerns regarding low frequency noise emission from the Proposed Project, the Proposed Project's AAR (Appendix M) estimates that the G-weighted noise level from an 1.8 MVA inverter would be no greater than 47 dBG at 300 feet—the shortest distance between the inverter and a proximate property line of an NSLU. Like A-weighting, the G-weighting scale is a set of decibel adjustments applied to unweighted sound pressure levels and can be used to evaluate low frequency noise at one-third octave bands 20 Hz, 25 Hz, and 31.5 Hz that are typically considered audible (albeit on the low end of the audible spectrum) to the average healthy human ear. In fact, the G-weighting scale actually increases an unweighted sound pressure level at 20 Hz by 9 dB, thus reflecting its sensitivity and application for low frequency noise level assessment.

Since the County of San Diego has no low frequency noise thresholds that apply for these kinds of electrical equipment, and because the estimated G-weighted noise level (47 dBG) from an installed inverter as received by the nearest noise sensitive land use or occupied residential property line is expected to be far less than an audible threshold of 85 dBG (Soitec 2014), low frequency noise from the Proposed Project would be a **less than significant** impact.

2.9.4.6 Proposed-Project-Generated Noise, Construction

Guidelines for the Determination of Significance

San Diego County Code Section 36.409, Sound Level Limitations on Construction Equipment states: "Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 dB for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received" (County of San Diego 2009b).

Analysis

Construction Activities Summaries

The construction of the proposed solar facility would consist of several phases, including site preparation, development of staging areas and site access driveways, solar array assembly and installation, and construction of electrical transmission facilities as summarized in the following paragraphs. This analysis presumes that these site preparation activities and other construction phases are distinct and sequential, such that no NSLU or boundary line position would be expected to witness or experience concurrent activities with all equipment impractically "stacked" together at a geographically common position or otherwise operating in a manner not reflecting typical construction practice.

Clearing and Grading

Construction of the Proposed Project would involve clearing and grubbing of the existing vegetation; grading necessary for the construction of access and service driveways and the installation of solar arrays; trenching for the electrical DC and alternating current AC collection system including the telecommunication lines; installation of the inverter stations; construction of 34.5 kV collection systems leading to the Proposed Project substation; and construction of the Proposed Project substation and the gen-tie line from the Proposed Project substation to the adjacent 138 kV high-voltage facilities.

Collection System Trenching

Trenching requirements for the DC electrical collection system and telecommunication lines would consist of a trench up to approximately 3 to 4 feet deep and 1 to 2 feet wide. The trenches may be filled with sand or another inert material to provide insulation and heat dissipation for the direct buried cable within the collection system. Excessive material from the foundation and trench excavations would be used for site leveling.

PV System Construction Overview

Proposed Project construction would include several phases occurring simultaneously with the construction of (1) PV systems assembly consisting of pile-driving of support racks and the placement of panels on support racks, (2) trenching and installation of the DC and AC collection system; (3) point of interconnection upgrades; and (4) the grading of access driveways.

Soil Stabilization

To reduce fugitive dust and erosion, the disturbed areas on the Project site would either be treated in one of the following methods, or a combination of both: Treatment with a permeable nontoxic soil binding agent (preferred method), and/or placement of disintegrated granite (DG) or other base material (good for driveways).

Construction Personnel, Traffic, and Equipment

The number of workers expected on the site during construction would vary over the construction period, with a maximum of 1,000 trips a day during the most intense phase of construction (i.e., the racks and panels installation). Deliveries of equipment and supplies to the site would also vary over the construction period but are expected to average about 40 to 70 daily trips.

It is assumed that all employees would arrive within the morning peak hour and depart within the evening peak hour, and delivery truck trips would be distributed evenly throughout a 12-hour-shift day, between the hours of 7:00 a.m. and 7:00 p.m. Since the surrounding area is rural, traffic is very low on the local roads surrounding the Project site. Implementation of the Proposed Project would result in a temporary increase in traffic along these roads, but not to the level of the road carrying capacity. No road closures are anticipated during Proposed Project construction. With the implementation of Project Design Feature **(PDF) TR-1**, as described in Section 3.1.7, Transportation, a County-required Traffic Control Plan to provide safe and efficient traffic flow in the area and on the Project site would be prepared prior to construction. The Traffic Control Plan would be prepared in consultation with the County of San Diego and would contain Proposed-Project-specific measures for noticing, signage, policy guidelines, and the limitation of lane closures to off-peak hours (although it is noted that no requirement for lane closures has been identified).

During the peak of construction, a typical day would include the transportation of parts, movement of heavy equipment, and transportation of materials.

Similar to the Proposed Project, the construction of the switchyard and its 1,390-foot-long asphalt-paved access driveway would consist of several phases, including site preparation (i.e., clearing and grading of the switchyard site work area and access driveway), setting foundations for the electrical equipment, laying conduit and grounding, and paving the access driveway. Transmission line tie-ins would also involve site preparation, erecting steel poles, and installing the conductors.

Anticipated Construction Noise

On-Site Noise Emission

Construction activities would occur during the County's allowable hours of operation (Monday through Saturday from 7:00 a.m. to 7:00 p.m.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed and the condition of the equipment. The average sound level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period.

Construction equipment would include standard equipment such as graders, scrapers, backhoes, loaders, cranes, dozers, water trucks, portable generators and air-compressors, and miscellaneous trucks. The maximum noise level ranges for various pieces of construction equipment at a distance of 50 feet are depicted in Table 2.9-5. The maximum noise levels at 50 feet for typical equipment would range up to 85 dB for the type of equipment normally used for this type of project. The hourly average noise levels would vary, but construction noise levels of up to approximately 75 to 80 dB at 50 feet are typical for the anticipated construction activities.

The Proposed Project's AAR (Appendix M) used an Excel-based construction noise model for the construction scenario. The AAR's model emulated the FHWA Roadway Construction Noise Model (RCNM) and included a temporal parameter to account for actual equipment operating presence and time (within an 8-hour work shift) at a specified distance to a studied receptor, activity-specific construction noise was estimated for up to three source-to-receiver distance values as follows:

- 50 feet from an assumed geographic center-point for the indicated construction activity to a location on the Proposed Project boundary that adjoins a NSLU property line
- 83 feet between the geographic activity center and the NSLU property line, which is the closest expected distance between a Proposed Project boundary line location to the nearest expected post-driving for the PV panel support structure foundations
- Approximately 300 feet between a Proposed Project boundary location and the nearest inverter/transformer platform

At these studied distances, not all construction equipment anticipated for a phase would be clustered at the same location. By way of example, it would be unreasonable to assume that all 20 anticipated all-terrain vehicles (ATV) expected for usage across the entire Project site would be present at any of these three nearest distances. Instead, and reflecting expectation of how the Proposed Project construction activity would likely unfold, the AAR assumed that equipment expected for each phase will be distributed across the Project site. Hence, only a portion of the

listed equipment would be as close as the indicated distance and for only a portion of the full eight-hour period against which the construction noise was being assessed against the County's 8-hour L_{eq} threshold.

Additionally, the AAR's analysis presumed that phased construction activity would be sequential. If any activities were to be concurrent, then only one of these activities would be proximate to the Proposed Project boundary (i.e., one of the above-listed source-to-receiver distances, as appropriate) and any others would be sufficiently distant so as to not cause a cumulative additive effect that would risk exceeding the County's construction noise limit of 75 dBA 8-hour L_{eq}

Consequently, and as shown in Table 2.9-6, the Proposed Project's AAR (Appendix M) found that the predicted 8-hour L_{eq} values during construction at the property line adjoining the nearest NSLU are estimated to range from 31 dBA to 75 dBA depending on phase, activity, and sound propagation distance. Under these conditions, noise exposures from construction activities involving conventional heavy equipment and processes would comply with the County's 8-hour 75 dBA L_{eq} standard at the property lines. However, if actual conditions were to be different from these predictions, (i.e., should Proposed Project construction phases or other activities overlap in schedule or otherwise occur concurrently), the Proposed Project does have the potential to exceed the 8-hour L_{eq} County threshold at the Project boundary and impacts may be **potentially significant** (**Impact NOI-3**).

Construction Traffic Noise

The San Diego Association of Governments (SANDAG) Transportation Forecast Information Center (TFIC) forecasts that Old Highway 80 should experience a total average weekday traffic (AWT) volume of 5,300 vehicles in 2020 (SANDAG 2019). Using calculation methods from the Federal Transit Administration (FTA), and assuming 50 miles per hour vehicle speed and daytime traffic represents 85% of the AWT total, estimated traffic noise would be 63 dBA L_{dn} at a distance of 75 feet from the roadway centerline (FTA 2018).

Conservatively assuming one worker per vehicle making a trip to and from the Project site, the total of 1,000 Proposed-Project-related vehicles added to the daytime portion of the 5,300 AWT baseline would result in only a 19% increase in daily traffic volume and hence less than a dB change to the daily traffic noise (e.g., assessed as CNEL or L_{dn}). The change is less than 1 dB due to acoustical principles. All other factors being equal, it requires a doubling of traffic volumes to cause a 3 dB increase (i.e., 3 dB = 10*LOG[2]). Therefore, and using the same mathematical expression, a 19% change would only result in a 0.75 dB increase (= 10*LOG[1.19]), which would be a **less than significant** cumulative traffic noise impact.

Switchyard

The construction of the switchyard and its asphalt-paved access driveway would consist of several phases, including site preparation (i.e., clearing and grading of the switchyard site work area and access road), setting foundations for the electrical equipment, laying conduit and grounding, and paving the access road. Transmission line tie-ins would also involve site preparation, erecting steel poles, and installing the conductors.

Because the nearest residential land use is approximately 3,500 feet away from the switchyard work area and its access route, the predicted 8-hour noise levels from anticipated construction activities associated with the switchyard and transmission line tie-ins are expected to range from 25 dBA to 60 dBA. Compared to the County's 8-hour standard of 75 dBA L_{eq8hr}, this construction noise level range would be **less than significant**.

Further, because it is more than 10 dBA less than the 75 dBA limit, the estimated construction noise level range for switchyard construction activity would not cause a significant additive effect to other Proposed Project construction noise assessed at the same noise-sensitive receptor location. The combination of such noise level exposures is logarithmic; hence, a level of 60 dBA logarithmically added to 75 dBA would yield 75 dBA and thus remain complaint with the County's construction noise level standard and a **less than significant impact**.

2.9.4.7 Proposed-Project-Generated Noise, Impulsive

Guidelines for the Determination of Significance

San Diego County Code Section 36.410, Sound Level Limitations on Impulsive Noise, states, "Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in the measurement period. The maximum sound level depends on the use being made of the occupied property and are as follows:

- Residential, village zoning, or civic use – 82 dBA
- Agricultural, commercial, or industrial use – 85 dBA

The minimum measurement period for any measurements conducted for impulse noise determination shall be one hour. During the measurement period, a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise, exceeds the

maximum sound level for any portion of any minute it will be deemed that the maximum sound level was exceeded during that minute" (County of San Diego 2009b).

Analysis

Each tracker assembly, on which an array of PV panels would be arranged (and thus tilt in unison), would be installed on 4- to 6-inch-diameter pipes or beams. The beams would be driven into grade using a pile/vibratory/rotary driving technique similar to that used to install freeway guardrails. Most foundations would be driven to approximate depths of 10 to 15 feet deep.

It is anticipated that a RTG Model RG21T vibratory pile driver or comparable machine would be used. Based on data provided by the equipment vendor for this product and prior project experience, this size and type of equipment is anticipated to generate a maximum noise level of approximately 85 dBA at a distance of 50 feet (RTG 2014). At a distance of 83 feet, which is the shortest distance between the expected pile driving activity and the property boundary of any occupied residence, the maximum noise level from this post-driving process would be approximately 81 dBA and thus under the County's 82 dBA threshold per Section 36.410.

It takes 10 minutes or less to drive a post for the solar array tracker support structure, so each site would experience noise emission over less than 20% of an hour—assuming the remainder of the hour involves moving the post-driving machine to a new site and preparing a new post for ground installation. Assuming post driving occurs for approximately 20% of an hour at each tracker site, the average hourly noise level would be approximately 78 dB at 50 feet from the pile driver or 74 dBA at 83 feet, the distance to the closest residential property boundaries. This consideration has already been included in the predicted noise levels for the System Installation phase as appearing in Table 2.9-6; thus, noise from pile driving would also comply with Section 36.409 from the County's Noise Ordinance.

On the basis of these findings, post-driving activities would result in a **less than significant** noise impact.

2.9.4.8 Excessive Groundborne Vibration

Guidelines for the Determination of Significance

Per the County's Guidelines for Determining Significance for Noise (County of San Diego 2009a), the County of San Diego refers to FTA guidance for evaluation criteria to assess potential groundborne vibration impact at sensitive receptors such as residences (and other occupied

structures where inhabitants normally sleep). At such sensitive receptors, the following impact criteria are established:

- A vibration velocity level of 0.004 ips root mean squared (rms) would be considered a significant impact with respect to "frequent events," which for purposes of this analysis would be assumed to mean regular operation of conventional construction equipment, such as active bulldozers or graders, that may momentarily work in an area near a sensitive receptor. Expressed as a PPV value, and assuming a crest value of 4 as adopted by the FTA (FTA 2006), this criterion would be 0.016 ips.
- For "infrequent events" (i.e., less than 70 events per day), the threshold would be 0.01 ips rms. Expressed as a PPV value, and assuming the same crest value of 4, this criterion would become 0.04 ips.
- A vibration velocity level of 0.1 ips PPV would be considered a significant impact with respect to operation of post-driving equipment (i.e., pile drivers).

Although vibration level assessment criteria would be different for land uses with primarily daytime uses (e.g., school), or where scientific research or other processes within a potentially affected structure require low levels of vibration to avoid disruption of progress or production yield, neither category of land use exists or is sufficiently proximate to the study area. Additionally, there are no "special buildings" such as auditoriums, concert halls, recording studios, or theaters near the Proposed Project that would have similar vibration velocity thresholds to those of occupied residences, but more stringent groundborne noise criteria.

Analysis

Operation of the Proposed Project largely involves stationary equipment installed on massive platforms and post-driven foundations; therefore, groundborne vibration expected from these systems distributed across the Project area is not expected to create perceptible levels of vibration velocity at the nearest sensitive receptors, which in this context would be the previously studied NSLU. Groundborne vibration attenuates rapidly through intervening soils and rock strata as it propagates from the source to a sensitive receptor.

Construction activities, on the other hand, present more likely opportunities for vibration impact due to the anticipated operation of conventional heavy construction equipment (e.g., graders) and post-driving processes evaluated for airborne noise impact studied for noise emission under Section 2.9.4.6, Proposed-Project-Generated Noise, Construction. The following presents an assessment of vibration levels and potential impact for each of these two types of expected on-site construction activities.

At 83 feet, the nearest potential distance between operating construction equipment and a sensitive receptor position (e.g., occupied residence), the predicted groundborne vibration velocity level from a large bulldozer (PPV_{equip}) would be 0.01 ips PPV and thus compliant with the FTA-based guideline threshold. This finding is based on a reference vibration velocity level (PPV_{ref}) of 0.089 ips PPV for the bulldozer at a reference source-to-receptor distance of 25 feet (FTA 2006), and using these quantities as inputs in the following expression for estimating PPV at a sensitive receptor:

$$PPV_{equip} = PPV_{ref} * (25/D)^{1.5}$$

Where D is the distance (in feet) between the vibration-producing equipment and the sensitive receptor.

By complying with this County-adopted standard, vibration from operating conventional construction equipment would be expected to cause a **less than significant** impact at sensitive receptors.

At 83 feet, the nearest potential distance between an anticipated post-driving machine and a sensitive receptor position (e.g., occupied residence), the predicted groundborne vibration velocity level (PPV_{equip}) would be 0.03 ips PPV and thus compliant with the County's threshold of 0.1 ips. This finding is based on a reference vibration velocity level (PPV_{ref}) of 0.17 ips PPV at a reference distance of 25 feet for the post-driver, assuming it compares with a "pile driver (sonic)" per FTA guidance (FTA 2006). By complying with this County-adopted standard, vibration due to normal operation of the post-driving equipment would not be expected to cause a significant adverse effect at sensitive receptors and thus impact would be **less than significant**.

Switchyard

Due to expected attenuation of groundborne vibration as it propagates through soils and strata between the switchyard site vicinity and the nearest County sensitive receptor that is approximately 3,500 feet away, vibration velocity levels from either construction or operation of the switchyard would be far less than the aforementioned thresholds that determine impact significance. Hence, vibration from the switchyard should be a **less than significant** impact.

2.9.4.9 Airport Related Noise

Guidelines for the Determination of Significance

According to the County of San Diego's Guidelines for Determining Significance, the Proposed Project would have a significant noise impact resulting from airport noise if it would result in exposure at the exterior of an on- or off-site, existing or reasonably foreseeable future NSLU in excess of 60 dBA CNEL or an increase of 10 dBA CNEL over pre-existing noise (County of San Diego 2009a).

Additionally, Table JAC-1 from the Jacumba Airport Land Use Capability Plan (ALUCP) identifies 55 dBA CNEL as being a "compatible" exterior noise level for single-family, multi-family and mobile homes (SDCRAA 2011).

Analysis

According to the Jacumba ALUCP, the Project site partially lies within the 50 to 55 dB CNEL and 55 to 60 dB CNEL calculated noise contours (SDCRAA 2011). However, the Proposed Project does not propose adding any land uses that would be considered a NSLU, and therefore would not expose a NSLU to airport noise. In addition, the Proposed Project would be operated remotely; therefore, the amount of on-site workers would be limited to maintenance workers who would only visit the Project site periodically. This would limit the potential exposure workers or visitors would have to airport noise. Therefore, impacts would be **less than significant**.

Switchyard

According to the Jacumba Airport Land Use Compatibility Plan, the switchyard area lies outside of the 50-55 dB CNEL calculated noise contours (SDCRAA 2011). In addition, the switchyard does not propose any land uses that would be considered a NSLU, and therefore would not expose NSLU to airport noise. Additionally, the switchyard would be an un-staffed facility that would limit the exposure of potential on-site workers or visitors to airport noise. Therefore, impacts would be **less than significant**.

2.9.5 Cumulative Impact Analysis

Noise levels tend to diminish quickly with distance from a source; therefore, the geographic scope for the analysis of cumulative impacts related to noise would be limited to projects within approximately 0.25 miles of the Proposed Project, the switchyard, and the access routes. This area is defined as the geographic extent of the cumulative impact area because noise impacts would generally be localized, mainly within approximately 500 feet from any noise source; however, it is possible that noise from different sources within 0.25 miles of each other could combine to create a significant impact to receptors at any point between the projects. At distances greater than 0.25 miles, construction noise would be briefly audible and steady construction noise from the Proposed Project would generally dissipate into quiet background noise levels. The temporal scope for cumulative impacts associated with noise would include the construction and operation phases of the Proposed Project and the switchyard. The baseline for assessing cumulative noise impacts includes the noise sources associated with other projects within 0.25 miles of the Proposed Project that could be constructed and/or operated at the same time as the Proposed Project. Based on the foregoing criteria, the only cumulative projects included in this cumulative analysis are as follows:

the Jacumba Solar Project, East County (ECO) Substation project, Southwest Powerlink 500 kV, Sunrise Powerlink 500 kV, and the ECO 138 kV to 230 kV interconnection lines.

2.9.5.1 Construction Noise

The Proposed Project would have a short-term construction-related potential to generate temporary increases in outdoor ambient noise levels. Construction is estimated to take approximately 13 months. Grading for the Proposed Project is designed to be balanced, thus, there would be no import or export of dirt. However, there would be worker vehicles and truck material deliveries to the site. It is anticipated that up to 500 construction workers per day would visit the Project site during construction (including truck trips).

No cumulative impact regarding construction could occur because the afore-listed cumulative projects are complete. Other construction activities may be occurring in or outside the Proposed Project vicinity, but at distances with respect to common NSLU (i.e., receptors of the Proposed Project and others) such that their acoustical contribution would not be cumulatively considerable. Noise attenuates with distance due to geometric divergence, atmospheric acoustical absorption, and ground effects (due to acoustical absorption from porous ground surfaces and vegetative cover, as well as potentially path-intervening natural terrain features and built structures). Therefore, with conditions not giving rise to cumulatively impactful noise levels, Proposed Project construction noise would **not result in a cumulatively considerable impact**.

As discussed above, construction of the Proposed Project would cause a temporary increase in traffic on area roadways that is not expected to result in a significant noise impact from the temporary increase in trips. Conservatively assuming one worker per vehicle making a trip to and from the Project site, the total of 1,000 Proposed-Project-related vehicles (i.e., making one-way trips) added to the daytime portion of the 5,300 AWT baseline would result in only a 19% increase in daily traffic volume and hence less than a dB change to the daily traffic noise (e.g., assessed as CNEL or L_{dn}). Since the pre-Proposed-Project traffic noise level already exceeds 60 dBA, and a change in traffic noise would have to be 3 dB in order to be considered perceptible (Caltrans 2009), this less than 1 dB change in traffic noise would therefore be considered a less than significant cumulative noise impact.

In addition, none of the cumulative projects located in the vicinity of the Proposed Project that may have overlapping construction schedules are substantial in size such that they would contribute to a cumulatively considerable increase in area traffic trips that would result in a temporary noticeable increase in traffic noise. Therefore, the Proposed Project's contribution of noise from increased traffic along area roadways **would not be cumulatively considerable**.

2.9.5.2 Operation Noise

The Proposed Project is designed to operate under remote monitoring, with few site visitors to conduct periodic inspection and maintenance of on-site systems. Hence, AWT attributed to these infrequent trips (likely numbering less than one trip per week) added to existing volumes on Old Highway 80 would be considered a less than significant impact on the basis of changing the pre-existing noise at existing or reasonably foreseeable future NSLU by less than a 1 dB, which would not be considered a perceptible increase.

While there are a number of existing and planned energy production and transmission projects in the shared vicinity of southeastern San Diego County, the propagated sound levels from operating Proposed Project features (inverter/transformer platforms, battery storage container cooling systems, and the collector substation) attenuates to a sound level less than 45 dBA within the boundary. At such relatively low noise levels, and because noise from other projects (e.g., operation of the ECO Substation, Jacumba Solar, and potential new facilities including Campo Wind Energy, Cameron Solar, and Boulevard Solar) would similarly diminish with distance, the opportunity for a "cumulatively considerable" effect as defined by the San Diego County Noise Report Format and Requirements (County of San Diego 2009b) guidance would be very unlikely.

The primary source of operating noise at the ECO Substation would be the on-site transformers that result in a 1-hour average 45 dBA noise contour within the substation property line (Dudek 2010). Beyond its property line, noise from the ECO Substation would continue to attenuate with distance traveled. Upon reaching studied NSLU of the Proposed Project, its acoustical combination with Proposed Project operation noise **would not result in a cumulatively considerable impact.**

The nearest sensitive receptor to the ECO Substation is a residence located approximately 2,600 feet (i.e., approximately 0.5 miles) northwest of the substation site adjacent to Interstate 8. This sensitive receptor is also located approximately 3,500 feet (approximately 0.7 miles) north of Jacumba Solar, but is over 2 miles distant from the nearest edge of the Proposed Project. Therefore, the Proposed Project (or from the switchyard) contribution **would not be cumulatively considerable**.

Under the right conditions, such as after the accumulation of dust or moisture on their conductors, normal operation of the aforementioned Southwest Powerlink 500 kV, Sunrise Powerlink 500 kV, and ECO 138 kV to 230 kV interconnection lines would cause audible corona noise. However, the audibility of such noise generation is typically proximate to the transmission lines, and at much larger distances the noise levels would be attenuated and thus not be expected to have a cumulatively considerable acoustical contribution to Proposed Project operation noise at studied NSLU. "For example, the calculated rainy weather audible noise for a 230 kV transmission line at the right-of-way edge is about 25 dBA, which is less than ambient levels in a library and much

less than background noise for wind and rain" (CPUC 1999). Therefore, anticipated Proposed Project operation noise in combination with existing transmission line corona noise would be **less than significant cumulative impact**.

2.9.5.3 Vibration

No cumulative impact regarding groundborne vibration, which is limited to the construction phase, could occur because the afore-listed cumulative projects are complete. Other construction activities may be occurring in or outside the Proposed Project vicinity, but at distances with respect to common NSLU (i.e., receptors of the Proposed Project and others) such that their contribution would not be cumulatively considerable. Vibration attenuates with distance due to geometric divergence and the variability of subsurface soils and rock strata through which vibration waves propagate. Therefore, with conditions not giving rise to cumulatively impactful levels, construction activity vibration attributed to the Proposed Project would be a **less than significant cumulative impact**.

2.9.5.3 Airport Noise

The Project site lies partially within the 55 to 60 dB CNEL calculated noise contours as presented in the Jacumba Airport Land Use Compatibility Plan (ALUCP). However, the Proposed Project does not propose any land uses that would be considered an NSLU. The solar facilities would be operated remotely. Therefore, the Proposed Project **less than significant cumulative impact**.

2.9.6 Significance of Impacts Prior to Mitigation

Excessive Noise Levels

Operation Noise Levels

As described in Sections 2.9.4.2 and 2.9.4.4, the Proposed Project's AAR found that the operational noise levels from the stationary equipment of the Proposed Project would be compliant with both the San Diego County Guidelines threshold of 56.4 dBA CNEL at the nearest NSLU and the Noise Ordinance (36.404) threshold of 45 dBA hourly L_{eq} nighttime limit if the Proposed Project's equipment and layout is the same as what was evaluated in the AAR; however, if the equipment was to change and/or the layout is different from what was evaluated, operational noise levels have the potential to exceed the County's Noise Ordinance threshold and impacts may be **potentially significant** (**Impact NOI-1**).

As described in Sections 2.9.4.2 and 2.9.4.4, the Proposed Project's AAR found that when the PV panel washing operations of the Proposed Project occur at a distance of 250 feet or greater from the nearest property line that adjoins an offsite commercial property, a self-propelled washer

vehicle (e.g., Mazaka, MultiOne, or comparable tractor/excavator based system of up to 34.6 kW rated power) may be used to perform PV panel surface cleansing during daytime hours. Where the activity occurs in proximity to a Proposed Project property line that adjoins an offsite property having a rural or residential zoning classification per the County (i.e., akin to "Noise Zone (1)" per its Table 36.404 from the County's Noise Ordinance), this minimum distance value increases to 450 feet. If this PV panel cleaning activity occurs less than either of these distance values, the Proposed Project's impact may be **potentially significant** (**Impact NOI-2**).

Based on the analysis in Section 2.9.4.2, predicted exterior CNEL levels due to the continuous normal operation of the Proposed Project at the four nearest NSLU in the vicinity would not exceed the County's exterior threshold of 56.4 dBA CNEL. And as described in Section 2.9.4.3, the arithmetic difference between this outdoor significance threshold and the interior significance threshold of 45 dBA CNEL is less than 12 dB, which according to the California State Planning Guidelines represents the low end of a "typical range of noise reduction provided by residential dwellings (12 to 18 dB with windows partially open)." Hence, one can reasonably expect interior noise level due to Proposed Project operation within these nearest NSLU to be compliant with the interior threshold and thus **less than significant**.

Construction Noise

As described in Section 2.9.4.6, Proposed Project construction is anticipated to include several phases of activity involving typical heavy construction equipment and vehicles. Additionally, mobile post-driving machines are anticipated to install foundation elements for the single-axis tracking assemblies upon which the 300,000 PV panels are to be mounted.

For multiple source-to-receptor distances (i.e., between average positions of anticipated construction activities and Proposed Project property line positions adjoining NSLU), prediction of aggregate noise from the anticipated sequence of these phased construction activities is anticipated to be compliant with the County's construction noise thresholds of 75 decibels L_{eq} for an 8-hour metric between 7:00 a.m. to 7:00 p.m., and the impulse noise limit of 82 dBA maximum sound level [L_{max}], pursuant to the Noise Ordinance Sections 36.408 through 36.410 (County of San Diego 2009a). However, should Proposed Project construction phases or other activities overlap in schedule or otherwise occur concurrently, the Proposed Project does have the potential to exceed these thresholds and impacts may be **potentially significant** (**Impact NOI-3**).

Construction Traffic Noise

As described in Section 2.9.4.6, the estimated traffic noise from the Proposed Project would be 63 dBA L_{dn} at a distance of 75 feet from the roadway centerline (FTA 2018). Conservatively assuming one worker per vehicle making a trip to and from the Project site, the total of 1,000 Proposed-

Project-related vehicles added to the daytime portion of the 5,300 AWT baseline would result in only a 19% increase in daily traffic volume and hence less than a dB change to the daily traffic noise (e.g., assessed as CNEL or L_{dn}). The change is less than 1 dB due to acoustical principles. All other factors being equal, it requires a doubling of traffic volumes to cause a 3 dB increase (i.e., 3 dB = 10*LOG[2]). Therefore, and using the same mathematical expression, a 19% change would only result in a 0.75 dB increase (= 10*LOG[1.19]), which would be a **less than significant** traffic noise impact.

Groundborne Vibration

As described in Section 2.9.4.8, based on the anticipated construction equipment and distance from the equipment to the adjacent residences, construction activities would result in vibration levels below County standards at noise sensitive land use. Hence, County-compliant vibration levels from operation of the construction equipment would be a **less than significant** impact.

During construction, vibration from post-driving activities near the Project site west boundary would be **less than significant** because groundborne vibration would not exceed the County's Guidelines for Determining Significance at the nearest sensitive receptor.

No operational components of the Proposed Project include significant groundborne noise or vibration sources, and no significant vibrations sources currently exist, or are planned, in the Proposed Project vicinity. Thus, groundborne noise or vibration attributed to the operation of the Proposed Project would be a **less than significant** impact.

Operational activities associated with the Proposed Project, would not produce significant groundborne vibrations; therefore, vibration and groundborne noise attributed to Proposed Project operation would result in **less than significant** impact.

Airport Noise

As described in Section 2.9.4.9, most of the Project site is located outside the 55 to 60 dBA noise level contours of Jacumba Airport. and those areas of the Project site that are within the 55 to 60 dBA noise level contours would not include land uses that would expose a NSLU to airport noise. The Project site lies partially within the 55 to 60 dB CNEL calculated noise contours as presented in the Jacumba Airport Land Use Compatibility Plan (ALUCP). However, the Proposed Project does not propose any land uses that would be considered an NSLU. The solar facilities would be operated remotely; therefore, impacts from airport noise would be **less than significant**.

Cumulative Impacts

Cumulative impacts would be less than cumulatively considerable.

2.9.7 Mitigation

M-NOI-1 **Stationary Equipment**: The Proposed Project would comply with the County's Noise Ordinance §36.404 based upon the current proposed layout of the Proposed Project and the anticipated major noise producing operating stationary equipment (Equipment) deployed for the Proposed Project. The Equipment modeled in the Acoustical Analysis Report (AAR) prepared for the EIR was selected as representative technology at the time this AAR was prepared. The Project applicant may propose to use different Equipment than what was used to perform the noise modeling in the AAR or propose a change in the Equipment layout. If different Equipment is selected and/or the layout of Equipment is changed subsequent to Project approval, the applicant will be required to submit a revised AAR, and a revised site plan if needed, as follows:

a. The Project applicant shall retain a County Approved CEQA Noise Consultant to prepare a new predictive operations noise analysis in accordance with the County's Noise Report Format and Content requirements.

b. Any proposed Equipment selections, equipment duty cycles, Project layout alterations, and/or the addition, modification, reduction of the preceding equipment noise limits and measures may be approved, if they are demonstrated to comply with applicable outdoor hourly L_{eq} noise limits per Section 36.404(a) of the County's Noise Ordinance at the property line.

c. The above identified measures shall take place prior to approval of any building plans for the Proposed Project. Any alterations or modifications proposed and approved pursuant to this procedure shall be included in the proposed Project design plans.

M-NOI-2 **PV Panel Washing Protocol:** To ensure noise from mobile operating equipment associated with regular cleansing of Project PV panel surfaces complies with daytime County noise standards, the following shall be implemented:

a. As part of the Project operations and maintenance program, the Applicant shall prepare a PV Panel Washing Plan (PVPWP) that addresses the usage of self-propelled or towed washing systems during the expected quarterly (or other frequency as reasonably anticipated annually) PV panel washing. The PVPWP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating PV panel washing equipment and vehicle noise sufficiently proximate to the property line of the property on which the noise is produced or at any location that is receiving the noise. The PVPWP

shall be submitted to County Planning & Development Services (PDS) a minimum of 30 days prior to the first PV panel washing. The County shall review the PVPWP to ensure compliance with the County Noise Ordinance prior to any panel washing. A subsequent plan shall be submitted to County PDS if there are any anticipated changes to the panel washing in the future. The subsequent Plan shall be submitted to the County 30 days prior to any new PV panel washing procedures occur. Components of the PVPWP shall include the following:

- Affected property owners shall be notified in writing two weeks prior to the use of PV panel washing activity with 500 feet of their property boundaries.
- Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA L_{eq} at 16 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins S80, RR or similar County-classified Noise Zone 1 property:

  within 150 feet – not permitted;

  150 to 250 feet – up to five minutes within any hour;

  250 to 300 feet – up to fifteen minutes within any hour;

  300 to 450 feet – up to thirty minutes within any hour; and,

  beyond 450 feet – no restriction.

- Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA L_{eq} at 16 feet over a full hour; and its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property:

  within 100 feet – not permitted;

  100 to 150 feet – up to five minutes within any hour;

  150 to 200 feet – up to fifteen minutes within any hour;

  200 to 250 feet – up to thirty minutes within any hour; and,

  beyond 250 feet – no restriction.

- Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA L_{eq} at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the

property line that adjoins S80, RR or similar County-classified Noise Zone 1 property:

within 50 feet – not permitted;

50 to 75 feet – up to five minutes within any hour;

75 to 100 feet – up to fifteen minutes within any hour;

100 to 125 feet – up to forty-five minutes within any hour; and,

beyond 125 feet – no restriction.

- Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA L_{eq} at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property:

  within 25 feet – not permitted;

  25 to 40 feet – up to five minutes within any hour;

  40 to 60 feet – up to fifteen minutes within any hour;

  60 to 75 feet – up to thirty minutes within any hour; and,

  beyond 75 feet – no restriction.

- Visual guides (flags, reflectors, or other markers) shall clearly delineate distances or zones of operation allowed for either of the afore-mentioned PV panel washing systems (self-propelled or towed).

b. Operators of the PV panel washing equipment shall be informed of the PVPWP as part of customary on-site Project training and awareness of County noise standard compliance to avoid potential noise impacts to the Jacumba Hot Springs community.

M-NOI-3 **Construction Noise Management Plan:** Prior to construction and decommissioning, the Applicant shall prepare a construction noise management plan (CNMP) which establishesconstruction activity restrictions in order to reliably achieve compliance with theCounty's 8-hour 75 dBA L_{eq} standard at the Project property lines adjoiningexisting occupied properties (defined by Section 36.402.m as "property on whichthere is a building for which a certificate of occupancy has been issued"). TheCNMP shall demonstrate compliance with the County Noise Ordinance foravoiding potential impacts caused by operating construction equipment and vehiclenoise sufficiently proximate to these property lines of occupied properties. The

CNMP shall be submitted to County Planning & Development Services (PDS) thirty (30) days prior to any land disturbance. Components of the CNMP shall include the following:

a. Affected property owners shall be notified in writing two weeks prior to construction activity within 500 feet of their property boundaries.

b. In order to comply with the County Noise Ordinance (Section 36.409 – Construction Equipment), the acoustical usage factors (AUF) of heavy construction equipment used on the Project site shall be comparable to those listed on Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide Table 1, reference L_{max} values at 50 feet shall be the lower of either the "Spec. 721.560" or "Actual Measured" values from the same RCNM User's Guide Table 1, and duration of heavy equipment operating for construction shall comply with the following limitations by activity, for the specified distance between the indicated heavy equipment operations and a position along the property line of an occupied parcel:

- Perimeter fence installation – up to two flatbed trucks and a front end loader:

  within 15 feet – not permitted;

  15 to 25 feet – no more than twenty minutes per 8-hour period;

  25 to 50 feet – no more than one hour per 8-hour period;

  50 to 75 feet – no more than 4 hours per 8-hour period; and,

  beyond 75 feet – no restriction.

- Site preparation (clearing) – water truck and tractor (mowing attachment):

  within 20 feet – not permitted;

  20 to 25 feet – no more than twenty minutes per 8-hour period;

  25 to 50 feet – no more than thirty minutes per 8-hour period;

  50 to 75 feet – no more than 2 hours per 8-hour period;

  75 to 100 feet – no more than 4 hours per 8-hour period; and,

  beyond 100 feet – no restriction.

- Site preparation (earth-moving) – bulldozer, water truck, and scraper:

  within 25 feet – not permitted;

  25 to 50 feet – no more than twenty minutes per 8-hour period;

50 to 75 feet – no more than one hour per 8-hour period;

75 to 100 feet – no more than three hours per 8-hour period;

100 to 125 feet – no more than six hours per 8-hour period; and,

beyond 125 feet – no restriction.

- Site preparation (grading) – flatbed truck, grader, water truck, and sheepsfoot roller:

  within 25 feet – not permitted;

  25 to 50 feet – no more than twenty minutes per 8-hour period;

  50 to 75 feet – no more than one hour per 8-hour period;

  75 to 100 feet – no more than three hours per 8-hour period;

  100 to 125 feet – no more than six hours per 8-hour period; and,

  beyond 125 feet – no restriction.

- Underground work (trenching) – excavator, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift):

  within 25 feet – not permitted;

  25 to 50 feet – no more than twenty minutes per 8-hour period;

  50 to 75 feet – no more than 1.5 hours per 8-hour period;

  75 to 100 feet – no more than 3 hours per 8-hour period; and,

  beyond 100 feet – no restriction.

- Underground work (back-filling) – Aussie padder, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift):

  within 25 feet – not permitted;

  25 to 50 feet – no more than twenty minutes per 8-hour period;

  50 to 75 feet – no more than 1.5 hours per 8-hour period;

  75 to 100 feet – no more than 3 hours per 8-hour period; and,

  beyond 100 feet – no restriction.

- System installation – gradall (4x4 forklift), crane, ATV, vibratory pile driver (RGT Model RG21T or comparable), pick-up truck, and 5kW generator:

  within 25 feet – not permitted;

25 to 50 feet – no more than twenty minutes per 8-hour period;

50 to 75 feet – no more than 1.5 hours per 8-hour period;

75 to 100 feet – no more than 4 hours per 8-hour period; and,

beyond 100 feet – no restriction.

All construction equipment operations shall incorporate all recommended noise reducing measures such as, but not limited to, limiting construction equipment operations, installation of temporary noise barriers, and implementation of the recommendations within the CNMP to demonstrate compliance with the County Code Noise Ordinance, Sections 36.408 and 36.409.

Concurrent construction activities may occur so long as next closest construction activity to the same studied property line position is at least four times its "no restriction" distance away. By way of example, if earth-moving was occurring near a fixed point on the potentially affected property line, the next-closest set of earth-moving equipment performing like work, or perhaps an overlapping and comparable scheduled activity (e.g., grading), would be permitted if no closer than 500 feet (= 4 x 125') from the same receptor point.

c. If distance buffers or duration limits cannot be maintained, then the Project Applicant or its contractor will implement on-site temporary sound abatement measures, such as a field-erected noise barrier (e.g., sound blankets) of sufficient height and horizontal extent, or the placement of storage containers and other similarly solid sound-occluding structures, to ensure construction activity noise at the Project property line complies with County standards.

d. The CNMP will also include direction for the Project applicant or its contractor(s) to implement the following:

- Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer;
- Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements;
- Usage of truck engine exhaust compression braking systems shall be limited to emergencies;
- Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational

Safety and Health Administration (OSHA) and Cal OSHA's safety requirements are not violated;

- Vehicle horns shall be used only when necessary, as specified in the contractor's specifications; and,
- Radios and other noise-generating "personal equipment" shall be prohibited.

2.9.8 Conclusion

This section provides a synopsis of the conclusion reached in each of the above impact analyses with mitigation incorporated.

Operational Noise

The operational noise levels from the stationary equipment of the Proposed Project would be compliant with the County's noise standards if the Proposed Project's equipment and layout is the same as what was evaluated in the AAR; however, if the equipment was to change and/or the layout is different from what was evaluated, operational noise levels have the potential to exceed the County's Noise Ordinance threshold (**Impact NOI-1**). Mitigation Measure **M-NOI-1** would ensure predicted stationary equipment operation noise levels would be compliant with the applicable County Noise Ordinance nighttime noise level standard at the Proposed Project property lines and at nearest NSLU per the County's Guidelines with respect to a CNEL standard. With implementation of **M-NOI-1**, impacts from noise caused by stationary equipment (**Impact NOI-1)** would be reduced to **less than significant**.

PV panel washing activities have the potential to exceed noise level standards in the County's Noise Ordinance and Guidelines. Mitigation measure **M-NOI-2** would be required to ensure that operation of mobile PV panel washing processes for the Proposed Project comply with the County's Noise Ordinance and Guidelines (i.e., daytime hourly L_{eq} standards and expected CNEL at the nearest NSLU). With implementation of **M-NOI-2**, impacts from noise caused by occasional on-site PV panel washing procedures (**Impact NOI-2)** would be reduced to **less than significant**.

Construction Noise

If the Proposed Project construction phases or other activities overlap in schedule or otherwise occur concurrently, the Proposed Project does have the potential to exceed these thresholds and impacts may be **potentially significant** (**Impact NOI-3**). Mitigation measure **M-NOI-3** would be required to ensure construction noise emission is compliant with County standards. With implementation of mitigation measure **M-NOI-3,** impacts from construction related noise (**Impact NOI-3**) would be reduced to **less than significant**. Additionally, should Proposed Project construction phases or other activities overlap in schedule or otherwise occur concurrently, the

Construction Noise Management Plan as outlined in **M-NOI-3** would include specified distance restrictions that when implemented would help ensure such concurrence does not cause logarithmically combined noise levels to exceed the County's standard per Section 36.409 of the Noise Ordinance.

Impacts associated with construction traffic noise, groundborne vibration, and airport noise would be less than significant; therefore, no mitigation is required. Cumulative impacts would be less than cumulatively considerable.

Table 2.9-1
Typical Sound Levels Measured in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet flyover at 1,000 feet		
	— 100 —	
Gas lawnmower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2009, pp. 2–21.
dBA = A-weighted decibels.

Table 2.9-2
Measured Outdoor Ambient Noise Levels in Proposed Project Vicinity

Site	Location	Start Time	Noise Level (dB)		
			L_{eq}[1]	L_{max}[2]	L_{min}[3]
ST1	West side of Project site	10:55 a.m.	41.2	48.1	32.8
ST2	Residence at center of Project site	12:10 p.m.	49.2	66.9	32.1
ST3	East side of Project site	12:30 p.m.	46.1	63.6	31.9
ST4	Adjacent to nearest residence, approx. 50 feet west of Project site	11:50 a.m.	36.2	47.7	29.7
ST5	Southwest side of Project site	11:15 a.m.	35.3	48.0	29.0
ST6	Residence at north boundary of Project site	11:30 a.m.	36.0	47.3	31.9

1 Equivalent Continuous Sound Level (Time-Average Sound Level)
2 Maximum Sound Level
3 Minimum Sound Level

Table 2.9-3
County of San Diego Exterior Noise Standards

Zone	Time	One-Hour Sound Level Limits (dB)
(1) R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92 and R-V and R-U with a density of less than 11 dwelling units per acre	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	50 45
(3) S-94, V4 and all commercial zones (C-44)	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	60 55
(7) S-88 (see subsection (c))		

Source: County of San Diego Noise Ordinance, Section 36.404.

Table 2.9-4
Predicted Proposed Project Operations
Noise Levels at Property Line and Off-Site Locations

Receiver Locations (Property Line Positions and Noise-Sensitive Land Uses)	One-Hour Average Noise Level (L_{eq1h}, dBA) at the Receiver Location	
	*All Proposed Project Sources**	*Collector Substation Transformer Only*
ST2 = near 44993 Old Highway 80	43.7	13.4
ST4 = Corner of Seeley Avenue and Laguna Street	41.6	12.7
ST5 = Railroad Street, south of Heber Street	35.2	6.2
ST6 = Corner of Heber Street and Seeley Avenue	34.6	9.4
B1 = Corner of Holtville Avenue and Laguna Street	44.4	11.9
B2 = southeastern corner of Jacumba Community Park	43.8	8.3
B3 = east of the switchyard, adjoining S-92 zoned land	39.3	36.9
R1 = Residence north of Seeley Avenue and Laguna Street	40.7	12.3
R2 = Residence on the south side of Holtville Avenue, east of Campo Street	41.0	11.3
R3 = Residences within "Wagon Wheel Trailer Park" located at 44726 Old Highway 80	41.5	11.0
R4 = Apparent residence on the west side of Railroad Street, south of Old Highway 80	34.2	5.7
R5 = Apparent residence at 45093 Old Highway 80	43.8	13.6
R6 = Apparent residence at 45851 Old Highway 80	28.8	17.6

* Includes Proposed Project inverter/transformer platforms and battery storage HVAC units; and, the collector substation step-up transformer (34.5 kV to 138 kV).

Table 2.9-5
Typical Construction Equipment Noise Emission Levels

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Measured L_{max} at 50 Feet (dBA, slow)
Auger drill rig	No	20	84
Backhoe	No	40	78
Compactor (ground)	No	20	83
Compressor (air)	No	40	78
Concrete pump truck	No	20	81
Crane	No	16	81
Dozer	No	40	82
Drill rig truck	No	20	79
Dump truck	No	40	76
Excavator	No	40	81
Flat-bed truck	No	40	74
Front end loader	No	40	79
Generator (<25KVA, VMS signs)	No	50	73
Gradall	No	40	83
Man lift	No	20	75
Paver	No	50	77
Pickup truck	No	40	75
Roller	No	20	80
Scraper	No	40	84
Slurry trenching machine	No	50	80

Source: FHWA 2006.

Table 2.9-6
Conventional Construction Equipment Noise Prediction Results

Construction Phase or Activity	Eight-hour L_{eq} (dBA) at Indicated Source-to-Receiver Distance		
	Nearest NSLU (50 Feet) [A]	*Nearest NSLU (83 Feet)* [B]	*Nearest NSLU (300 Feet)* [C]
Perimeter fence installation	74	65	54
Site preparation (clearing)	73	64	53
Site preparation (earth-moving)	74	65	54
Site preparation (grading)	74	65	54
Underground work (trenching)	75	65	55
Underground work (back-filling)	75	65	55
System installation	N/A [D]	75	60
Energy storage unit installation	N/A [D]	N/A [D]	64
Testing & commissioning	51	45	31
Site cleanup & restoration	75	69	55

[A] Distance to access road near Proposed Project property line
[B] Distance to PV tracker support structure
[C] Distance to inverter/transformer platform and battery storage containers
[D] Not applicable (distance does not occur for this activity)

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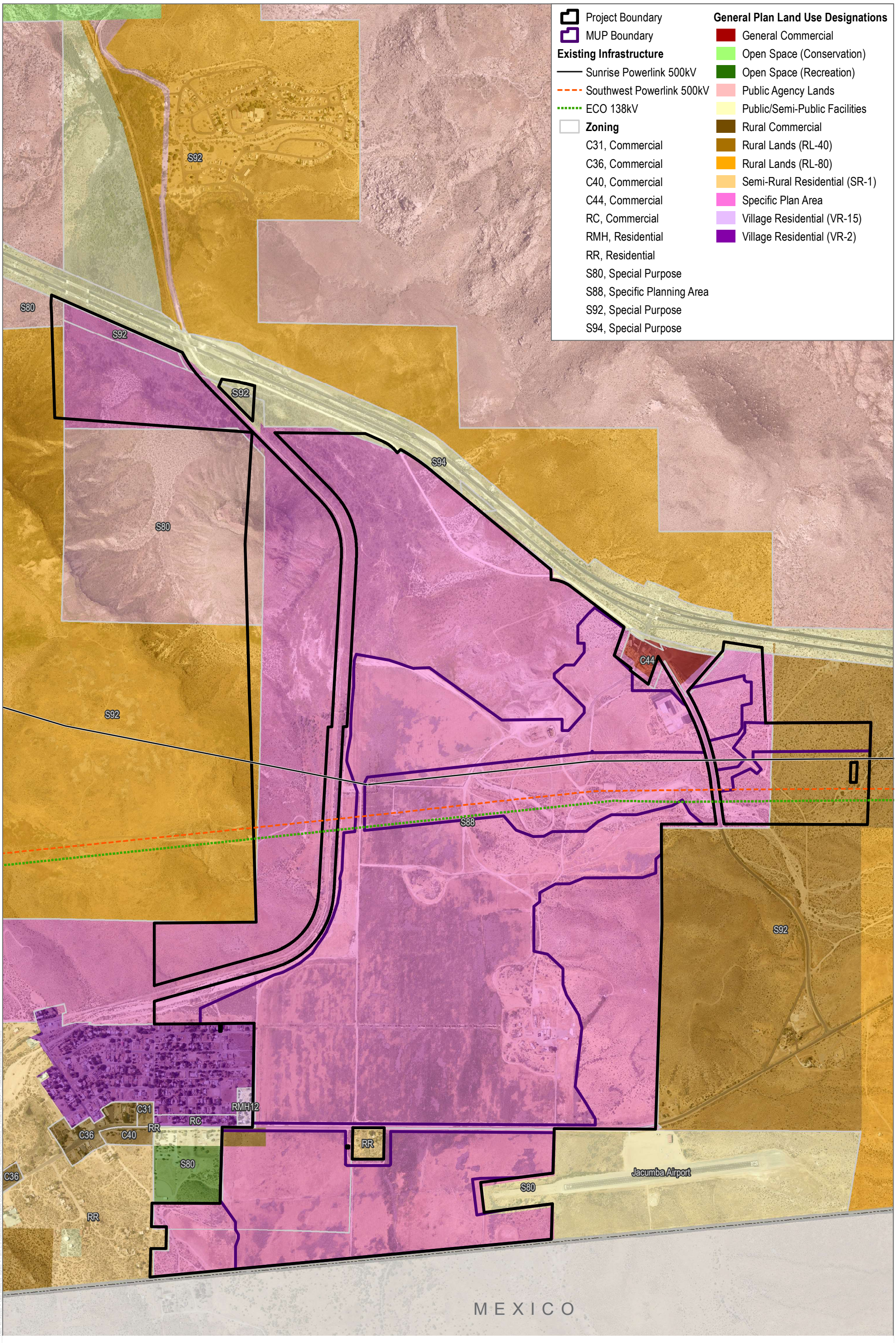

SOURCE: Kimley-Horn 2020; SANGIS 2017, 20020

DUDEK

0 500 1,000 Feet

FIGURE 2.9-1

Environmental Setting

JVR Energy Park Project

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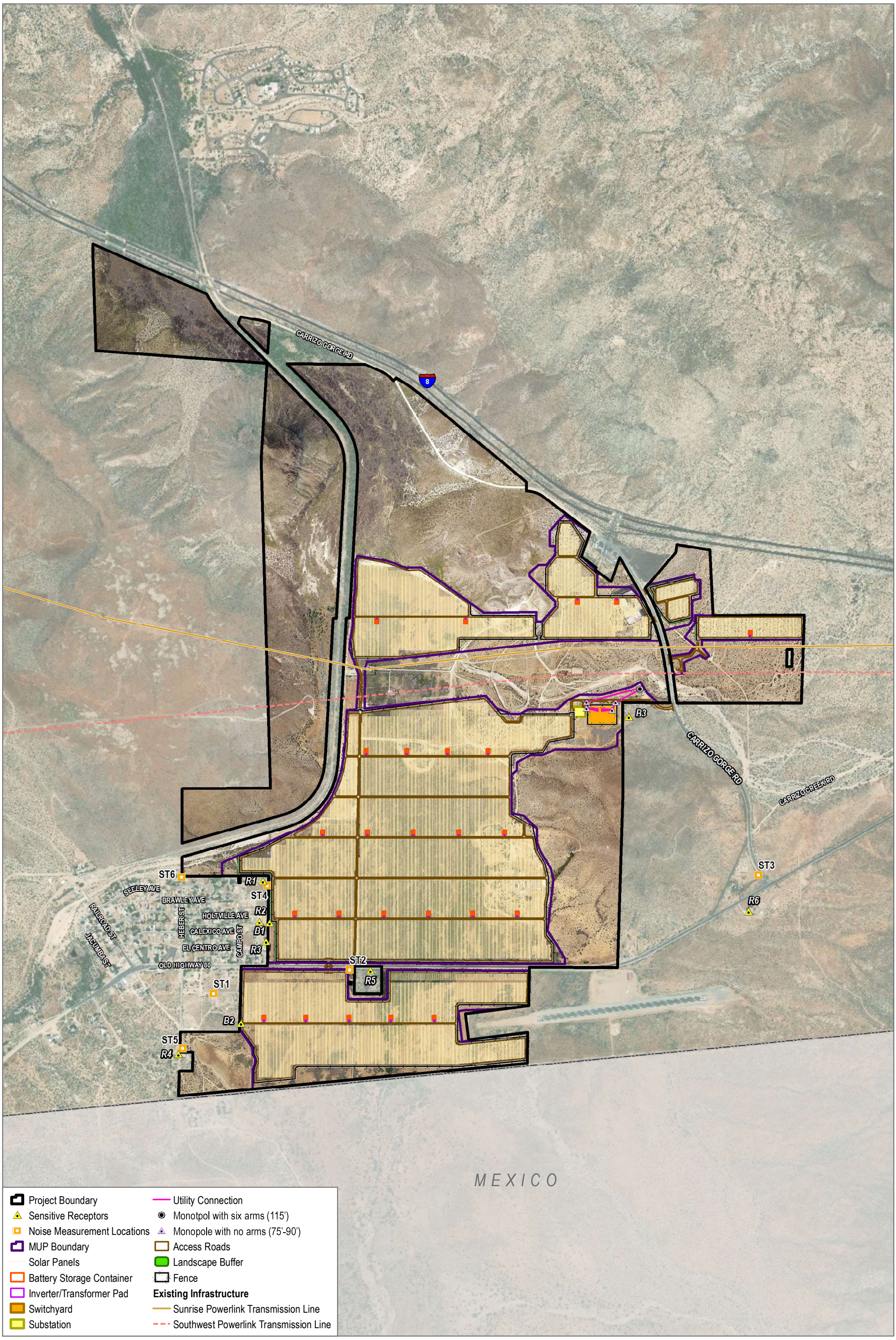

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.9-2

Noise Measurement Locations

JVR Energy Park Project

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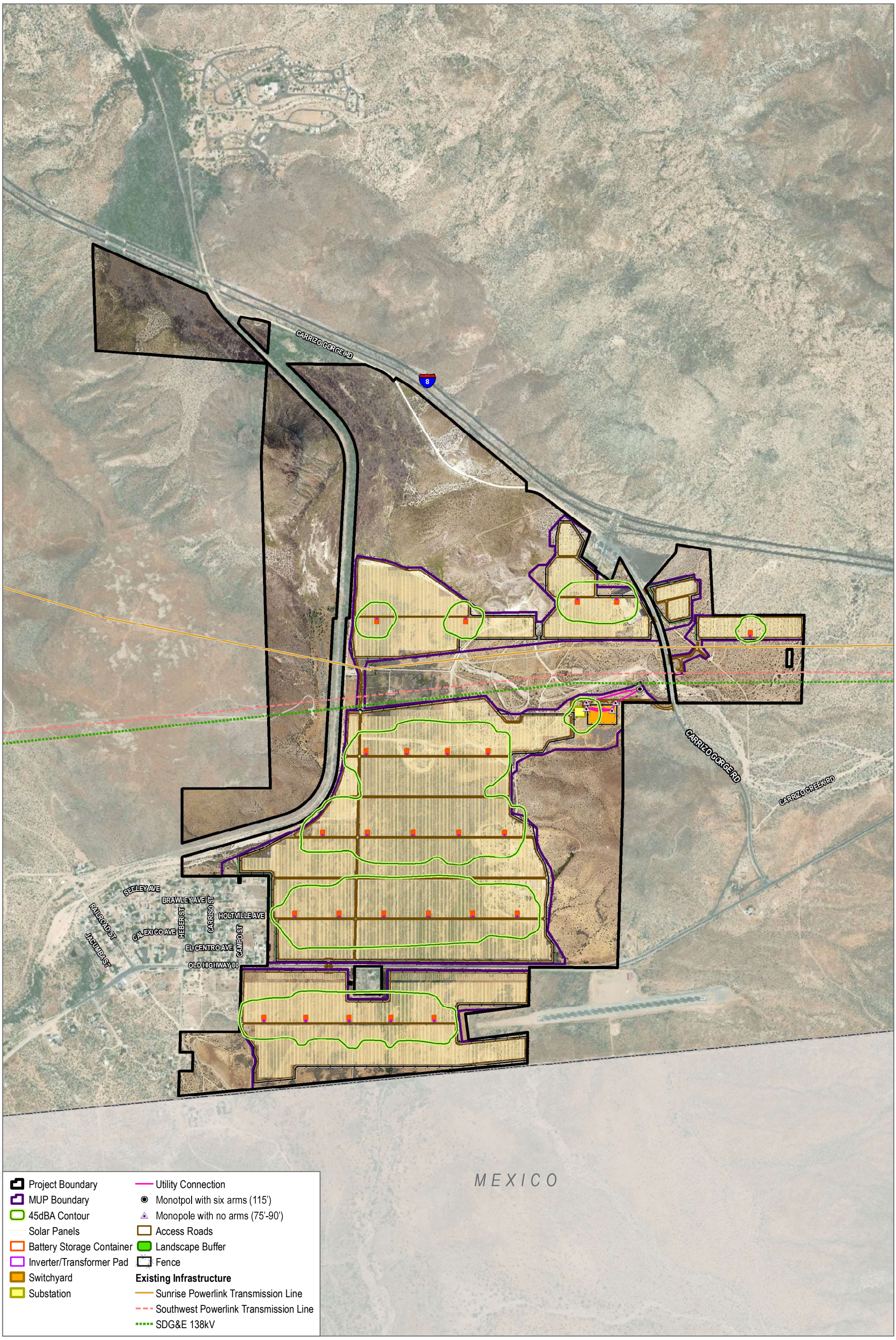

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.9-3

Predicted Project Operations Noise Contour (45 dBA Leq)

JVR Energy Park Project

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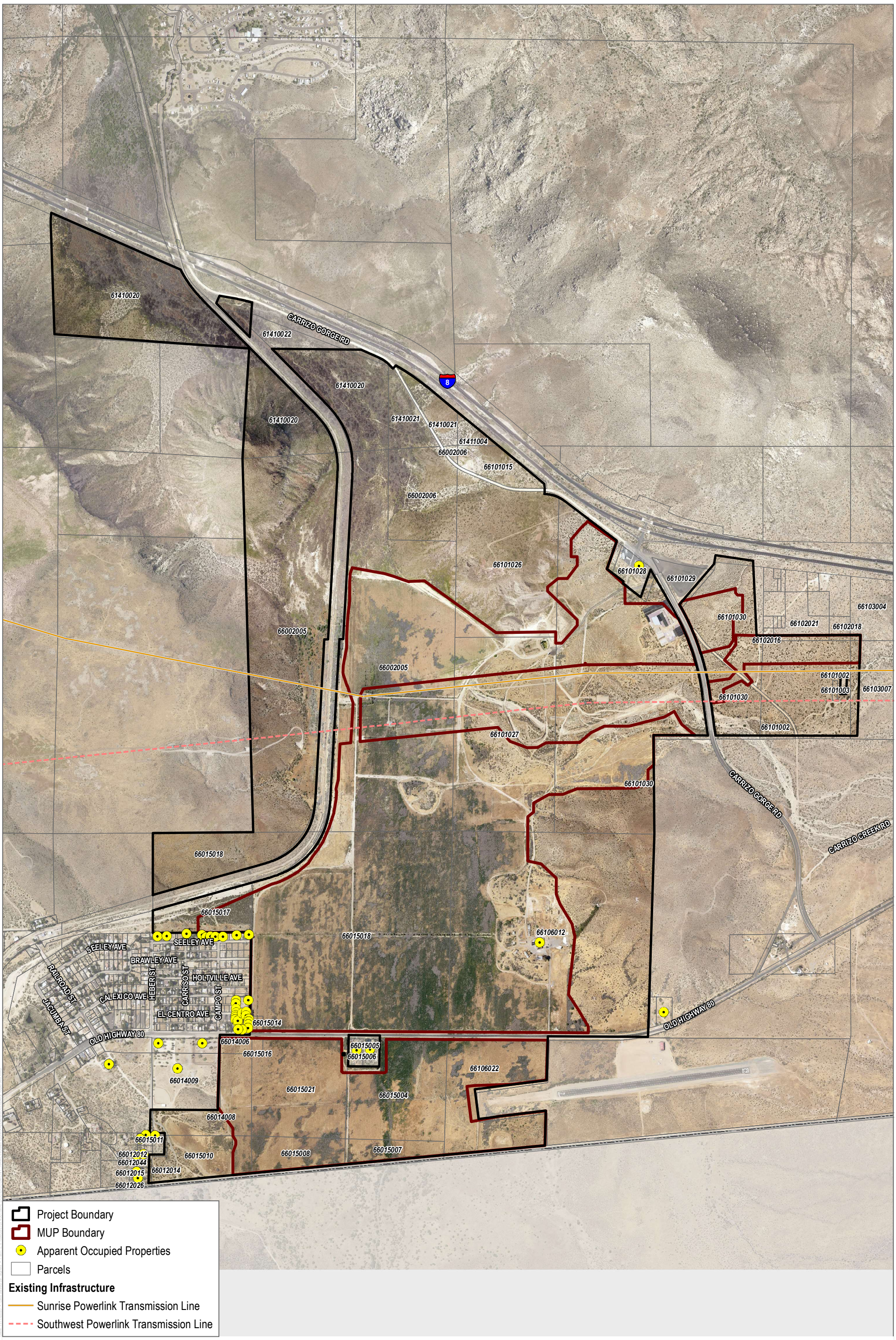

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.9-4

Apparent Occupied Properties

JVR Energy Park Project

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2.10 Paleontological Resources

This section discusses potential impacts to paleontological resources resulting from implementation of the proposed JVR Energy Park Project (Proposed Project). The analysis is based on a review of existing paleontological resources, technical data, and applicable laws, regulations, and guidelines.

No comments were received in response to the Notice of Preparation regarding paleontological resources. A copy of the Notice of Preparation and comment letters received in response to it are included in Appendix A of this Environmental Impact Report (EIR).

2.10.1 Existing Conditions

Paleontological resources are the remains and/or traces of prehistoric life, exclusive of human remains, and include the localities where fossils were collected and the sedimentary rock formations from which they were obtained/derived. The defining character of fossils is their geologic age. Fossils or fossil deposits are generally regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last Late Pleistocene glacial event and the beginning of the current period of climatic amelioration of the Holocene (County of San Diego 2007).

A unique paleontological resource is any fossil or assemblage of fossils, or paleontological resource site or formation that meets any one of the following criteria (County of San Diego 2007):

- Is the best example of its kind locally or regionally.
- Illustrates a paleontological or evolutionary principle (e.g., faunal succession; plant or animal relationships).
- Provides a critical piece of paleobiological data (illustrates a portion of geologic history or provides evolutionary, paleoclimatic, paleoecological, paleoenvironmental, or biochronological data).
- Encompasses any part of a "type locality" of a fossil or formation.
- Contains a unique or particularly unusual assemblage of fossils.
- Occupies a unique position stratigraphically within a formation.
- Occupies a unique position, proximally, distally or laterally within a formation's extent or distribution.

Geologic Setting

The Project site is located on the eastern portion of the Peninsular Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is typified by northwest to

southeast trending mountain ranges extending approximately 900 miles from the Transverse Ranges and the Los Angeles Basin to the southern tip of Baja California. The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the Southern California batholith. The portion of the province in San Diego County that includes the Project site generally consists of uplifted granitic mountains and alluvial valleys. Portions of the Project site are also underlain by Miocene-age volcanic and sedimentary rocks (Appendix F).

As outlined in the Preliminary Geotechnical Evaluation Report prepared for the Proposed Project (Appendix F), a variety of soil types typical of those found in the surrounding geologic region occur within the Project site. The geologic units encountered within the Proposed Project development footprint during subsurface exploration included primarily fill, alluvium, and terrace deposits. Generalized descriptions of the earth units encountered during the field reconnaissance and subsurface exploration are provided in Appendix F, and Section 2.5, Geology, Soils and Seismicity, of this EIR.

Paleontological Resource Potential

Based on rock type and location of previously recorded fossils, areas within the County have been assigned to the following categories for potential paleontological resources: high sensitivity, moderate sensitivity, low sensitivity, marginal sensitivity, and zero sensitivity. The County's California Environmental Quality Act (CEQA) guidelines for paleontological resources use these categories to guide the significance determinations for projects under discretionary review. Most of the County is underlain by geologic formations with no potential, low sensitivity, or marginal sensitivity for paleontological resources (County of San Diego 2009).

As shown on the County's Paleontological Resources Maps (County of San Diego 2009, 2011), as well as Figure 2.10-1, Paleontological Resource Potential, the Project Site is located within areas rated as "high," "moderate," "low," and "no sensitivity" for paleontological resources. High resource potential and high sensitivity are assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleonenvironmental interpretation, and fossils providing important information about the paleoclimatic, paleobiological and/or evolutionary history (phylogeny) of animal and plant groups. Moderate resource potential and moderate sensitivity are assigned to geologic formations known to contain paleontological localities. These geologic formations are judged to have a strong, but often unproven, potential for producing unique fossil remains (County of San Diego 2009). Low resource potential and low sensitivity are assigned to geologic formations that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains. Low resource potential formations rarely produce fossil remains of scientific significance and are considered to have low sensitivity. No resource potential is assigned to geologic formations that are composed entirely of volcanic or plutonic igneous rock, such as basalt or granite, and therefore do not have any potential for producing fossil remains.

2.10.2 Regulatory Setting

Federal Regulations

There are no federal regulations related to paleontological resources applicable to the Proposed Project.

State Regulations

California Environmental Quality Act (CEQA)

CEQA requires lead agencies to carefully consider the potential effects of a project on unique paleontological resources. CEQA requires an assessment of impacts associated with the direct or indirect destruction of unique paleontological resources or sites that are of value to the region or State.

Local Regulations

County of San Diego General Plan — Conservation and Open Space Element

The Conservation and Open Space Element of the County General Plan provides policies for the protection of natural resources. In addition, the Conservation and Open Space Element lists "Unique Geologic Features" for conservation, many of which are fossiliferous formations. The following policies are related to paleontological resources (County of San Diego 2011):

- **Goal COS-9: Education and Scientific Uses.** Paleontological resources and unique geologic features conserved for educational and/or scientific purposes.
    - **Policy COS-9.1: Preservation.** Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.
    - **Policy COS-9.2 Impacts of Development.** Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.

County of San Diego Grading Ordinance

The Grading Ordinance requires that projects involving grading, clearing, and/or removal of natural vegetation obtain a grading permit, unless the project meets one or more of the exemptions listed in Section 87.202 of the Grading Ordinance. The grading permit is discretionary and requires compliance with CEQA. Section 87.430 of the Grading Ordinance provides that the County official (e.g., permit compliance coordinator) may require a paleontological monitor during all or selected grading operations, to monitor for the presence of paleontological resources. If fossils greater than 12 inches in any dimension are encountered, then all grading operations in the area of discovery shall be suspended immediately and not resumed until authorized by the County official.

The ordinance also requires immediate notification of the County official regarding the discovery. The County official shall determine the appropriate resource recovery operation, which the permittee shall carry out prior to the County official's authorization to resume normal grading operations (County of San Diego 2012).

2.10.3 Analysis of Project Effects and Determination of Significance

Methodology

Paleontological resource impacts occur through the destruction or alteration of a paleontological resource or site by grading, excavation, trenching, boring, tunneling or other activity that disturbs the subsurface geologic formation. Excavation operations are the most common ways for paleontological resources to be adversely impacted and can result in the permanent loss of resources and valuable information. The most extensive excavation impacts are usually associated with mass grading, where earthmovers are used in combination with bulldozers to rip and transport soil and bedrock. Front-end loaders, track hoes, and trucks can also be used in mass excavation operations. Smaller amounts of earth are moved during, boring, trenching, and tunneling, and typically the impacts are less extensive. Indirect impacts to paleontological resources could include destruction or loss of surface fossils from increased erosion, increased human access to the area, and non-scientific or unauthorized surface collection or subsurface excavation of a fossil or paleontological site.

The analysis of potential impacts to paleontological resources resulting from implementation of the Proposed Project is based on a review of the County's Paleontological Resources Maps (County of San Diego 2007) and the underlying geologic unit at the Project site.

Guidelines for the Determination of Significance

The Proposed Project is a solar energy generation and energy storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, of this EIR), is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

Direct, indirect, and cumulative impacts pertaining to paleontological resources are evaluated based on specified thresholds identified in the CEQA Guidelines Appendix G, and in the County of San Diego's Guidelines for Determining Significance, including the following:

- County of San Diego Guidelines for Determining Significance, Paleontological Resources

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted, or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

For the purposes of this section, the County's guidelines for Determining Significance – Paleontological Resources (County of San Diego 2009) applies to the direct, indirect, and cumulative impact analysis. An affirmative response to or confirmation of the following guideline will generally be considered a significant impact related to paleontological resources, in the absence of scientific evidence to the contrary:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. A significant impact to paleontological resources may occur as a result of the project, if project-related grading or excavation will disturb the substratum or parent material below the major soil horizons in any paleontologically sensitive area of the County, as shown on the San Diego County Paleontological Resources Potential and Sensitivity Map.

This guideline is derived from CEQA Guidelines Appendix G. It requires the evaluation of paleontological resources to determine whether or not a proposed action will have a significant effect on paleontological resources (County of San Diego 2009).

Analysis

Development of the solar facility and supporting infrastructure would disturb approximately 643 acres during construction-related grading activities. Clearing and grubbing would be required for construction and access to the Project site. Clearing and grubbing activities are unlikely to disturb paleontological resources, if present, because they would affect surface soil horizons only, which are unlikely to contain significant paleontological resources.

Grading would be required throughout the development footprint. Grading is expected to be balanced on site, with approximately 264,000 cubic yards of cut redistributed across the site. Proposed grading has the potential to disturb paleontological resources onsite. In addition to grading, construction activities that would disturb the subsurface would include demolition of

existing structures on a portion of the Project site; pile driving; fence installation; landscaping installation; construction of the substation, switchyard, and meteorological stations; tracker and PV Module installation; undergrounding of electrical facilities; inverter/transformer platform installation; and battery energy storage system installation. The Proposed Project also includes interior access and proposed access driveways.

The proposed undergrounding of the collection system would require trenching for installation of the AC medium voltage underground electrical collection system and telecommunication lines. Trenches would be approximately 3 to 4 feet deep and 2 to 3 feet wide. The trenches would be filled with base materials above and below the conductors and communication lines to ensure adequate thermal conductivity and electrical installation characteristics. The topsoil from trench excavation would be set aside the trench before the trench is backfilled and would ultimately comprise the uppermost layer of the trench. Excess material from the foundation and trench excavations would be used for site leveling. Where possible, trenching would be located beneath interior access and driveways to minimize disturbance.

As described above, most of the County is underlain by geologic formations with no potential, low sensitivity, or marginal sensitivity for paleontological resources (County of San Diego 2009). However, as shown on the County's Paleontological Resources Maps (County of San Diego 2009, 2011), as well as Figure 2.10-1. Within the development footprint (shown as "MUP Boundary" on Figure 2.10-1), the potential for paleontological resources is rated as "high," "moderate," "low," and "no sensitivity." Further, grading would 2,500 cubic yards, which the County considers would increase the potential loss of paleontological resources and may disturb the substratum or parent material below the major soil horizons on the Project site. Although majority of the development footprint is mapped as having "low" paleontological resource potential, since some areas along the eastern and western Proposed Project boundary are mapped as "high" and "moderate" potential, impacts to paleontological resources during construction of the Proposed Project would be **potentially significant (Impact PR-1)**.

During the operational phase, the Proposed Project would not have any full-time personnel on site, but may include up to five people on site during operations inspections, maintenance, and repair activities. Operational activities are unlikely to disturb paleontological resources because they would affect surface soil horizons only, which do not contain significant paleontological resources. Therefore, it is determined that operation and maintenance related impacts would be **less than significant**.

Decommissioning activities would be performed within the Proposed Project development footprint. No ground-disturbing activities would occur outside the development footprint. All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line, which would be owned and operated by SDG&E. The activities associated with decommissioning would not include grading. Implementation of a final decommissioning plan(s)

would be required, and would be provided within one year of issuance of the building permits for the Proposed Project to ensure compliance with Section 6954.b.3(d) of the County of San Diego Zoning Ordinance for removal surety as described in Chapter 1, Project Description, of this EIR. Implementation of the final decommissioning plan impacts to paleontological resources during decommissioning of the Proposed Project would be **less than significant**.

Switchyard

The Proposed Project would include a 138 kV switchyard located adjacent to the proposed collector substation (see Figure 1-5, Substation and Switchyard, in Chapter 1 of this EIR). The size of the switchyard would be approximately 140,000 square feet. Within this area would be 8-foot-high security fence (445 feet by 300 feet) surrounded by a 5-foot shoulder for grounding protection inside the fence. As shown on Figure 2.10-1, the area within the switchyard site is mapped as having "low" paleontological resource potential. However, as the switchyard would be located within close proximity to areas mapped as "high" and "moderate" paleontological resource potential, there would be the potential to impact unknown paleontological resources during construction. Therefore, impacts would be **potentially significant (Impact PR-1)**.

After completion of construction of the switchyard, operation of the switchyard facility would be transferred to SDG&E. The switchyard would be un-staffed during operation. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Operational activities are unlikely to disturb paleontological resources because they would affect surface soil horizons only, which do not contain significant paleontological resources. Therefore, it is determined that operation and maintenance related impacts would be **less than significant**. The switchyard and connection to the SDG&E transmission line that would be owned and operated by SDG&E would not be decommissioned at the life span of the solar facility.

2.10.4 Cumulative Impact Analysis

Cumulative projects (Table 1-4, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects, in Chapter 1 of this EIR) located within the cumulative project area would have the potential to result in a cumulative impact associated with paleontological resources from extensive grading, excavation, or other ground-disturbing activities that are located in an area of high or moderate sensitivity. Cumulative projects on state or public lands would be required to

comply with Public Resources Code Sections 5097–5097.6 pertaining to impacts to paleontological resources. Other cumulative projects would be regulated by state and local regulations, including CEQA and the County Grading Ordinance.

As discussed in Section 2.10.2, Regulatory Setting, the Proposed Project is subject to the County Grading Ordinance, which requires a paleontological monitor to be present during grading or excavation activities at the discretion of the County, mandates the suspension of grading operations upon the discovery of fossils greater than 12 inches in any dimension, and gives the appropriate County official the authority to determine the appropriate resource recovery operations, which shall be carried out prior to the County official's authorization to resume normal grading operations. Therefore, due to the Grading Ordinance and discretionary review process required, the Proposed Project **would not contribute to a cumulatively considerable impact** to paleontological resources.

2.10.5 Significance of Impacts Prior to Mitigation

County guidelines state that for projects within areas of high or moderate paleontological resources potential that propose excavation equal to or greater than 2,500 cubic yards, the services of a Project Paleontologist and a Paleontological Resources Monitor are required. Because construction of the Proposed Project would require 264,000 cubic yards of excavation, and areas of "high" and "moderate" paleontological resource potential occur within the Proposed Project development footprint, construction of the Proposed Project has the potential to impact unidentified paleontological resources. Therefore, construction related impacts would be **potentially significant** prior to mitigation (**Impact PR-1**).

2.10.6 Mitigation Measures and Design Considerations

M-PR-1 Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist, subject to the review and approval of the County. The paleontologist shall prepare a Paleontological Resources Monitoring Program (PRMP) for the Project. The PRMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (2010). The qualified paleontologist shall attend the preconstruction meeting and the paleontological monitor shall be on-site during rough grading and other significant ground-disturbing activities in previously undisturbed geological units with moderate to high paleontological resource sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be contained with temporary orange construction fencing and shall include a 50-foot radius buffer. Once

documentation and collection of the find is completed, the paleontological monitor shall remove the temporary orange construction fencing and grading will be allowed to recommence in the area of the find. Upon completion of the paleontological monitoring program, the qualified paleontologist shall prepare a final monitoring report documenting the results of the monitoring program. This report shall include a description of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

2.10.7 Conclusion

With implementation of **M-PR-1**, Paleontological Resources Monitoring, the potential for impacts to paleontological resources would be reduced to a level of **less than significant**. Implementation of the mitigation measure would ensure that fossils, if present, would be identified and recovered as appropriate.

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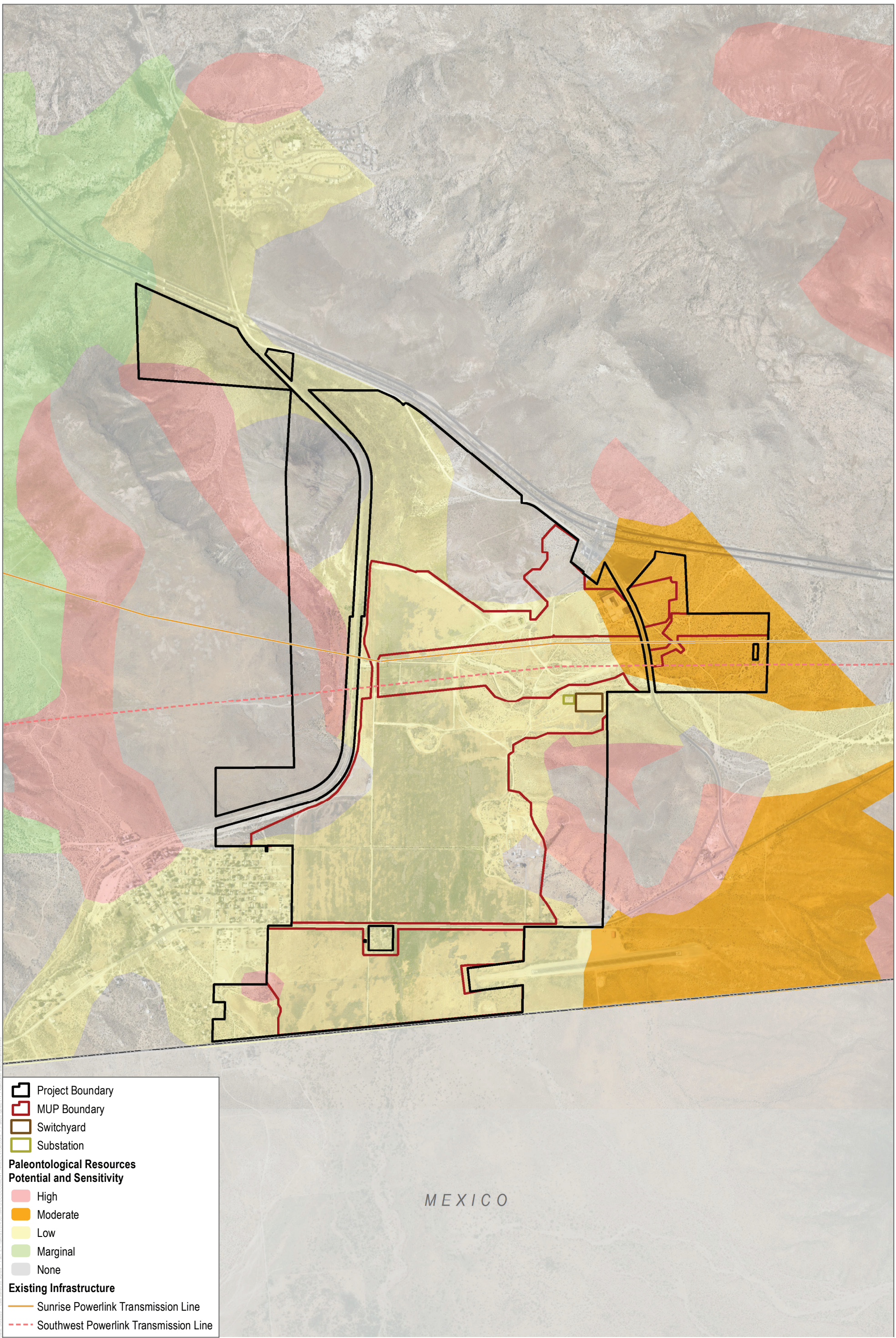

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.10-1

Paleontological Resource Potential

JVR Energy Park Project

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2.11 Tribal Cultural Resources

This section discusses potential impacts to tribal cultural resources (TCRs) resulting from implementation of the proposed JVR Energy Park Project (Proposed Project). This assessment is based on Native American consultation and the Cultural Resources Report prepared by Dudek (Appendix E). The results of the analysis are presented below and included as Appendix E to this Environmental Impact Report (EIR), with confidential records and maps on file at the County of San Diego (County) Planning & Development Services and deposited with the South Coastal Information Center (SCIC).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding proper Native American consultation and proper monitoring for tribal cultural resources, tribal artifacts, cremation sites and human remains. These concerns are addressed herein. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

The analysis is based on a review of existing cultural resources; technical data; applicable laws, regulations, and guidelines; and the technical report prepared for the Proposed Project attached as Appendix E, in conformance with the California Environmental Quality Act (CEQA) Guidelines Appendix G Checklist Question XVII(a) and (b), as well as with the County of San Diego's Guidelines for Determining Significance for Cultural Resources (County of San Diego 2007) and other applicable standards. In addition, this assessment is also based on Native American consultation conducted by the County pursuant to Assembly Bill (AB) 52.

For the purposes of this section, TCRs include those resources identified by tribal individuals that are either eligible for listing in the California Register of Historical Resources (CRHR) or determined by the CEQA Lead Agency, within its discretion and as supported by substantial evidence, to be a TCR. In many cases, TCRs are CRHR-eligible archaeological sites that convey tribal values.

2.11.1 Existing Conditions

Natural Setting

The Project site is located within Jacumba Valley in unincorporated southeastern San Diego County. The Proposed Project's area of direct impact (ADI) is largely confined to the valley floor, a portion of which has been altered by agricultural activity. The valley floor on which most of the solar facility would be constructed is located at an elevation of approximately 2,800 feet above mean sea level.

The Project site is located in the eastern portion of the Peninsular Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is typified by northwest to

southeast trending mountain ranges that parallel the trace of the San Andreas and related regional fault system. The Peninsular Ranges generally comprise the granitic of the Peninsular Ranges batholith and associated metamorphic rocks. West of the batholith, in the San Diego embayment, the Peninsular Range Geomorphic Province comprises sedimentary rocks ranging from Late Cretaceous to Pleistocene in age (Appendix E).

The climate is classified as Mediterranean Hot Summer. Rainfall is about 24 centimeters (9.5 inches) per year, based on rain gauge averages between 1963 and 2011, falling primarily between December and March. The average January daily minimum temperature is 4°C (39°F), and the average July daily maximum is 32°C (90°F). The climate would have imposed few constraints on prehistoric hunter-gatherers in the region.

Mammals, birds, and reptiles within these communities provided potential food resources to prehistoric inhabitants. Common animals within this area may include coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), cottontail (*Sylvilagus audubonit*), black-tailed jackrabbit (*Lepus californicus bennettii*), deer mouse (*Peromyscus maniculatus*), and song sparrow (*Melospiza melodia*), as well as a number of other species of birds, mammals, reptiles, and amphibians.

Cultural Setting

Evidence for continuous human occupation in southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. The prehistoric sequence within the general Jacumba region is particularly complicated by potential overlap with aboriginal groups traveling west from the Colorado Desert and Imperial Valley. To overcome potential issues in the application of disparate cultural sequences, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769). Descriptions of these chronological trends are outlined in detail within Section 1.2.1 of the Cultural Technical Report prepared for the Proposed Project (Appendix E).

Area of Direct Impact

The Project site includes 24 parcels of private land that encompass an area of 1,356 acres immediately east of the community of Jacumba Hot Springs. Located within the Project site is the 643-acre ADI (Figure 2.11-1, Area of Direct Impact). The ADI includes all Proposed Project solar facilities, access driveways, fencing, and landscaping. The vertical ADI for the Proposed Project is considered to be the sediments disturbed during Proposed Project construction. The amount of

disturbed sediments varies according to topography and construction needs. The foundations for photovoltaic cells, which cover the extreme bulk of the ADI, consists of metal pipe or I-beams driven 10 to 15 feet into the ground. Installation of the collection system would include trenches 3 to 4 feet in depth.

Tribal Cultural Resources in the Area of Potential Effects

Under California's AB 52, TCRs are defined as archaeological resources that are eligible for or listed in the CRHR, or determined by the CEQA Lead Agency, within its discretion and as supported by substantial evidence, to be a TCR. Notwithstanding the lack of information on TCRs received by the County to date, no significant archaeological sites eligible for or listed in the CRHR would be impacted by the Proposed Project. However, County consultation on AB 52 is ongoing and will continue throughout the processing of the Proposed Project.

2.11.2 Regulatory Setting

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended (16 USC Section 470) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on such properties, and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued in the Code of Federal Regulations (CFR) by the Advisory Council on Historic Preservation (36 CFR 800).

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their actions on historic properties and to seek comments from the Advisory Council on Historic Preservation. The purpose of Section 106 is to avoid unnecessary harm to historic properties from federal actions.

Archeological Resources Protection Act

The Archeological Resources Protection Act (ARPA) makes acts of destruction or alteration of archaeological resources punishable with civil and criminal penalties. The U.S. Department of the Interior has issued regulations under the ARPA, establishing definitions, standards, and procedures to be followed by all federal land managers in providing protection for archaeological resources located on public lands and Native American lands. Permitting authority of the Bureau

of Indian Affairs under the ARPA is detailed in 25 CFR Part 262. An application for an ARPA permit must include authorization and a written agreement between the federal agency and an appropriate repository that will house and curate the collection recovered from a project site. This permit process applies to all excavations on federal, public, and tribal lands.

Native American Graves Protection and Repatriation Act

If Native American human remains, associated or unassociated funerary objects, sacred objects, and objects of cultural patrimony are found, then the Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC Sections 3001–3013) would apply. Under the NAGPRA, federal agencies are required to consult with Native American tribes, in addition to carrying out the inventory, summary, and repatriation provisions of the NAGPRA. Federal agencies also have special NAGPRA responsibilities when Native American human remains and objects are discovered on federal or tribal lands. On tribal trust lands, the tribe, rather than the federal agency, retains responsibilities under the NAGPRA.

Traditional Cultural Properties

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Also relevant to prehistoric archaeological sites is the category termed "traditional cultural property" (TCP) in discussions of cultural resource management performed under federal auspices. According to Guidelines for Evaluating and Documenting Traditional Cultural Properties, "traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice (NPS 1992). The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include the following:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;

- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A TCP can be defined, generally, as one that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. Under County guidelines, TCPs may also be protected under the County's Resource Protection Ordinance (RPO) (County of San Diego 2012).

State Regulations

California Environmental Quality Act

CEQA requires lead agencies to carefully consider the potential effects of a project on TCRs. CEQA requires an assessment of impacts associated with the direct or indirect destruction of TCRs or sites with cultural value to a California Native American tribe.

AB 52 amended California Public Resources Code (PRC) Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. The primary intent of AB 52 was to include California Native American tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency in its discretion and as supported by substantial evidence.

PRC Section 21080.3.1 requires that, within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact or tribal representatives of California Native American tribes that are traditionally and culturally affiliated with the geographic area of a project site (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1[b]). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification, and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC Sections 21080.3.1[d] and 21080.3.1[e]).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary, the significance of tribal cultural resources, the significance of a project's impacts on tribal cultural resources, project alternatives or appropriate measures for preservation, and mitigation measures. Consultation is considered concluded when either (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2[b]).

If a California Native American tribe has requested consultation pursuant to PRC Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with PRC Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an Environmental Impact Report or adopt a Mitigated Negative Declaration (PRC Section 21082.3[d][2] and [3]).

PRC Section 21082.3(c)(1) states that any information, including the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process must not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information must be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Local Regulations

County of San Diego Guidelines for Determining Significance, Cultural Resources

According to the County's Guidelines (County of San Diego 2007), any of the following will be considered a potentially significant impact to cultural resources:

1. The project causes a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant, in a manner not consistent with the Secretary of Interior Standards.
2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an

important archaeological site that contains or has the potential to contain information important to history or prehistory.

3. The project disturbs any human remains, including those interred outside of formal cemeteries.
4. The project proposes activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources.
5. The project proposes activities or uses damaging to significant causes a substantial adverse change in the significance of a tribal cultural resources as defined under CEQA Section 21074.

Guidelines 1 and 2 are derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the state CEQA Guidelines recommend evaluating historical and archaeological resources to determine whether or not a proposed action would have a significant effect on unique historical or archaeological resources. Guideline 3 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the "Most Likely Descendant" as identified by the Native American Heritage Commission (NAHC) for any project in which human remains have been identified. Guideline 4 was selected because the RPO requires that cultural resources be considered when assessing environmental impacts.

Since the adoption of the County CEQA Guidelines, a new subject area has been added to CEQA – Tribal Cultural Resources. Guideline 5 is included because TCRs are important to local Native American communities and may include sacred sites and traditional use areas that have been used over multiple generations. All discretionary projects are required to conform to applicable County standards related to cultural resources. These include the Zoning Ordinance, General Plan, and the Grading, Clearing and Watercourses Ordinance (Section 87.429). Non-compliance would result in a project that is inconsistent with County standards, which is itself a significant impact under CEQA.

County of San Diego Grading Ordinance

The Grading Ordinance requires that projects involving grading, clearing, and/or removal of natural vegetation obtain a grading permit, unless the project meets one or more of the exemptions listed in Section 87.202 of the Grading Ordinance. The grading permit is discretionary and requires compliance with CEQA. In the event that human remains or Native American artifacts are encountered, Section 87.429 requires that grading operations be suspended in the affected area, and the operator is required to inform the County official. The County's Grading Ordinance requires projects to comply with the requirements of Health and Safety Code Section 7050.5 and Public Resources Section 5097.99.

County of San Diego General Plan Conservation and Open Space Element

The Conservation and Open Space Element of the County General Plan provides policies for the protection of natural resources. The following policies are related to tribal cultural resources (County of San Diego 2011):

- **Policy COS-7.1:** Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
- **Policy COS-7.2:** Open Space Easements. Require development to avoid archaeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.
- **Policy COS-7.3:** Archaeological Collections. Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.
- **Policy COS-7.4:** Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.
- **Policy COS-7.5:** Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the most likely descendant (MLD) and under the requirements of federal, state, and County Regulations.
- **Policy COS-7.6:** Cultural Resource Data Management. Coordinate with public agencies, tribes, and institutions in order to build and maintain a central database that includes a notation whether collections from each site are being curated, and if so, where, along with the nature and location of cultural resources throughout the County of San Diego.

County of San Diego Resource Protection Ordinance

The RPO requires that cultural resources be evaluated as part of the County's discretionary environmental review process for certain permit types. If cultural resources are found to be significant pursuant to the RPO, they must be preserved. The RPO prohibits development, trenching, grading, clearing and grubbing, or any other activity or use that damages significant prehistoric or historic site lands, except for scientific investigations with an approved research design prepared by an archaeologist certified by the Register of Professional Archaeologists (County of San Diego 2012).

Pursuant to the RPO, significant prehistoric or historic sites are sites that provide information regarding important scientific research questions about prehistoric or historic activities that have

scientific, religious, or other ethnic value of local, regional, state, or federal importance. Such locations include the following (County of San Diego 2012):

- Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
  a. Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or
  b. To which the Historic Resource (H designator) Special Area Regulations have been applied; or
- One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
- Any location of past or current sacred religious or ceremonial observances which is either:
  a. Protected under Public Law 95-341, the American Indian Religious Freedom Act or PRC 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or
  b. Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

2.11.3 Analysis of Project Effects and Determination of Significance

Methodology

The presence and significance of existing tribal cultural resources associated with the Proposed Project was determined using methodologies that include archaeological site record and archival research, a Sacred Lands File search, intensive pedestrian field survey and evaluation (see Appendix E), and Native American consultation pursuant to AB 52 was conducted.

Records Search

As described in the Cultural Resources Report (Appendix E), and Section 2.4, Cultural Resources, of this EIR, Dudek conducted a records search of files obtained from the SCIC for the Project site and a 0.5-mile buffer surrounding the Project site. SCIC records indicate that 35 previous cultural resources studies have been performed within a 0.5-mile radius of the Project site; of these, 19 cover at least a portion of the Project site. The SCIC records search also identified 143 cultural resources previously recorded within a 0.5-mile radius of the Project site. Of the 143 resources, 51 are located within the Project site, 24 of which are within the Proposed Project ADI. Prehistoric resources previously located within the Project site include 34 artifact scatters, six temporary campsites, a village site, a bedrock milling station, and an isolated flake. There are also eight multicomponent artifact scatters, and one historic railroad track.

Pedestrian Survey and Evaluation

An intensive pedestrian survey was completed in July and August 2018 and February and December 2019 for the Proposed Project and this was followed by significance evaluation testing in February, March, and June 2019 and January 2020. The pedestrian survey was conducted in less than 15 m intervals; however, actual survey transect spacing depended on ground visibility. Areas with dense vegetation required shorter, 10-meter transect spacing and areas with excellent ground visibility at times allowed for a maximum transect width of 15 meters. All survey transects were oriented according to cardinal directions or to major topographic features. Transect spacing was kept using a compass but field tablets with a mobile ESRI GIS application with real-time locations plotted on aerials were used to help navigate the survey and ensure the entire Proposed Project ADI was covered. The crew moved together as a team to ensure accurate transect spacing and to facilitate resource identification. Upon discovery of an artifact or feature, the entire crew stopped while the crew chief confirmed the identified resource. At the same time, all other crew members more closely inspected the area around their individual transects. All artifact concentrations and features were recorded during transect sweeps. Section 4.1 of the Cultural Resources Technical Report (Appendix E) describes in detail the methodology for the intensive pedestrian survey.

The pedestrian survey identified nine newly identified archaeological resources and 25 new isolates. The survey also revisited 28 previously recorded archaeological sites and one isolate. Following the initial intensive pedestrian survey in July and August 2018, the Proposed Project design was adjusted to avoid impacts to significant archaeological sites. After design modifications, the ADI contains 28 archaeological sites and 20 isolated finds. Red Tail Monitoring and Research provided Kumeyaay Native American monitors during all field studies, from survey to evaluation.

Sites CA-SDI-7056, CA-SDI-8072, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733 were identified within the ADI and were previously unevaluated. These archaeological sites consisted of highly dispersed artifact scatters or a single milling feature resource with little to no subsurface deposits. After field evaluation and laboratory analysis, due to their lack of data potential, Dudek recommends these sites, in their entirety, as not significant, and not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines (Appendix E). Four additional sites located within the ADI were only partially evaluated by Dudek: CA-SDI-4457/H, CA-SDI-6741, CA-SDI-8430, CA-SDI-11676. The portions of the archaeological sites within the current ADI were evaluated during the current study and are recommended not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. These portions of the sites are therefore recommended as non-contributing elements to the overall eligibility of the resource. Sites CA-SDI-7054, CA-SDI-11675, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-

19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI-19909 are located within the ADI but have been previously evaluated as not significant or are no longer extent. There are 31 archaeological sites that are located within the Project site but are outside of the Proposed Project ADI. These archaeological sites would not be impacted by Proposed Project implementation.

Tribal Consultation and Outreach

Dudek contacted the NAHC on July 27, 2018, to request a search of their Sacred Lands Files (Appendix B of Appendix E). The NAHC responded indicating the presence of Native American cultural sites in the Jacumba Quad that may be impacted. The NAHC response letter advised Dudek to contact Native American representatives who may have information about cultural resources within the Project area. Dudek sent outreach letters to all Native American contacts supplied by the NAHC requesting any information these representatives have concerning TCRs within the Project area. When mailing addresses were not available, Dudek attempted to contact Native American representatives by telephone. Dudek received four responses to these Native American outreach efforts. The response letters did not indicate knowledge of any specific TCRs that may be impacted by the Proposed Project but did comment on the sensitivity of the area and requested Native American monitoring.

Lacy Padilla of Agua Caliente Band of Cahuilla Indians and Chris Devers of Pauma Band of Luiseno Indians both responded via email and advised Dudek that the Proposed Project is outside of their tribes' traditional area. Both deferred to tribal entities more closely associated with the Project area.

Gwendolyn Parada, Chairwoman of La Posta Band of Mission Indians, responded via a letter dated August 21, 2018, stating that the Project site is located within the Diegueno traditional territory and that they would like to consult on the Proposed Project. Chairwoman Parada requested to be added to the distribution list for public notices and environmental review documents for the Proposed Project. La Posta tribe does not have knowledge of any specific TCRs that may be impacted by the Proposed Project but requested that a Native American monitor be present during survey and archaeological testing. The La Posta tribe further requested to meet with Dudek to "consult" on the Proposed Project and to discuss their concerns and proposed mitigation. Dudek sent a response letter via email on October 2, 2018, letting Ms. Parada know that the County of San Diego was the lead agency overseeing the Proposed Project and that they would be leading Native American consultation. La Posta did not send any further communications to Dudek.

Carmen Lucas of the Kwaavmii Laguna Band of Mission Indians called Dudek archaeologist Matthew DeCarlo on September 10, 2018, in response to Dudek's outreach letter. Ms. Lucas did not have knowledge of any specific TCRs that may be impacted by the Proposed Project but she stated that Jacumba is a sacred area and that "not one inch" of the area does not have cultural

significance. Ms. Lucas recommended that a qualified Native American monitor be present during survey of the Proposed Project. She also recommended that forensic dogs be used to identify human remains, and that the dog analysis should dictate the design of the solar arrays. Mr. DeCarlo notified Ms. Lucas that the County of San Diego was the lead agency overseeing the Proposed Project, and that the County would be leading Native American consultation.

Red Tail Monitoring and Research provided Kumeyaay Native American monitors during all field studies, from survey to evaluation. Justin Linton, Tushon Phoenix, and Daniel "Bobo" Linton represented Red Tail during various sessions of fieldwork and were included in determining the archaeological findings.

As the lead agency responsible for environmental compliance for the Proposed Project, San Diego County staff initiated formal Native American consultation as required by AB 52 on January 31, 2019. Eight tribes (Barona, Campo, Jamul, Kwaaymii, Manzanita, Santa Ysabel, Sycuan, Viejas) who have requested to consult under AB 52 were notified of the Proposed Project. Five tribes (Campo, Jamul, Manzanita, Santa Ysabel, Viejas) responded. Santa Ysabel deferred to the Campo tribe. The County has been consulting with Campo, Jamul, Manzanita and Viejas. To date, no TCRs have been identified during consultation. Consultation is ongoing and will continue throughout the processing of the Proposed Project.

Guidelines for the Determination of Significance

The Proposed Project is a solar energy facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, of this EIR) is a component of the Proposed Project and has been analyzed as a part of the whole of the action. However, this EIR highlights the specific analysis of the switchyard operation under each threshold of significance in the event responsible agencies have CEQA obligations related to the switchyard.

The County's Guidelines for Determining Significance do not include guidance on tribal cultural resources. However, as mentioned above, the County's RPO includes protections for TCRs (County of San Diego 2012). Therefore, for the purpose of this EIR, Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and the County's RPO applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if:

1. The project, as designed, causes a substantial adverse change in the significance of a tribal cultural resource as defined in PRC, Section 21074, as either a site, feature, place, or 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 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 5024.1. In applying the criteria set forth in subdivision c) of Public Resources Code 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American Tribe.

2. The project proposes activities or uses damaging to tribal cultural resources as defined by the County RPO and fails to preserve those resources.

The first guideline is included in CEQA Guidelines, Appendix G and was selected because CEQA requires that TCRs be evaluated to determine whether or not a proposed action would have a significant effect on such resources. Any project that would have an adverse impact (direct, indirect, and/or cumulative) on a significant TCR as defined by these guidelines would be considered to have a significant impact on the environment. The second guideline was selected because TCRs are protected under the RPO. Any project that would have an adverse impact (direct, indirect, and/or cumulative) on a significant TCR as defined by these guidelines would be considered to have a significant impact on the environment.

Analysis

TCR impacts occur through the destruction or alteration of a TCR through grading, excavating, trenching, boring, tunneling, or other activity that disturbs or displaces the TCRs. Excavation operations are the most common ways for TCRs to be adversely impacted and can result in the permanent loss of resources. The most extensive excavation impacts are usually associated with grading, where earthmovers are used in combination with bulldozers to rip and transport soil and bedrock. Front-end loaders, track hoes, and trucks can also be used in excavation operations. Construction of the Proposed Project would involve clearing and grubbing of the existing vegetation within the 643-acre development footprint. Grading would be required throughout the development footprint. Grading is expected to be balanced on site, with approximately 264,000 cubic yards of cut redistributed across the site. For the Proposed Project, no mass grading is proposed. Smaller amounts of earth are moved during, boring, trenching, and tunneling, and typically the impacts are less extensive. Indirect impacts to TCRs can also occur, including increased access to resources, and altering, obscuring, or reducing the visual setting of a resource.

The analysis of potential impacts to TCRs resulting from implementation of the Proposed Project is based on a review of archival records, Native American outreach, recent survey and archaeological evaluation accompanied by Native American monitoring, and laboratory analysis as described in the Cultural Resources Report (Appendix E) and through AB 52 consultation conducted by the County.

The Proposed Project's ADI comprises approximately 643 acres within the 1,356-acre Project site. In addition to grading, construction activities that would disturb the subsurface within the ADI include construction of trenching for the underground collection system, installation of approximately 300,000 photovoltaic modules, 25 inverter/transformer platforms, 75 battery storage containers, an on-site collector substation and switchyard, and access improvements. A half-mile buffer around the maximum extents of the Project site was considered for indirect impacts to cultural resources. Indirect impacts could occur through increased access to the area.

Implementation of the Proposed Project would impact 20 archaeological isolates and would result in direct impacts to 28 archaeological sites, as identified in Section 2.4, Cultural Resources, of this EIR. The 20 isolates identified within the ADI required no evaluation or avoidance measures as isolates are, by definition, not significant. None of the evaluated archaeological sites contained substantial or diverse archaeological deposits that could be used to develop or refine local or regional culture histories. Instead, evaluated prehistoric sites produced low quantities of limited diversity chipped stone assemblages, primarily consisting of cortical and interior flakes, and rock shatter representing incipient tool production. Minor amounts of brownware aboriginal ceramic sherds indicate some transient occupation possibly taking advantage of seasonally available resources, but no evidence of longer-term or more residentially stable occupation was identified in the ADI (Appendix E). All sites or portions of sites located within the Proposed Project ADI would be subject to grading and leveling and the surface of the sites would be completely destroyed. Due to their lack of data potential, these resources or portions of resources within the Proposed Project ADI are recommended as not significant, and not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, or County Significance Guidelines. As such, impacts to each of these evaluated sites as a result of Proposed Project implementation would not be significant.

Some of the archaeological sites intersecting the Project site were previously included in the Jacumba Valley Archaeological District (JVAD). Individual archaeological sites or portions of larger sites included in the JVAD that overlap the current Proposed Project ADI were subject to archaeological test excavations. No significant archaeological deposits were identified. Specifically, only small quantities of debitage and aboriginal ceramics were recovered with no midden soils or other evidence of habitation, or any organic datable materials. As a result, these evaluated sites or portions thereof are recommended as not significant under CEQA and not eligible for listing in the CRHR or Local Register. Though no federal nexus has been identified for the Proposed Project as of the date of the Cultural Resources Report (Appendix E), significance recommendations under Section 106 of the National Historic Preservation Act are the same; none of the evaluated archaeological sites are recommended as significant and none are eligible for listing in the NRHP under any criteria. As a result, it is determined that implementation of the Proposed Project would have No Adverse Effect to the JVAD because it would not impact archaeological deposits that convey the significance of the JVAD (Appendix E).

Under AB 52, TCRs are defined as resources that are eligible for or listed in the CRHR, or resources that the lead agency determines to be a TCR with a substantial burden of evidence. Notwithstanding the lack of information on TCRs received by the County to date, no significant archaeological sites eligible for or listed in the CRHR will be impacted by the Proposed Project. Therefore, no TCRs have been identified that would be impacted by the Proposed Project. However, there is the potential for inadvertent discovery of TCRs, including human remains, previously unknown as a result of the historic and ongoing Tribal use of the Project site, as well as indirect impacts through increased access to the area. Additionally, although identified archaeological sites located in the Proposed Project ADI are not considered eligible for listing on the CRHR or the NRHP, all cultural resources are considered important under County of San Diego Guidelines for Determining Significance (County of San Diego 2007). As such, impacts would be **potentially significant (Impact TCR-1)** during construction. Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential TCRs within the Proposed Project ADI. Therefore, impacts during operation would be **less than significant**.

Decommissioning activities would be performed within the Project ADI. No ground-disturbing activities would occur outside the Proposed Project ADI and the activities associated with decommissioning would not include grading. All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E. Implementation of a final decommissioning plan(s) would be required, and would be provided within one year of issuance of the building permits for the Proposed Project to ensure compliance with Section 6954.b.3(d) of the County of San Diego Zoning Ordinance for removal surety as described in Chapter 1, Project Description, of this EIR. Although no TCRs have been identified that would be impacted by the Proposed Project, there is the potential for the inadvertent discovery of TCRs, including human remains, previously unknown as a result of the historic and ongoing Tribal use of the Project site, as well as indirect impacts through increased access to the area. Additionally, although identified archaeological sites located in the Proposed Project ADI are not considered eligible for listing on the CRHR or the NRHP, all cultural resources are considered important under County of San Diego Guidelines for Determining Significance (County of San Diego 2007). As such, impacts would be **potentially significant (Impact TCR-1)**. Therefore, impacts to TCRs as a result of Proposed Project decommissioning would be **potentially significant**.

Switchyard

The Proposed Project would include a 138-kilovolt switchyard located adjacent to the proposed collector substation (see Figure 1-5, Substation and Switchyard, in Chapter 1 of this EIR). The size of the switchyard would be approximately 140,000 square feet. Within this area would be an 8-foot-high security fence (445 feet by 300 feet) surrounded by a 5-foot shoulder for grounding protection inside the fence. After completion of construction of the switchyard, operation of the

switchyard facility would be transferred to SDG&E as described in Chapter 1, Project Description, of this EIR. The switchyard would be un-staffed during operation. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Accordingly, no new personnel would be required for operation and maintenance. Routine operations would require a single pickup truck visiting the switchyard several times a week for switching, as well as several larger substation construction and maintenance trucks visiting the switchyard several times a year for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Operational activities are unlikely to disturb tribal cultural resources because they would affect surface soil horizons only, which do not contain significant tribal cultural resources as previously analyzed and as described in Appendix E. Therefore, it is determined that switchyard operation and maintenance impacts related to tribal cultural resources would be **less than significant**. The switchyard and connection to the SDG&E transmission line which would be owned and operated by SDG&E would not be decommissioned at the life span of the solar facility.

2.11.4 Cumulative Impact Analysis

Cumulative projects located within the cumulative project area (identified in Table 1-4 of Chapter 1, Project Description, of this EIR) would have the potential to result in a cumulative impact associated with tribal cultural resources from extensive grading, excavation, or other ground-disturbing activities that are located in an area of high or moderate sensitivity. Cumulative projects would be regulated by applicable state and local regulations, including CEQA and the County Grading Ordinance.

According to CEQA, the importance of cultural resources comes from the research value and the information they contain. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of that information. For sites that are less than significant, the information is preserved through recordation and test excavations. Significant sites that are placed in open space easements avoid impacts to cultural resources and preserve the data. Significant sites that are not placed within open space easements preserve the information through recordation, test excavations, and data recovery programs that would be presented in reports and filed with the County and SCIC. The artifact collections from any potentially significant site would also be curated at a facility within the County or with an affiliated tribal curation facility. Alternatively, the collections may be repatriated to a tribe of appropriate affiliation.

The cumulative study area includes southeastern San Diego County and southwestern Imperial County and was selected because these areas include the relatively undeveloped portions of the ancestral Kumeyaay territory, and those rural areas outside of the historically developed urban population centers in San Diego and southwestern Imperial County. These cumulative projects are

summarized in Chapter 1, Project Description (Table 1-4). Related projects within this geographic extent are capable of collectively contributing, along with the Proposed Project's ADI, to impacts on tribal cultural resources associated with ancestral Kumeyaay lifestyles.

Those projects identified within the cumulative impact study area would be required to implement mitigation should they result in potentially significant impacts to tribal cultural resources. This reduces the potential for cumulative impacts. As described above, no significant archaeological sites eligible for or listed in the CRHR would be impacted by the Proposed Project. In addition, no TCRs have been identified during AB 52 consultation. Therefore, no TCRs would be impacted by the Proposed Project. As such, it is determined that the Proposed Project **would not contribute to a significant cumulative impact to cultural resources**.

2.11.5 Significance of Impacts Prior to Mitigation

The Proposed Project's development activities could affect TCRs within 50 feet of the Project ADI or within resource-specific, predetermined buffers, and has the potential to affect undiscovered TCRs, including human remains and archaeological resources that may qualify as TCRs. Therefore, impacts to TCRs would be **potentially significant** (**Impact TCR-1**). Cumulative impacts would **not be cumulatively considerable**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential tribal cultural resources within the Proposed Project ADI. Therefore, impacts during operation would remain **less than significant**.

2.11.6 Mitigation Measures

M-TCR-1 **Temporary Fencing.** To prevent inadvertent disturbance of tribal cultural resources (TCRs) within the avoidance areas (land outside of the Project ADI), temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements:

- Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect archaeological sites or portions of sites adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances; remain for the duration of earth-disturbing activities; and include the following:

- Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI.
- The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.
- Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to **M-CR-2**.

M-TCR-2 **Archaeological and Tribal Monitoring.** To mitigate for potential impacts to undiscovered, buried tribal cultural resources (TCRs) within the Project ADI, an archaeological and tribal monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements:

a. Pre-Construction

- The project developer shall contract with a County-approved archaeologist to perform archaeological monitoring. The Project archaeologist shall contract with a Kumeyaay Native American monitor(s) to conduct Native American monitoring for the Project.
- The pre-construction meeting shall be attended by the Project archaeologist and the Kumeyaay Native American monitor(s) to explain the monitoring requirements.

b. Construction

- Monitoring
  - Both the Project archaeologist and Kumeyaay Native American monitor(s) are to be on site during all earth-disturbing activities. The frequency and location of monitoring of native soils shall be determined by the Project archaeologist and the Kumeyaay Native American monitor. Both the Project Archaeologist and Kumeyaay Native American monitor(s) will evaluate fill soils to ensure that they are negative for cultural resources

- Inadvertent Discoveries
    - Both the Project archaeologist and the Kumeyaay Native American monitor have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
    - The Project archaeologist shall contact the County archaeologist.
    - The Project archaeologist, in consultation with the County archaeologist and the Kumeyaay Native American monitor, shall determine the significance of discovered resources and whether they constitute a TCR.
    - Construction activities shall be allowed to resume after the County archaeologist has agreed with the significance evaluation.
    - Isolates and non-significant deposits shall be minimally documented in the field. If the isolates and non-significant deposits are not collected by the Project archaeologist, the Kumeyaay Native American monitor may collect the cultural material for transfer to a tribal curation facility or repatriation program.
    - If cultural resources are determined to be significant, a research design and data recovery program shall be prepared by the Project archaeologist in consultation with the Kumeyaay Native American monitor and approved by the County archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources or sacred sites, to cap identified sacred sites or unique cultural resources and to place development over the cap if avoidance is infeasible; and to perform data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).

c. Human Remains

- The property owner or their representative shall contact the County coroner and the County Planning & Development Services staff archaeologist.
- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County coroner has made the necessary findings as to origin. Should the human remains need to be taken off site for evaluation, they shall be accompanied by a Kumeyaay Native American monitor.
- If the remains are determined to be of Native American origin, the most likely descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the property owner or their representative to determine proper treatment and disposition of the remains.

- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by California Public Resources Code, Section 5097.98, has been conducted.
- California Public Resources Code, Section 5097.98; CEQA Guidelines, Section 15064.5; and California Health and Safety Code, Section 7050.5, shall be followed in the event that human remains are discovered.

d. Rough Grading

- Upon completion of rough grading, a monitoring report identifying whether resources were encountered shall be prepared. A copy of the monitoring report shall be provided to any culturally affiliated tribe that requests a copy.

e. Final Grading

- A final report substantiating that native soil-disturbing activities are completed and whether cultural resources were encountered shall be prepared. A copy of the final report shall be submitted to the South Coastal Information Center (SCIC) and any culturally affiliated tribe that requests a copy.

f. Cultural Material Conveyance

The final report shall include the following:

- Evidence that all prehistoric materials have been curated at a San Diego curation facility or tribal curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations or alternatively have been repatriated to a culturally affiliated tribe.
- Evidence that historic materials have been curated at a San Diego curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations.

M-TCR-3 **Long-Term Preservation of Resources.** All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 11 potentially significant sites (or portions thereof) that are located within 50 feet of the Project ADI, including the eight sites that were fully or partially tested and the three that were not evaluated). Temporary fencing will be installed during decommissioning activities to delineate the ADI.

2.11.7 Conclusion

The potential for discovery of tribal cultural resources, including human remains, during construction and decommissioning of the Proposed Project (**Impact TCR-1**) would be mitigated to **less than significant** with incorporation of mitigation measures **M-TCR-1**, **M-TCR-2**, and **M-TCR-3**. Cumulative impacts would **not be cumulatively considerable**.

Once in operation, the Proposed Project would not involve additional ground-disturbing activities that could impact potential tribal cultural resources within the Proposed Project ADI. Therefore, impacts during operation would remain **less than significant**.

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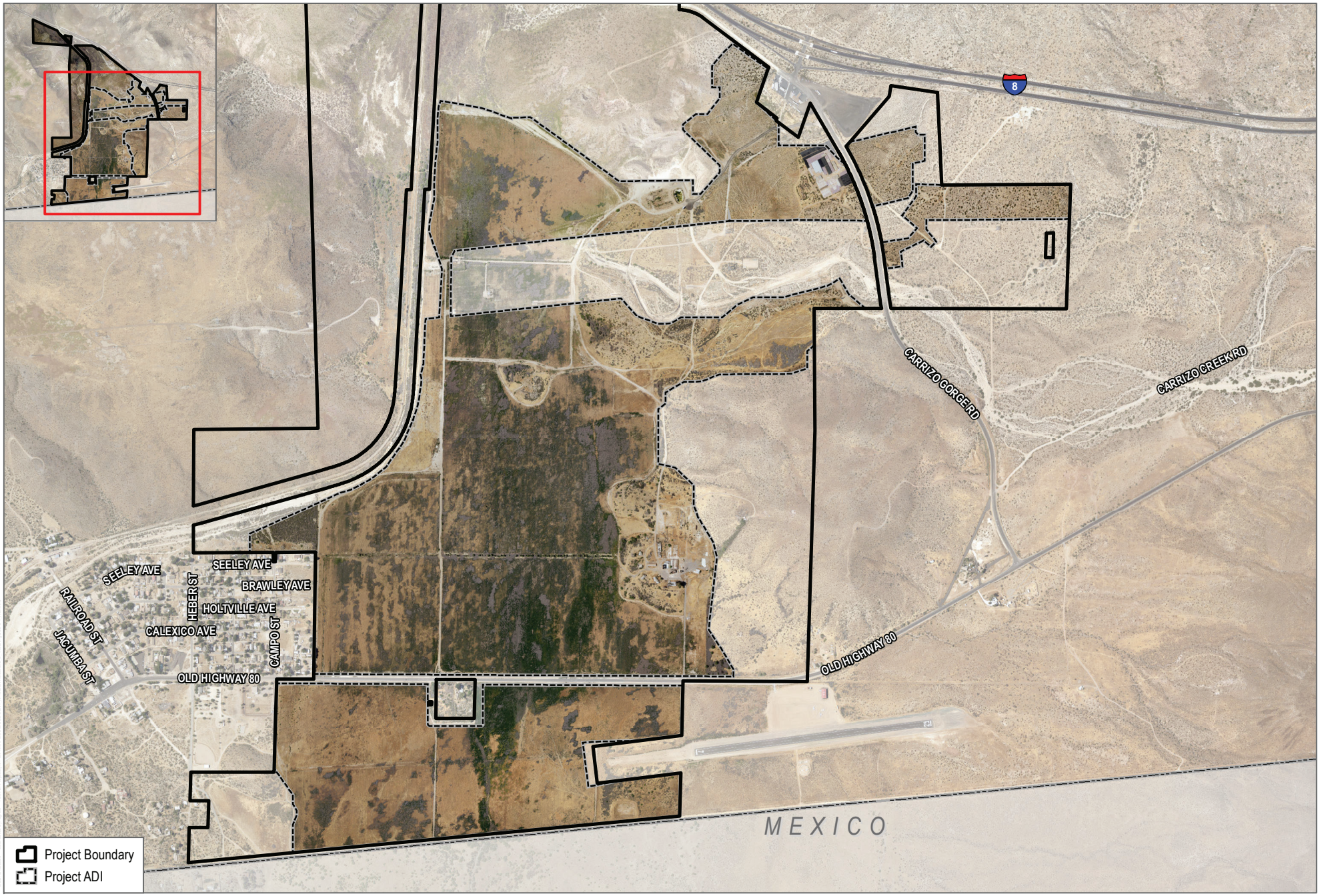

SOURCE: SANGIS 2017, 2020; Kimley-Horn 2019

DUDEK

0 1,000 2,000 Feet

FIGURE 2.11-1

ADI Map

JVR Energy Park Project EIR

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2.12 Wildfire

This section describes the existing setting of the Project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the JVR Energy Park Project (Proposed Project). Potential wildfire impacts resulting from construction, operation, and decommissioning of the Proposed Project were evaluated based on a review of existing resources, technical data, and applicable laws, regulations, guidelines, and standards, as well as the following technical reports prepared for the Proposed Project:

- Fire Protection Plan– JVR Energy Park (Appendix N)
- Construction Fire Prevention Plan – JVR Energy Park (Appendix A of the Fire Protection Plan)

Technical Report for Fire Personnel – JVR Energy Park (Appendix G of the Fire Protection Plan) Comments received in response to the Notice of Preparation (NOP) included concerns regarding the potential for wildfire risk and the potential temperature rise related to solar facilities. These concerns are addressed in this section. For a discussion of fire protection services, please refer to Section 3.1.6, Public Services. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.12.1 Existing Conditions

2.12.1.1 Regional Overview

The 1,356-acre Project site is located in unincorporated southeastern San Diego County at the convergence of the California Peninsular Ranges and desert regions. The elevation within the Project site ranges from approximately 2,745 feet above mean sea level (amsl) to 3,365 feet above mean sea level. The Project site includes the eastern portion of Round Mountain, which is located within the northwestern area of the Project site. A moderately sloped mesa landform is located to the south of Round Mountain at an elevation of approximately 2,743 feet amsl. North of Interstate (I)-8, Grey and Table Mountains are located north and northeast of the Project site and reach elevations of 3,780 feet amsl and 4,089 feet amsl, respectively. Lastly, Jacumba Peak, a conical peak with an approximate elevation of approximately 3,365 feet amsl, is located approximately 1 mile east of the Project site (see Figure 2.12-1, Topographic Features in the Proposed Project Area).

The properties to the west of the Project site were recently transferred from the Anza Borrego Foundation to the California Department of Parks and Recreation for inclusion as part of Anza-Borrego Desert State Park. An existing easement for the San Diego and Arizona Eastern Railway enters the southwestern portion of the Project site at the western boundary, running generally east/west then turning northward and exiting the northwestern corner of the property near I-8. An existing San Diego Gas & Electric (SDG&E) easement also traverses the central portion of the site

from east to west. Several large-scale SDG&E transmission towers are present within this easement. Old Highway 80 traverses the southern portion of the Project site.

The majority of the lands surrounding the Project site are largely undeveloped. The town of Jacumba Hot Springs is located southwest of the Project site and consists of residential uses and small-scale commercial uses. The Jacumba Valley Airport is located just south of Old Highway 80, and directly south and east of the southernmost portion of the Project site. The U.S./Mexico international border lies just south of the Project site. Two gas stations are located along Carrizo Gorge Road, adjacent to the northeastern property boundary and south of I-8.

Further to the east is the existing SDG&E East County Substation (within Carrizo Gorge Road and Old Highway 80 right-of-way) and a 20-megawatt (MW) solar facility (Jacumba Solar) located south of the SDG&E East County Substation.

2.12.1.2 Fire Hazard Severity Zones

The California Department of Forestry and Fire Protection (CAL FIRE) uses Fire Hazard Severity Zones (FHSZ) to classify the anticipated fire-related hazard for state responsibility areas. The classifications include Non-Wildland Non-Urban, Moderate, High, and Very High. Fire hazard measurements take into account the following elements: vegetation, topography, weather, crown fire production, and ember production and movement. The very high fire hazard severity designation can be attributed to a variety of factors including highly flammable, dense, drought-adapted desert chaparral vegetation, seasonal, strong winds, and a Mediterranean climate that results in vegetation drying during the months most likely to experience Santa Ana winds.

Figure 2.12-2, Fire Hazard Severity Zones in the Proposed Project Area, identifies the CAL FIRE FHSZ designations in the vicinity of the Project site. The majority of the 643-acre solar facility would be constructed in areas classified as a High FHSZ by CAL FIRE (CAL FIRE 2007a). The western portion of the development footprint is classified as Moderate FHSZ. A small portion along the western boundary of the development footprint is classified as a Very High FHSZ. Additionally, the lands adjacent to the west of the Project site are classified as very high FHSZ and the lands adjacent to the east are classified as moderate FHSZ and include Federal Responsibility Areas (CAL FIRE 2005). Within the development footprint, the existing vegetation would be cleared and the site would be graded.

The existing vegetation within the remainder of the Project site would be undisturbed. The area to remain undisturbed along the western boundary of the Project site is classified as Very High FHSZ. The land between the northern boundary of the proposed development footprint and I-8 is classified as Moderate and High FHSZ. The land to remain undeveloped within the eastern portion of the Project site is classified as High FHSZ. Other areas outside of the Project site that would

border the proposed solar facility are classified as High to Very High FHSZ. The land in Mexico is not classified by CAL FIRE. Thus, the land surrounding the proposed solar facility is classified predominantly as Very High FHSZ to the west and High FHSZ to the east.

CAL FIRE also maps and ranks areas of fire threat, which indicates the level of fire threat based on the potential fire behavior (fuel rank) and expected fire frequency (fire rotation) at a given location (CAL FIRE 2005). Figure 2.12-3, Fire Threat Ranking in Proposed Project Area, identifies the CAL FIRE Threat zone designations in the vicinity of the Proposed Project. The solar facility development footprint is classified primarily as moderate fire threat (CAL FIRE 2005). The western boundary of the Project site is classified as either moderate, high, or very high. Thus, areas surrounding the proposed solar facility are primarily classified as moderate fire threat.

2.12.1.3 Project Site

Vegetation/Fuels

The Project site is generally an arid semi-desert environment that supports a limited range of habitats and biological communities. Nine vegetation communities and/or land cover types occur on the Project site, as summarized in Table 2.3-1, Vegetation Communities/Land Covers on the Project Site in Section 2.3, Biological Resources. Sonoran Mixed Woody Scrub, Sonoran Mixed Woody and Succulent Scrub, Big Sagebrush Scrub, Desert Saltbush Scrub, Desert Sink Scrub, Mesquite Bosque, Disturbed Habitat, Urban/Developed, and Non-Vegetated Floodplain or Channel communities are the most common vegetation communities and/or land cover types that currently occur on the Project site. Detailed descriptions of the vegetation types on the Project site are provided in Section 2.3, Biological Resources, and the Biological Resources Technical Report (Appendix D). The distribution of vegetation communities and land cover types on the Project site is shown on Figure 2.3-2, Biological Resources in Section 2.3.

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading. For example, grass dominated plant communities become seasonally prone to ignition and produce lower intensity, higher spread rate fires. In comparison, chaparral can produce higher heat intensity and higher flame lengths under strong, dry wind patterns, but does not typically ignite or spread as quickly as light, flashy grass fuels.

Another important factor is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes disrupts plant succession, setting plant communities to an earlier state where less fuel is present for a period of time as the plant community begins its

succession again. High-frequency fires tend to convert shrublands to grasslands or maintain grasslands, while fire exclusion tends to convert grasslands to shrublands, over time. In general, biomass and associated fuel loading will increase over time, assuming that disturbance (fire, farming, or grading) or fuel reduction efforts are not implemented. It is possible to alter successional pathways for varying plant communities through manual alteration.

Topography

Located in southeastern San Diego County, the Project site is situated in a valley at the northeast edge of an unnamed, mountain range that extends south into Mexico. The Project site lies between two major drainage divides: the Tecate Divide to the west and the In-Ko-Pah Mountains to the east. The Project site includes the eastern portion of Round Mountain that is located within the northwestern area of the Project site. Gray Mountain lies just north of I-8. Topography within the proposed development footprint includes primarily level terrain and gently rolling slopes. Round Mountain and steeper slopes are located within the western portion of the Project site which would remain undisturbed. Site elevations range from approximately 3,365 feet amsl in the highest portions near Round Mountain to the northwest to 2,745 feet amsl in the lower northwestern corner of the Project site.

The Project site is located within the Anza Borrego watershed, Colorado River Hydrologic Basin Region 7 Planning Area. The contributing watersheds to the Project site cover an area of approximately 70,868 acres (111 square miles), with 76% located in Baja California, Mexico. The majority of flow from Mexico north into the Jacumba Valley is derived from the Flat Creek subwatershed, which includes the Blue Angel Peak subwatershed and an unnamed subwatershed, as defined by the U.S. Geological Survey. The subwatersheds predominantly located in the United States are the Boundary Creek and Walker Canyon-Carrizo Creek subwatersheds. Precipitation that falls in the Jacumba Valley Hydrologic Sub-Area and the aforementioned subwatersheds either infiltrates into the subsurface or enters Carrizo Creek and drains north through a narrow constriction known as the Carrizo Gorge. During significant precipitation events, Carrizo Creek flows northeast towards the Salton Sea.

Climate

Eastern San Diego County, including the Project site, is influenced by the Pacific Ocean and are frequently under the influence of a seasonal, migratory subtropical high pressure cell known as the "Pacific High" (WRCC 2019a). Wet winters and dry summers with mild seasonal changes characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds (WRCC 2019a). The average high temperature for the Project site is approximately 76.3°F, with average highs in the summer and early fall months (July–

October) reaching 93.8°F. The average precipitation for the area is approximately 14.82 inches per year, with the majority of rainfall concentrated in the months of December (2.06 inches), January (3.04 inches), February (2.77 inches), and March (2.30 inches), while smaller amounts of rain are experienced during the other months of the year (WRCC 2019b).

The prevailing wind pattern is from the west (on-shore), but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. During the day, winds are from the west–southwest (sea), and at night, winds are from the northeast (land). During the summer season, the diurnal winds may average slightly higher than the winds during the winter season due to greater pressure gradient forces. Surface winds can also be influenced locally by topography and slope variations. The highest wind velocities are associated with downslope, canyon, and Santa Ana winds.

The Project site's climate has a large influence on the fire risk as drying vegetation during the summer months becomes available wildfire fuel should an ignition be realized. Typically, the highest fire danger is produced by the high-pressure systems that occur in the Great Basin, which result in the Santa Ana winds of Southern California. Sustained wind speeds recorded during recent major fires in San Diego County exceeded 30 miles per hour (mph) and may exceed 50 mph during extreme conditions. The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis during late summer and early fall. Santa Ana winds are winds originating from the Great Basin that create extreme fire weather conditions characterized by low humidity, sustained high speeds, and extremely strong gusts. Santa Ana winds typically blow from the northeast over the Peninsular Range. As the air is forced through coastal mountain passes, wind speeds of 40 mph can be maintained for hours with gusts from 70 to 115 mph possible (Schroeder et al. 1964). Winds can exceed 100 mph, particularly near the mouth of canyons oriented along the direction of airflow; this situation can lead to serious fire suppression problems, resulting in temporary closure of sections of main highways (BLM 2007). The Project site is affected by Santa Ana winds.

Fire History

Fire history allows for an understanding of fire frequency, fire type, most vulnerable facilities areas, and significant ignition sources, amongst others. The ire history was determined using the Fire and Resource Assessment Program (FRAP) database. FRAP summarizes fire perimeter data dating to the late 1800s, which is incomplete due to the fact that it includes only fires over 10 acres in size and has incomplete perimeter data, especially for the first half of the 20th century. However, the data does provide a summary of recorded fires and can be used to show whether large fires have occurred within the Project site, which indicates whether they may be possible in the future. Fire history recorded for the Project site is presented in Table 2.12-1, Historic Fires within 3 Miles of the Project Site. A map depicting historic fire locations is presented in Figure 2.12-4, Fire History Map. Refer to the Fire Protection Plan (FPP) (Appendix N) for the Proposed Project for further discussion of the fire history.

As presented in the Table 2.12-1, there have been 16 fires recorded since 1911 by CAL FIRE in their FRAP database[1] within 3 miles of the Project site over the past 76 years. A total of three fires, ranging from 29 acres (2003 Range Fire) to 40 acres (2005 Railroad Fire) are noted to have burned within one mile of the Project site. No recorded fires have burned on the Project site. Based on this data, the average interval between wildfires was calculated to be 6 years with intervals ranging between 0 (multiple fires in the same year) and 30 years. Based on this analysis, it is expected that wildfire could impact the Project site, if weather conditions coincide, roughly every 6 years with the realistic possibility of shorter interval occurrences, as observed in the fire history records. Further, the large expanses of undeveloped land surrounding the Project site and potential ignition sources along I-8, Old Highway 80, existing transmission lines, and the San Diego and Arizona Eastern Railroad contribute to increased potential risk and wildfire hazard in the area.

2.12.1.4 Environmental Effects of Fires

Although fire can benefit natural ecosystems that have evolved with occasional fire and that benefit from the stimulation of growth through the reproduction of plants and wildlife habitat, fire can also be detrimental to biological and other natural resources, such as air quality and water quality.

Biological Resources

Flora. Grassland communities, usually non-native grasses, will readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals of up to several years, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities will typically re-sprout and absent fire or other disturbances will return to pre-fire conditions. Chaparral communities also tend to repopulate many of the San Diego County forest types following stand-replacing fire. The chaparral may establish for the first several years after the fire event, whereupon the tree cover will begin to establish (USDA 2000a). Because vegetation communities can be converted following fire, these changes in dominant vegetation communities can drastically affect plant and animal habitat and can affect the prevalence of special-status species.

Fauna. Generally speaking, fires injure or kill a relatively small proportion of wild animals. For example, birds and larger mammals can flee wildfire and small mammals and reptiles can seek refuge in subterranean burrows. Habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. Fires can result in short-term increases in vegetation productivity and the availability and nutrient content of forage and browse (USDA 2000b). These increases can in turn lead to increases in herbivore populations.

[1] Based on polygon GIS data from CAL FIRE's FRAP, which includes data from CAL FIRE, USDA Forest Service Region 5, BLM, NPS, Contract Counties and other agencies. The data set is a comprehensive fire perimeter GIS layer for public and private lands throughout the state and covers fires 10 acres and greater between 1911–2018.

However, any increase in population size is highly dependent upon the population's ability to survive in the post-fire environment (USDA 2000b). In general, fires that devastate a landscape featuring many shrubs and trees reduce habitat cover for species requiring cover and increase habitat for species (such as raptors) that prefer open areas (USDA 2000b).

Desert Ecosystems. Weedy species have been known to invade desert and semi-desert habitats in areas where fires have occurred infrequently because of scant fuels sources. When fires occur in these areas, vegetation can change (such as converting to non-native grasses) and become more susceptible to ignition. Animals within desert ecosystems are ill-suited to avoid fire and often struggle to use resources and prosper in post-fire communities.

Air Quality

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (Stone et al. 2016).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of smoke on the ground. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Regional weather systems, such as the Santa Ana winds of Southern California, on the other hand, can spread fire quickly and result in numerous devastating impacts. The Santa Ana winds effectively work to reverse the typical onshore flow patterns and blow winds from dry, desert Great Basin areas westward toward the coast. As a result, coastal communities can be impacted by fires originating in inland areas (Stone et al. 2016).

Large quantities of pollutants can be released by wildland fires over a relatively short period of time. Air quality during large fires can become hazardous and can remain impaired for several days after the fire is ignited.

Water Quality

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned by fire, resulting in increased water temperature through removal or modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire retardant chemicals used during firefighting activities.

Erosion and Sedimentation. Watersheds severely burned by wildfire are vulnerable to accelerated rates of soil erosion and can experience large amounts of post-fire sediment deposits. Increases in post-fire suspended sediments in streams and lakes (in addition to possible increases in turbidity) can result from erosion and overland flow, channel scouring, and creep accumulations in stream channels after an event (USDA 2005). While less is known regarding the effect of fire on turbidity, it has been observed that post-fire turbidity levels in stream water are affected by the steepness of the devastated watershed (USDA 2005). The little data available regarding post-fire turbidity levels has indicated that U.S. Environmental Protection Agency (EPA) water quality standard for turbidity can be exceeded after a fire event (USDA 2005). The threat to water quality from erosion following wildfire was analyzed by CAL FIRE (2009). This analysis estimates an expected erosion rate if an area experiences a high severity fire and considers information on fire rotation to better identify locations that are more likely to experience frequent high severity fires (CAL FIRE 2010). Mapping data generated from this analysis indicates that the majority of the 1,356-acre Project site is classified as primarily having low to no post-fire erosion potential, although a small area in the northwest portion of the Project site is classified as having moderate post-fire erosion potential (CAL FIRE 2009).

Water Temperature. When fire burns stream bank vegetation and shade trees, water temperature can rise, which in turn can lead to thermal pollution, which leads to increased biological activity in the stream. Increased activity levels place a greater demand on the dissolved oxygen content of the water and can affect the survivability and sustainability of aquatic populations and communities (USDA 2005). Water temperature increases up to 62°F have been recorded in stream flows following fires in which the stream bank vegetation was burned (USDA 2005).

Water Chemistry. Ash deposits generated by a fire can affect the pH of water immediately after the event, potentially increasing to levels that violate water quality standards. In addition, increases in the pH of nearby soil can also cause increases in stream flow pH (USDA 2005). Dissolved nitrogen levels can increase after fires as a result of accelerated mineralization and nitrification (dissolved nitrogen is commonly studied as an indicator of fire disturbance), but these levels do not typically exceed established water quality standards (USDA 2005). Dissolved phosphorous, sulfur, chloride, and total dissolved solids levels can increase after a fire, but studies have shown that these increases typically do not result in violation of drinking water quality standards (USDA 2005).

Fire Retardant. The use of fire retardants to protect communities, sensitive resources, or other assets has proven highly effective, but it can have a direct effect on aquatic environments. The use of ammonium-based retardants can affect water quality and, in some instances, they can be toxic to aquatic biota (USDA 2005). Nitrogen-containing retardants can potentially affect drinking water quality, and retardants containing sodium ferrocyanide (YPS) can potentially be lethal for aquatic organisms (USDA 2005).

2.12.2 Regulatory Setting

This section discusses federal, state, and local regulations, plans, and standards applicable to the Proposed Project.

2.12.2.1 Federal Regulations

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission requires utilities to adopt and maintain minimum clearance standards between vegetation and transmission voltage power lines. These clearances vary depending on voltage. In most cases, the minimum clearances required in state regulations are greater than the federal requirement. In California for example, the state has adopted General Order 95 rather than the North American Electric Reliability Corporation (NERC) Standards as the electric safety standard for the state (California Public Utilities Commission [CPUC]). Federal Energy Regulatory Commission is not discussed further.

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides, are developed through a consensus standards development process approved by the American National Standards Institute (ANSI). This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. NFPA standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or "codes" unless adopted as such or referenced as such by the California Fire Code or the Local Fire Agency.

- NFPA 10, Standard for Portable Fire Extinguishers (2018): A long-standing standard, which specifies the types, sizes, rating, and locations for portable fire extinguishers. It also provides information on how to calculate the number and size of portable fire extinguishers needed.
- NFPA 11, Standard for Low-, Medium-, and High-Expansion Foam (2016): NFPA 11 is a longstanding standard, which provides recommendations for design and installation of firefighting foam systems and portable equipment. It also provides recommendations regarding calculating the amount of foam concentrate and solution needed on a flammable or combustible liquid fire.
- NFPA 13, Standard for Installation of Sprinkler Systems (2019): NFPA 13 is the standard for design and installation of automatic fire sprinkler systems in a building. It provides the requirements for the type of system needed in a particular occupancy, water supply, sprinkler head flow and pressures, the locations of sprinkler heads, and installation of the system. This standard is referenced by the California Fire Code.

- NFPA 22, Standard for Water Tanks for Private Fire Protection (2018): Provides recommendations for the design, construction, installation, and maintenance of tanks and accessory equipment that supply water for private fire protection.
- NFPA 30, Flammable and Combustible Liquids Code (2018): This standard provides safeguards to reduce the hazards associated with the storage, use, and handling of flammable and combustible liquids. It provides detailed information regarding tank storage, spacing, dispensing of liquids, portable containers, and other related operations. NFPA 30 is referenced by the California Fire Code.
- NFPA 70, National Electrical Code (2017): NFPA 70 is the standard for the design, installation, and inspection of electrical hazards. It includes recommendations for various types of occupancies and also provides recommendations and criteria for the location and installation of "explosion proof" electrical systems.
- NFPA 72, National Fire Alarm and Signaling Code (2019): NFPA 72 is the standard for the design, installation, and operation of fire alarm systems in various occupancies. This standard is used by fire alarm system designers when designing and installing a system. It is utilized also by fire agencies when reviewing plans for new systems.
- NFPA 497, Classification of Flammable Liquids, Gases, or Vapors, and of Hazardous Locations for Electrical Installations in Chemical Process Areas (2017): NFPA 497 is the standard, which is utilized along with NFPA 70 to determine flammable gas, flammable liquid, and combustible liquid hazards and to recommend the areas that require explosion-proof electrical systems. It also sets forth the extent of the classified areas. Although the title says chemical process areas, it is used as a standard for explosion-proof electrical as it defines various risks and contains numerous diagrams to help the electrical system designer.
- NFPA 850, Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations (2015): NFPA 850 was prepared for the guidance of those charged with the design, construction, operation, and protection of electric generating plants and high voltage direct current converter stations that are covered by the scope of this document. This document provides fire hazard control recommendations for the safety of construction and operating personnel, the physical integrity of plant components, fire protection systems and equipment, and the continuity of plant operations.

National Electric Safety Code 2017

The National Electric Safety Code covers basic provisions related to electric supply stations, overhead electric supply and communication lines, and underground electric supply and communication lines. The code also contains work rules for construction, maintenance, and operational activities associated with electric supply and communication lines and equipment. The

code, which must be adopted by states on an individual basis, is not applicable in the State of California. As stated previously, the State of California has adopted its own standard (General Order 95) rather than a general national standard. The National Electric Safety Code is not discussed further.

North American Electric Reliability Corporation Standards

The NERC is a nonprofit corporation comprising 10 regional reliability councils. The overarching goal of NERC is to ensure the reliability of the bulk power system in North America. To achieve its goal, the NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel (NERC 2019). To improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern Seaboard, NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kilovolts (kV) and above to lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region. The plan, which became effective on April 7, 2006, establishes requirements of the formal transmission vegetation management program, which include identifying and documenting clearances between vegetation and any overhead, ungrounded supply conductors, while taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway (NERC 2006). The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers Standard 516-2009, *Guide for Maintenance Methods on Energized Power Lines* (NERC 2006).

Institute of Electrical and Electronics Engineers Standard 516-2009

The Institute of Electrical and Electronics Engineers is a leading authority in setting standards for the electric power industry. Standard 516-2009, *Guide for Maintenance Methods on Energized Power Lines*, establishes minimum vegetation-to-conductor clearances in order to maintain electrical integrity of the electrical system.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2001 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. An important component of the Federal Wildland Fire Management Policy is the acknowledgment of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles (WFLC 2009):

- Firefighter and public safety is the first priority in every fire management activity.

- The role of wildfire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan was a Presidential directive in 2000 as a response to severe wildfires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and assurance for sufficient firefighting capacity in the future. It is a long-term investment that will help protect natural resources in addition to communities, as well as a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes, and interested members of the public. There are five key areas addressed under the National Fire Plan:

- Firefighting and Preparedness
- Rehabilitation and Restoration
- Hazardous Fuels Reduction
- Community Assistance
- Accountability

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-

based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

2.12.2.2 State Regulations

State regulations are also applicable to the Proposed Project.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the California Code of Regulations (CCR). It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazards classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health & Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The state fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions.

Title 14 Division 1.5 of the California Code of Regulations

Title 14 of the CCR, Division 1.5, establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated area of the County is a State Responsibility Area, and any development in a State Responsibility Area must comply with these regulations. Among other things, Title 14, Section 1270 et seq. establishes minimum standards for emergency access, fuel modification, setback to property lines, signage, and water supply.

California Public Utilities Commission General Order 95: Rules for Overhead Transmission Line Construction

General Order 95 was initially adopted in 1941 and was most recently updated in 2009 for Southern California. General Order 95 governs the design, construction, and maintenance of overhead electrical lines. Rule 31.1 generally states that design, construction, and maintenance of overhead electrical lines should be done in accordance with accepted good practices for the given location conditions known at the time by the persons responsible for the design, construction, and maintenance of the overhead electrical lines and equipment. Rule 35 of General Order 95 (Tree Trimming) requires the following:

- 4 feet radial clearances for any conductor of a line operating at 2,400 volts or more, but less than 72,000 volts
- 6 feet radial clearances for any conductor of a line operating at 72,000 volts or more, but less than 110,000 volts
- 10 feet radial clearances for any conductor of a line operating at 110,000 volts or more, but less than 300,000 volts (this would apply to the Proposed Project)
- 15 feet radial clearances for any conductor of a line operating at 300,000 volts or more.

Under California Public Utilities Code Section 1708.5, interested persons are permitted to petition the CPUC to adopt, amend, or repeal a regulation. In response to the 2007 wildfires in San Diego County, on November 6, 2007, SDG&E submitted a petition to the CPUC requesting that the CPUC issues an Order Instituting Rulemaking to determine whether General Order 95 should be amended or if more rules should be adopted to address disaster preparedness, including damage from Santa Ana wind-driven firestorms (CPUC and BLM 2008). According to SDG&E, the petition requested that the CPUC consider several items, including the following:

- Operating rural electrical lines differently during severe fire weather
- Mitigating potential hazards associated with rural lines including undergrounding line, using steel poles in place of wood, and shortening spans between poles
- Better coordinating disaster management efforts among agencies, municipalities, local jurisdictions, and utilities
- Maintaining electrical line rights-of-way (ROWs) free of vegetation
- Adopting a state-wide Disaster Management Plan

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of emergencies including wildland fires and residential/commercial structure fires. In addition, CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is responsible for enforcing State of California fire safety codes included in the CCR and California Public Resources Codes. Public Resources Code 4291 states generally that any person operating any structure located on brush-covered lands or land covered with flammable material is required to maintain defensible space around the structure. CCR Title 14 Section 1254 identifies minimum clearance requirements required around utility poles. In state responsibility areas within the jurisdiction of CAL FIRE, the Fire Safety Inspection Program is an important tool for community outreach and enforcement of state fire codes.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of facilities by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and the successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the responsible party could face criminal and/or misdemeanor charges. In cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery Program, which requires parties liable for wildfires to pay for wildfire-related damages.

In the section of Southern California where the project is proposed, the power line hazard reduction standards are applicable year-round due to the scope of the fire season. More detailed descriptions of the applicable codes and regulations and images of exempt and non-exempt power line structures may be found in the *CAL FIRE Power Line Fire Prevention Field Guide* (CAL FIRE 2008).

- **Public Resource Code 4291** requires a reduction of fire hazards around buildings, requiring 100 feet of vegetation management around all buildings, and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction.
- **Public Resources Code 4292** states a that a minimum firebreak of 10 feet in all directions from the outer circumference of such pole or tower be established around any pole which supports a switch, transformer, lightning arrester, line junction, or end or corner pole. All vegetation shall be cleared within the firebreak.

- **Public Resources Code 4293** establishes the minimum vegetation clearance distances (between vegetation and energized conductors) required for overhead transmission line construction. Minimum clearances are discussed as follows:
    - A minimum radial clearance of 4 feet shall be established for any conductor of a line operating at 2,400 or more volts but less than 72,000 volts.
    - A minimum radial clearance of 6 feet shall be established for any conductor of a line operating at 72,000 or more volts but less than 110,000 volts.
    - A minimum radial clearance of 10 feet shall be established for any conductor of a line operating at 110,000 or more volts but less than 300,000 volts.
    - A minimum radial clearance of 15 feet shall be established for any conductor of a line operating at 300,000 or more volts.

Specific requirements applicable to the construction and operation of the Proposed Project include those from Public Resources Code, Division 4, Chapter 6:

- **Section 4427 –** Operation of fire-causing equipment
- **Section 4428** – Use of hydrocarbon-powered engines near forest, brush, or grass-covered lands without maintaining firefighting tools
- **Section 4431** – Gasoline-powered saws, etc.; firefighting tools
- **Section 4442** – Spark arrestors of fire prevention measures, requirements, exemptions.

Title 14 Division 1.5, Sections 1252, 1253, and 1254 of the California Code of Regulations

CCR Title 14 Division 1.5, Sections 1252 and 1253 state that in San Diego County, power line hazard reduction standards are applicable year round. Power lines reduction strategies includes pole brush clearing and in southeastern San Diego County, and CAL FIRE is responsible for inspecting local implementation of these strategies.

CCR Title 14 Section 1254 states that the fire break minimum clearance requirements of California Public Resources Code 4292 are applicable within an imaginary cylindroidial space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached. The radius of the cylindroid is 3.1 meters (10 feet) measured horizontally from the outer circumference of the specified pole or tower with height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid with the ground to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole of tower. Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

- At ground level: remove flammable materials, including but not limited to, ground liter, duff, and dead or desiccated vegetation that will allow fire to spread.

- From 0–2.4 meters (0–8 feet) above ground level: remove flammable trash, debris, or other materials, including grass, herbaceous, and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 meters (8 feet).
- From 2.2 meters (8 feet) to horizontal plane of highest point of conductor attachment: remove dead, diseased, or dying limbs and foliage from living sound trees and any dead, diseased, or dying trees in their entirety.

Emergency Response

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or the governor issues a proclamation of a state emergency. Once the act is activated, local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

2.12.2.3 Local Regulations

Local regulations are applicable to the Proposed Project.

County of San Diego General Plan

Updated (and adopted) in August 2011, the County of San Diego General Plan guides future growth in the unincorporated areas of the County, and considers projected growth anticipated to occur within various communities. Policies relevant to emergencies, hazards, and hazardous materials that may occur within the Project site are listed below (County of San Diego 2011a, 2011b).

Land Use Element

- **Policy LU-6.10: Protection from Hazards**. Require that development be located and designed to protect property and residents from the risks of natural and [hu]man-induced hazards.

Safety Element

- **Policy S-3.1: Defensible Development.** Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.
- **Policy S-3.3: Minimize Flammable Vegetation**. Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.
- **Policy S-3.4: Service Availability**. Plan for development where fire and emergency services are available or planned.
- **Policy S-3.5: Access Roads.** Require development to provide additional access roads when necessary to concurrently provide for safe access of emergency equipment and civilian evacuation.
- **Policy S-3.6: Fire Protection Measures**. Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.
- **Policy S-3.7: Fire Resistant Construction.** Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.
- P**olicy S-4.2: Coordination to Minimize Fuel Management Impacts.** Consider comments from CAL FIRE, U.S. Forest Service, local fire districts, and wildlife agencies for recommendations regarding mitigation for impacts to habitat and species into fuel management projects.
- **Policy S-6.1: Water Supply.** Ensure that water supply systems for development are adequate to combat structural and wildland fires.
- **Policy S-6.3: Funding Fire Protection Services.** Require development to contribute its fair share towards funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.
- **Policy S-6.4: Fire Protection Services for Development.** Require that development demonstrate that fire services can be provided that meet the minimum travel times identified in Table S-1 (Travel Time Standards)
- **Policy S-6.5: Concurrency of Fire Protection Services.** Ensure that fire protection staffing, facilities and equipment required to serve development are operating prior to, or in conjunction with, the development. Allow incremental growth to occur until a new facility can be supported by development.

Subregional Plans

The Project site is located within the Mountain Empire Subregional Plan and Jacumba Subregional Group Area Community Plan planning area boundaries. There are no policies relevant to wildfire in the Mountain Empire Subregional Plan or Jacumba Subregional Group Area (County of San Diego 2011c).

County of San Diego Code of Regulatory Ordinances

The following sections of the County Code of Regulatory Ordinances would be applicable to the Proposed Project.

Title 6, Division 8, Chapter 4: Removal of Combustible Vegetation and Other Flammable Materials Ordinance (Ordinance No. 9633, Sections 68.401–68.406)

The Removal of Combustible Vegetation and Other Flammable Materials Ordinance establishes that combustible vegetation, dead, dying or diseased trees, green waste, rubbish, and other materials on private property can create fire hazards resulting in conditions that are potentially injurious to the health, safety, and welfare of the public. The ordinance goes on to state that combustible vegetation and other materials are public nuisances that must be abated and the requirements for abatement must be enforced in all County Service Areas and in the unincorporated areas of the County outside of a fire protection district or municipal water district. Fire protection districts and municipal water districts either have adopted their own combustible vegetation abatement programs or have adopted the county ordinance.

Clearance requirements and combustible vegetation removal protocols are established in Section 68.404 and 68.406 of the Ordinance. Section 68.404 states that "no responsible party shall permit on a parcel any accumulation of combustible vegetation, dead, dying or diseased trees, green waste, rubbish, or other flammable materials within thirty (30) feet of the property line when such accumulation endangers property or the health, safety, or welfare of residents of the vicinity" and that "no responsible party shall permit on a parcel any accumulation of combustible vegetation, dead, dying or diseased trees, green waste, rubbish, or other flammable materials within ten (10) feet of each side of the improved width of highways, private roads and driveways" (County of San Diego 1985). Section 68.406 requires that combustible vegetation removal be conducted so as to leave the plant root structure intact to stabilize the soil and prevent erosion and that areas where combustible vegetation removal has occurred may be replanted with fire-resistant shrubbery and planting materials (County of San Diego 1985). The ordinance also requires that vegetation removal be conducted in conformance with all federal, state, and local environmental laws and regulations.

County of San Diego Code of Regulatory Ordinances, Removal of Fire Hazards

Per the County Code of Regulatory Ordinances, Sections 96.1.005 and 96.1.202, Removal of Fire Hazards, the San Diego County Fire Authority (SDCFA), in partnership with CAL FIRE, the Bureau of Land Management, and the U.S. Forest Service, is responsible for the enforcement of defensible space inspections. Inspectors from CAL FIRE are responsible for the initial inspection of properties to ensure an adequate defensible space has been created around structures. If violations of the program requirements are noted, inspectors provide a list of required corrective measures and provide a reasonable timeframe to complete the task. If the violations still exist upon re-inspection, the local fire inspector forwards a complaint to the County for further enforcement action.

Title 9, Division 6, Chapter 1: County Fire Code (Section 96.1.4703)

Section 96.1.4703 states that the County Department of Planning and Land Use or the applicable fire protection district may require an applicant for a parcel map, specific plan, or major use permit located in a wildland–urban interface fire area to prepare and submit an FPP as part of the approval process. According to the County Fire Code, wildland–urban interface fire area is a geographic area identified by the state as a "Fire Hazard Severity Zone" (the Proposed Project would be located within a Moderate to Very High Fire Hazard Severity Zone). The FPP, which requires that the topography, combustible vegetation, and fire history (among other factors) be considered during development of the plan, addresses water supply, vehicular and emergency apparatus access, travel time to the nearest fire station, structure setback from property lines, ignition-resistant building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management.

County of San Diego Consolidated Fire Code

The County, in collaboration with the local fire protection districts, created the first Consolidated Fire Code in 2001. The 2020 Consolidated Fire Code (CFC) contains the County's and fire protection districts' amendments to the 2019 CFC. The purpose of consolidation of the County's and local fire districts' adoptive ordinances is to promote consistency in the interpretation and enforcement of the CFC for the protection of public health and safety, which includes permit requirements for the installation, alteration, or repair of new and existing fire protection systems, and penalties for violations of the code. The CFC provides the minimum requirements for access, water supply and distribution, construction type, fire protection systems, and vegetation management. Additionally, the CFC regulates hazardous materials and provides associated measures to ensure that public health and safety are protected from incidents relating to hazardous substance releases. San Diego County's 2020 CFC is the most recently adopted version (County of San Diego 2020).

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

The County Multi-Jurisdictional Hazard Mitigation Plan is implemented by the County of San Diego Office of Emergency Services. The Multi-Jurisdictional Hazard Mitigation Plan is a County-wide plan that identifies risks posed by natural and human-caused disasters, and discusses ways to minimize potential damage occurring as a result of these disasters. The plan is intended to serve many purposes, including enhancing public understanding and awareness of potential hazardous situations, creating a decision tool for managing hazards, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, providing inter-jurisdictional coordination, and achieving regulatory compliance (County of San Diego 2017).

Operational Area Emergency Operations Plan

The Office of Emergency Services also implements the Operational Area Emergency Operations Plan (Emergency Operations Plan) in collaboration with the Unified San Diego County Emergency Services Organization. The Emergency Operations Plan is for use by the County and all of the cities within the County to respond to major emergencies and disasters. It describes the roles and responsibilities of all County departments (including many city departments), and the relationship between the County and its departments and the jurisdictions within the County. The Emergency Operations Plan contains 16 annexes detailing specific emergency operations for different emergency situations (County of San Diego 2018).

San Diego Fire Chiefs Association Defensible Space Memorandum of Understanding

In response to the Harmony Grove Fire in 1997, the San Diego County Fire Chief's Association and the Fire District's Association of San Diego County entered into a Memorandum of Understanding with the California Department of Fish and Game, U.S. Fish and Wildlife Service, and CAL FIRE (San Diego Fire Chiefs Association 2007). The removal of flammable vegetation within 100 feet of any structure and 30 feet from any roadway without a biological survey is permitted by the Memorandum of Understanding. The intent of the Memorandum of Understanding was to establish guidelines by which CAL FIRE, cities, and fire districts can continue to protect lives and property from the threat of fires by requiring the flammable vegetation abatement pursuant to applicable state and local regulations. The Memorandum of Understanding is also intended to establish a cooperative mechanism through which the U.S. Fish and Wildlife Service and California Department of Fish and Game may "assess, minimize, and help account for potential adverse impacts to sensitive species and habitats resulting from vegetation abatement activities" (San Diego County Fire Chiefs Association 2007).

2.12.3 Analysis of Project Effects and Determination as to Significance

For the purposes of this EIR, the Proposed Project is analyzed at a project level to discuss potential impacts from wildfires. The Proposed Project includes 300,000 photovoltaic (PV) modules, an underground collection system, a battery energy storage system, an on-site collector substation, a switchyard, a 138 kV transmission line tie-in, a control system, and meteorological weather stations. These components are described in Chapter 1, Project Description, of this EIR.

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to SDG&E after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1 of this EIR) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have California Environmental Quality Act (CEQA) obligations related to the switchyard.

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

CEQA Guidelines

The significance criteria used to evaluate the project impacts associated with wildfire are outlined in Appendix G of the CEQA Guidelines. According to these Guidelines, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, a significant impact related to wildfire would occur if the project would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan.
- 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.

- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

County Guidelines for Determining Significance

In addition, San Diego County's *Guidelines for Determining Significance and Report Format and Content Requirements: Wildland Fire and Fire Protection* (County of San Diego 2010) applies to both the direct impact analysis and the cumulative impact analysis. An affirmative response to, or confirmation of any one of the following Guidelines, will generally be considered a significant impact related to Wildland Fire and Fire Protection as a result of the Proposed Project, in the absence of evidence to the contrary:

- The project cannot demonstrate compliance with all applicable fire codes.
- A comprehensive Fire Protection Plan has been accepted, and the project is inconsistent with its recommendations.
- The project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.

As identified in the Proposed Project's FPP (Appendix N), the Proposed Project demonstrates compliance with applicable fire codes. Additionally, the FPP is being evaluated concurrent with this EIR. Although this FPP has not yet been accepted, the Proposed Project is consistent with its recommendations. For these reasons, the first two County Guidelines listed above are not discussed further in this section. Potential impacts associated with emergency response are addressed in the following section.

2.12.3.1 Emergency Response/Evacuation Plans

Guidelines for the Determination of Significance

This impact analysis considers the following CEQA Appendix G Guideline:

- Substantially impair an adopted emergency response plan or emergency evacuation plan.

In addition, this impact analysis considers the following County Guideline:

- The project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.

Analysis

Adopted Plans

To better establish Mutual Aid capabilities and improve communications between jurisdictions and agencies, as well as assist the County and cities in developing emergency plans and exercising those plans, the San Diego County Operational Area (OA) was formed. The OA Emergency Operations Plan (EOP) is used by the County and all of the cities within the San Diego County to respond to major emergencies and disasters, including wildfire. The OA EOP describes the roles and responsibilities of all departments and the relationship between the County and its departments and the jurisdictions within the County. The OA EOP has been adopted and is complete with 16 functional annexes, including an Evacuation Annex (Annex Q). The OA Evacuation Annex is intended to be used as a template for the development of other jurisdictional evacuation plans and describes how emergencies are managed and how the evacuation of residents and their pets are implemented. The OA Evacuation Annex outlines strategies, procedures, recommendations, and organizational structures that can be used to implement a coordinated evacuation effort in the OA (County of San Diego 2018.)

In addition, the County has contracted with an independent fire operations consulting firm (Rohde and Associates) which has been preparing regional Wildland Urban Interface emergency response plans for certain areas in the County to encapsulate the County's pre-fire planning for wildfire emergencies. However, a Wildland Urban Interface plan has not been prepared for the Jacumba area. Thus, there is no adopted plan specific to the Project site.

The Proposed Project would be a solar energy generation and storage facility with no on-site staff; therefore, the Proposed Project would not result in increased population or housing in the Project area. During operations, there would at times be a minimum number of workers (up to five workers) for maintenance activities as needed. Therefore, during operations the Proposed Project would not increase the number of people and vehicles needing to evacuate the area during a wildfire emergency.

During construction of the Proposed Project there would be up to 500 workers on site. The construction period is anticipated to last up to 13 months. Thus, the construction period would include the highest daily on-site population and potential for additional vehicles. The addition of up to 500 vehicles in the area during construction would increase the number of vehicles

evacuating the Jacumba community area during this period. During decommissioning, it is anticipated up to 250 workers would be onsite.

Measures to reduce fire risk during the construction period are included in the Construction Fire Protection Plan of the FPP (Appendix N). Informing on-site workers of their evacuation alternatives and that the route to the east to Carrizo Gorge Road will be the priority and preferred route unless it is compromised. Within the Project site, evacuation routes shall be maintained and free of obstructions. Unavoidable evacuation route blockages within the Project site shall be coordinated such that a secondary route is identified and available.

In addition, emergency response agencies managing wildfire evacuations know that wildfires are fluid events and San Diego County has developed a sophisticated approach to tracking and predicting wildfire spread and behavior with corresponding technology to phase evacuation notifications of down-wind communities. Situation awareness during a wildfire is important and the combined resources available to emergency managers are robust, providing these agencies with appropriate and essential evacuation control, which can evolve and include mid-evacuation changes.

The Proposed Project would not conflict with an adopted emergency response plan or evacuation plan; thus, there would be **no impact** to an adopted plan. Further, the Proposed Project would have no full-time on-site personnel; operations and maintenance personnel would be on-site only as needed. The increase in up to 500 workers on site would be temporary during the construction period.

Emergency Response

An increase in demand for fire protection and emergency services would occur at the Project site due to increased activity during construction and decommissioning leading to higher amounts of fuel on the site, and a greater number of ignition sources on the site, including equipment and human activities. In addition, during operations and maintenance, the Proposed Project would introduce potential ignition sources that do not currently exist on the Project site.

The County's General Plan requires that fire protection services be provided that meet the minimum travel time standards identified in Table S-1 of the Safety Element (Policy S-6-4) (County of San Diego 2011b). The travel time standards are based on the Regional Category and/or land use designations. The Project site has a Regional Category of Rural Village and the vast majority of the acreage within the proposed development footprint (approximately 627 acres) is designated as Specific Plan.

Based on these land use categories, the travel time standard from the closest fire station is 10 minutes. The Jacumba Fire Station 43 is approximately 3.6 miles from the most remote areas of

the proposed development footprint with a calculated travel time of less than 6.8 minutes.[2] Therefore, the Proposed Project would comply with the County General Plan for the travel time from the closest fire station (Appendix N). In addition, the Proposed Project would also have additional fire protection services from the Boulevard Fire Station that is located approximately 10.6 miles to the most remote portion of the Project site with a calculated travel time of approximately 18.7 minutes. In addition to these responding fire stations, there are resources available through automatic or mutual aid agreements. Thus, the Proposed Project meets the General Plan travel time standards.

Once operational, the Proposed Project would have access driveways, a perimeter drive and interior driveways within the solar facility. Access to the solar facility from Carrizo Gorge Road and Old Highway 80 would be established through construction of six driveways that would be located at the following five locations:

- Access 1 – Full access driveway along Carrizo Gorge Road (east leg), approximately 1,000 feet southeast of the I-8 interchange;
- Access 2 – Full access driveway along Carrizo Gorge Road (west leg), approximately 1,450 feet southeast of the I-8 interchange;
- Access 3 – Full access driveway along Carrizo Gorge Road (east leg), approximately 2,100 feet southeast of the I-8 interchange;
- Access 4 – Full access driveway along Carrizo Gorge Road (west leg), approximately 2,800 feet southeast of the I-8 interchange;
- Access 5 – Full access driveway along Old Highway 80 (north and south leg), approximately 1,200 feet east of Campo Street.

These access driveways would be paved, would be a minimum of 24 feet in width, and would be fully accessible to emergency services via a Knox Box placed at each access driveway. The Proposed Project does not propose any to changes to the design of Carrizo Gorge Road or Old Highway 80.

Within the fenced solar facility, the perimeter access driveway would be constructed to a minimum improved width of approximately 24 feet. The interior access would be constructed to a minimum improved width of 20 feet. All access would be arranged to provide a minimum inner turning radius of 28-feet, would be graded and maintained to support the imposed loads of a fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather

[2] Travel distances were derived from Google Earth road data and driving on the access roads to fire stations from Project site while travel times were calculated applying the nationally recognized Insurance Services Office (ISO) Public Protection Classification Program's Response Time Standard formula (T=0.65 + 1.7 D, where T= time and D = distance). The ISO response travel time formula discounts speed for intersections, vehicle deceleration and acceleration, and does not include turnout time.

driving capabilities. Minimum vertical clearance of 13 feet 6 inches from the driving surface shall be maintained for the interior access. Thus, the Proposed Project has been designed to allow ease of access for emergency responders both externally and internally.

The Proposed Project would also implement a project design feature (see **PDF-TR-1** in Section, 3.1.7, Transportation) that would require the preparation of the County-required traffic control plan during Proposed Project construction and decommissioning. **PDF-TR-1** would provide safe and efficient traffic flow in the Project area and on-site during construction and decommissioning activities, which would also ensure safe access to the site and surrounding properties by emergency responders.

During the operations phase of the Proposed Project, no full-time personnel are proposed to be located on site, but the site may include up to five people at a time as needed for inspections, maintenance, and repair activities. The Proposed Project is estimated to add fewer than 0.2 calls per year to Jacumba Fire Station 43 and the co-located CAL FIRE and County Boulevard Fire Station 47 during operation of the Proposed Project facilities (Appendix N).

During the construction phase, which would occur over approximately 13 months, there would be up to 500 people on the Project site on any given day. The short duration of the construction phase in comparison to the longer-term operational period is considered not significant in terms of its overall increase in annual calls. For example, assuming 500 people are on site every day for 12 months, this on-site population would be expected to result in up to 35 emergency calls, or 0.1 calls per day. Because construction would not occur during the nighttime hours, there would not be people on site for half of the day, reducing the potential calls to 0.05 calls per day. Neither of these call volume increases would be considered to impact the capabilities of the responding fire stations The addition of 0.05 calls for a short duration or 0.2 call per year long term to rural fire stations that currently respond to approximately one call per day is not considered significant and would not require the construction of additional Fire Station facilities based on that increase alone.

During decommissioning, up to 250 workers would be on site during the 10-month decommissioning period. This temporary impact on emergency response would be less than during the construction period.

For the reasons stated above, impacts to the emergency response objectives identified in the Public Facilities Element of the County General Plan as a result of the Proposed Project would be **less than significant**.

Switchyard

The switchyard component of the Proposed Project is located adjacent to the on-site collector substation and would be an un-staffed facility, except in cases of maintenance and repair activities. The switchyard site has a Regional Category of Rural Village and is designated as Specific Plan.

Based on these land use categories, the travel time standard from the closest fire station is 10 minutes. The Jacumba Fire Station 43 is approximately 1.5 miles from the switchyard site and would require a travel time of approximately 5 minutes. Therefore, the switchyard would comply with the County General Plan for the travel time from the closest fire station (Appendix N). In addition, the Proposed Project would also have additional fire protection services from the Boulevard Fire Station that is located approximately 8 miles from the switchyard site with a calculated travel time of approximately 16 minutes. In addition to these responding fire stations, there are resources available through automatic or mutual aid agreements.

Construction of the switchyard would be subject to the Traffic Control Plan, and when fully operational, the switchyard would include an approximately 1,450-foot-long asphalt paved access driveway from Carrizo Gorge Road to the switchyard. The access driveway would be approximately 30-feet-wide, requiring approximately 1.2 acres of land in new right-of-way and 0.3 acres of land on existing SDG&E right-of-way. The access road would be fully accessible to emergency services via a Knox Box. Thus, the Proposed Project has been designed to have ease of access by emergency responders.

During construction of the Switchyard, up to 41 people may be on the site at one time, and during the operations and maintenance of the switchyard, no full-time personnel are proposed to be located on site except for periodic visits from up to four workers at a time during operations inspections, maintenance, and repair activities. Thus, the amount of calls the switchyard would add per year to the Jacumba Fire Station 43 and the co-located CAL FIRE and County Boulevard Fire Station 47 during construction and operation of the switchyard facilities would not be substantial.

Therefore, impacts to the emergency response objectives identified in the Public Facilities Element of the County General Plan would be **less than significant**.

Because there are no officially adopted evacuation plans for the area, impacts to an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

2.12.3.2 Wildfire Risk

Guidelines for the Determination of Significance

This impact analysis considers the following CEQA Appendix G Guideline, which asks whether the Proposed Project would:

- 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.

Analysis

During construction, operation, and decommissioning of the Proposed Project, there would be increased human activity and ignition sources at the Project site, including equipment that could create a spark or be a source of heat.

Operation and Maintenance

During operations and maintenance, the Proposed Project would introduce potential ignition sources that do not currently exist on the Project site. With these additional ignition sources, the risk of wildfire would be increased. The lack of steep terrain within the development footprint is beneficial and results in reduced fire intensity and slower fire spread rates. However, Santa Ana wind events have the potential to increase fire spread rates and these weather periods will be a focused fire prevention period whenever they occur, subject to onsite activity limitations that reduce the potential for accidental ignitions. Potential causes of wildfire associated with operations and maintenance of the Proposed Project include the following:

- Explosion/Arcs, arc flashing, electrical shorts, sparking, motor or other machinery fire, wiring and harnessing fire, overheated junction boxes, rodents chewing on wires and causing arcing.
- Switchyard
- Employee and maintenance vehicles
- Collapse of supporting structures causing electrical shorts and fire
- Overgrown vegetative fuel under and around the array – the Proposed Project would minimize this potential fire hazard by managing its fuels
- Unauthorized equipment and supplies stored under arrays for shading – the Proposed Project would restrict storage under arrays
- Fire in an inverter
- Short circuit and fire of components in or on a panel
- Potential for sun reflection from panels igniting vegetation
- Illegal target practice or other vandalism or arson in a rural area
- Switchgear and cable fire

Fire risk associated with Proposed Project operations may result from the addition of new electrical equipment on site. Equipment such as the collector substation, switchyard, battery energy storage system, and other solar facility related infrastructure would be implemented for the Proposed

Project. The Proposed Project facilities have been designed to minimize the risk of fire hazard as much as feasible as described below.

Battery Energy Storage System Design

Potential hazards associated with battery energy storage systems are primarily associated with the possibility of thermal runaway (similar to overheating) occurring from a malfunctioning or damaged battery. Newer battery technologies have minimized the occurrence of thermal runaway through a system of protections including internal cell monitoring and partitioning; use of non-flammable chemicals; container design and features; ventilation, and air-conditioning systems; and inert gas fire suppression systems.

The Proposed Project's battery energy storage system would have a maximum capacity of up to 90 MW, 180 megawatt hours (MWh) and would to be located throughout the proposed solar facility. The battery energy system would include a total of up to 75 containers distributed at 25 locations within the solar facility (three containers at each location adjacent to inverter/transformer platforms). Figure 1-2 in Chapter 1, Project Description, shows the location of the containers within the proposed solar facility. The battery system would be direct current (DC) coupled with the PV system, connecting electrically at the DC bus of the inverters. The same inverters, transformers, medium voltage equipment, and alternating current (AC) wiring would all serve both the battery energy storage system and the PV system.

The Proposed Project proposes the use of customized steel containers to store banks of Lithium-ion batteries, which will enable on-site storage of solar energy produced by the Proposed Project. There are various types of Lithium-ion batteries available for use in this application. The specific battery type proposed for the Proposed Project is a Lithium-ion nanophosphate cell. Available data indicates that this particular type of Lithium-ion battery has proven to be less vulnerable to fire occurrences than typical Lithium-ion batteries. Lithium-ion nanophosphate batteries include a stable cathode chemistry that substantially reduces the possibility of thermal runaway and provides for reduced reaction from abuse (Sandia National Laboratories 2012).

The Proposed Project's battery storage would also include multiple levels of protections against overcharge. All battery components would be contained within an enclosed structure, avoiding contact with ignition sources and would not include liquids that could spill. The Proposed Project's steel containers would each hold Lithium-ion nanophosphate battery packs on racks throughout a large percentage of the container. Each container would have underground wiring connecting it to a 600-kilowatt skid mounted DC:DC converter, which would bring the voltage from the strings of batteries in the containers up to match the voltage of the PV energy entering into the inverter's DC bus. The containers are typically made from the 12- to 14-gauge steel in shipping containers that

measure approximately 55-feet-long, 19-feet-wide, and 10-feet-high. Each container would be separated from neighboring containers by approximately 10 feet.

The proposed batteries and containers would also include the following important monitoring and safety components:

- Modular battery racks designed for ease of maintenance
- Integrated heat and fire detection and suppression system
- Integrated air conditioning system
- Integrated battery management system

The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior sprinkler system with several sprinkler heads for coverage and an external dry standpipe for fire fighters to connect and pump water.

Critical information from the battery system, equipment data from the DC:DC converters and inverters would be monitored by the battery monitoring system inside the containers, at the LV (1500 V) metering at the inverter cabinets and at the power plant controller measured along with the solar plant performance with the Supervisory Control and Data Acquisition control system. The battery management system would track the performance, voltage and current, and state of charge of the batteries, proactively searching for changes in performance that could indicate impending battery cell failure. If an event is identified, the system powers down and isolates those battery strings in order to avoid potential failures and fire risks. If a fire event does occur, the battery energy storage system would activate its fire suppression system. The batteries would be located in a manner to void contact with other flammable sources; therefore, the most efficient way to control any fire would be to let it burn in place. Therefore, the battery energy storage system has been designed to minimize the risks of starting a fire.

Site Access

Site access driveways are necessary for the Proposed Project's development, but would also facilitate access by fire agencies. Access to the site has been designed per the County Fire Code. The Project site entrance off Old Highway 80 would be 24 feet wide and paved, and the access road to the switchyard site off Carrizo Gorge Road would be 30 feet wide and paved. The perimeter vehicle access within the fenced area would be constructed as suitable for fire access roads and would be constructed to a minimum width of approximately 24 feet. The interior on-site vehicle access would be constructed to a minimum improved width of 20 feet. All on-site vehicle access would be designed to provide a minimum inner turning radius of 28 feet, would be graded and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds), and would

be designed and maintained to provide all-weather driving capabilities. The purpose of the internal access is to allow for two-way access of fire apparatus throughout the solar facility in order to reach all of the inverter/transformer pads and battery storage containers. The non-load-bearing surface material of the fire access roads would consist of an all-weather surface capable of supporting 75,000 pounds as required by County Fire Code. An access-controlled gate would be installed at all access driveways to allow ease of access for fire authorizes.

Defensible Space and Fuel Management

Targeted fire prevention measures would be implemented within the solar facility to reduce the potential for ignitions, and defensible space and fuel management would be provided. For example, the perimeter of the solar facility would be fenced and all vegetation within the fenceline would be managed to reduce fire risk, substantially reducing the fuels available to be ignited within the fenced facility. The Proposed Project would provide defensible space by setting back all PV modules a minimum of 30 feet from the solar facility's perimeter fence. The perimeter Fuel Modification Zone (FMZ) buffer will include at least 30 feet of modified fuels and the perimeter fire access. Fuels throughout the solar facility would be maintained to a six-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the collector substation pad area and 100 feet surrounding the adjacent switchyard.

After construction of the Proposed Project, fires from off-site sources would not have continuous fuels across the solar facility and would therefore be expected to burn around and/or over the site via spotting. Burning vegetation embers may land on Proposed Project structures but are not likely to result in ignition based on ember decay rates and the types of non-combustible and ignition resistant materials that would be used on site. Ignition resistant materials of glass, steel, aluminum, and decomposed granite would provide resistance to ignitions from embers. Understory fuels would be maintained at roughly 6 inches, so ignitions in the ground cover from embers would produce a fast moving, but low intensity fire through the highly compartmentalized fuel modification areas beneath the PV modules. Further, six 10,-gallon water storage tanks with fire department connections would be provided on site; one tank would be provided at each driveway entrance to the solar panel areas as defined by geographic isolation from other sections and one tank would be provided near the substation (see Figure 2.12-5, Fire Response Access and Water Tank Locations Plan).

While the Proposed Project has been designed to minimize the risk of fire hazards to the extent feasible and will have minimal occupation during operation, the Proposed Project does propose new electrical equipment that could exacerbate wildfire risks and thereby expose Proposed Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, the Proposed Project's operational-related impacts would be **potentially significant (Impact WF-1)**.

Construction and Decommissioning

An increase in the risk of wildland fire on the Project site would occur during construction and decommissioning when there is the largest amount of fuel on the site and increased activity combined with a greater number of ignition sources on the site. Potential ignition sources during construction and decommissioning related activities include the following:

- Earth-moving equipment – create sparks, heat sources, fuel or hydraulic leaks
- Chainsaws – may result in vegetation ignition from overheating, spark, fuel leak; chainsaws should be fueled and maintained only in areas away from combustible fuels.
- Vehicles – heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders – open heat source may result in metallic spark coming into contact with vegetation
- Wood chippers – include flammable fuels and hydraulic fluid that may overheat and spray onto vegetation with a hose failure
- Compost piles – large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders – sparks from grinding metal components may land on a receptive fuel bed
- Torches – heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- Other human-caused accidental ignitions – ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others.

All Proposed Project components would be decommissioned except the switchyard and connection to the SDG&E transmission line that would be owned and operated by SDG&E. All decommissioning would occur within the development footprint and disturbance limits of the Proposed Project. The aboveground (detachable) equipment and structures would be disassembled and removed from the site. Detachable elements include all PV modules and support structures, battery storage units, inverters, transformers, and associated controllers. Removal of the fencing, substation, and aboveground conductors on the transmission facilities would also be implemented. Similar to construction of the Proposed Project, during decommissioning of the Proposed Project, there would be increased human activity and ignition sources, including equipment that could create spark, be a source of heat, or leak flammable materials on the Project site.

Thus, impacts to wildfire risks exposing Proposed Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire during construction and decommissioning of the Proposed Project would be **potentially significant (Impact WF-2).**

Switchyard

The switchyard component of the Proposed Project is located adjacent to the on-site collector substation and would be an un-staffed facility, except in cases of maintenance and repair activities. At the end of the construction phase, the operation and maintenance of the switchyard would be transferred to SDG&E, where the switchyard would be subject to fire prevention measures consistent with SDG&E. In addition, a robust fire prevention program that focuses on minimizing the potential for fire ignitions would be followed.

While the switchyard operation would be designed to minimize the risk of wildfire to the extent feasible, the amount of electrical equipment that would be present of the site would be increased as compared to existing conditions. Therefore, the operational impacts to wildfire risk would be **potentially significant (Impact WF-1**). In addition, during the switchyard's construction, the amount of ignition sources on the switchyard site would be increased, exposing Proposed Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and impacts would be **potentially significant (Impact WF-2)**.

2.12.3.3 Infrastructure Contribution to Increased Wildfire Risk

Guidelines for the Determination of Significance

This impact analysis considers the following CEQA Appendix G Guideline, which asks whether the Proposed Project would:

- 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.

Analysis

Infrastructure necessary for development of the Proposed Project includes the following components:

- Approximately 300,000 PV modules mounted on support structures (single-axis solar trackers)
- A 1,000- to 1,500-volt DC underground collection system linking the modules to the inverters
- 25 inverter/transformer platforms, located throughout the solar facility, to convert the power generated by the modules into a compatible form for use with the transmission network

- Approximately 5,000 feet of 34.5-kV underground AC collection system and 50 feet of overhead AC feeders, approximately 30-feet-tall linking the inverters to the on-site collector substation
- An on-site collector substation located within an approximately 27,360-square-foot area (152-foot by 180-foot)
- A 138 kV switchyard adjacent to the on-site collector substation to transfer power from the on-site collector substation to the existing SDG&E 138 kV transmission line
- A 138 kV, 220-foot-long 65-foot-high overhead slack span transmission line to connect the on-site collector substation to the switchyard
- Five 138 kV transmission poles ranging in height from 70 to 115 feet, with approximately 1,860 feet overhead transmission lines (tie-in) to loop the switchyard into the existing SDG&E Boulevard – East County transmission line.
- A battery energy storage system of up to 90 MW (or 180MWh) comprised of battery storage containers located adjacent to the inverter/transformer pads (up to three containers at each location for a total of 75 containers on site)
- Fiber optic line
- Control system
- Five meteorological weather stations
- Site access driveways
- Internal access
- Improvements within SDG&E Transmission Corridor
- Security fencing and signage
- Lighting
- Fuel modification zone
- Landscaping (visual screening) along specified sections of the perimeter fence
- Six 10,000-gallon water tanks dedicated for firefighting purposes

The construction period for the Proposed Project is anticipated to last up to 13 months. The Proposed Project would have a lifespan of 35 years of operation, after which, all Proposed Project components, with the exception of the switchyard and connection to the SDG&E transmission line, would be decommissioned over a 10-month period.

Potential ignition sources during construction and decommission-related activities would include the following:

- Earth-moving equipment – create sparks, heat sources, fuel or hydraulic leaks
- Chainsaws – may result in vegetation ignition from overheating, spark, fuel leak; chainsaws should be fueled and maintained only in areas away from combustible fuels.
- Vehicles – heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders – open heat source may result in metallic spark coming into contact with vegetation
- Wood chippers – include flammable fuels and hydraulic fluid that may overheat and spray onto vegetation with a hose failure
- Compost piles – large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders – sparks from grinding metal components may land on a receptive fuel bed
- Torches – heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- Other human-caused accidental ignitions – ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others.

With the installation and maintenance of this infrastructure, the primary wildfire ignition risks of the Proposed Project would include:

- Explosion/Arcs, arc flashing, electrical shorts, sparking, motor or other machinery fire, wiring and harnessing fire, overheated junction boxes, rodents chewing on wires and causing arcing
- Switchyard
- Employee and maintenance vehicles
- Collapse of supporting structures causing electrical shorts and fire
- Overgrown vegetative fuel under and around the array – the Proposed Project would minimize this potential fire hazard by managing its fuels
- Unauthorized equipment and supplies stored under arrays for shading – the Proposed Project would restrict storage under arrays
- Fire in an inverter
- Short circuit and fire of components in or on a panel

- Potential for sun reflection from panels igniting vegetation
- Illegal target practice or other vandalism or arson in a rural area
- Switchgear and cable fire

The Proposed Project would increase the potential for a wildfire and could impact the public and environment by exposure to wildfire due to installation of a solar energy generation and storage facility and its associated infrastructure. However, the Proposed Project has also been designed to prevent this infrastructure from exacerbating a fire risk to the extent feasible as discussed below.

The approximately 643-acre solar facility would be fenced along the entire facility boundary for security. The fencing would meet National Electrical Safety Code requirements for protective arrangements in electric supply stations. Fencing would be 7 feet in height total, with a 6-foot-high chain-link perimeter fence and 1 foot of three strands of barbed wire along the top. Signage in Spanish and English for electrical safety would be placed along the perimeter of the solar facility on the fence, warning the public of the high voltage and the need to keep out, and Motion censored lights would be installed at all site access driveway entrances.

The Proposed Project facilities would be designed and constructed in accordance with current fire codes and several of the Proposed Project components have been designed to minimize or reduce wildfire risk. Six water tanks are proposed throughout the Project site to provide water specifically for firefighting purposes. One tank would be provided at each entrance to a site section as defined by geographic isolation from other sections, and one tank would be provided near the substation.

As discussed in Section 2.12.3.2, Wildfire Risk, site access driveways are necessary for Proposed Project development, but would be designed per the County Fire Code to facilitate access by fire agencies. Minimum improved 24-foot wide perimeter access would be constructed to provide for maintenance and fire access. Interior access would be a minimum of 20 feet in width.

Defensible space and fuel management would also be provided as discussed in Section 2.12.3.2 above. The Proposed Project would provide defensible space by setting back all PV modules a minimum of 30 feet from the solar facility's perimeter fence. The perimeter FMZ buffer would include at least 30 feet of modified fuels and the perimeter fire access. Fuels throughout the solar facility would be maintained to a 6-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the collector substation pad area and 100 feet surrounding the adjacent switchyard. The defensible spaces and FMZs would minimize potential fires and damage to Proposed Project facilities that would exacerbate wildfires.

Although the Proposed Project's components and infrastructure have been designed to minimize risk, installation of Proposed Project infrastructure would result in a **potentially significant impact (Impact WF-3)** to wildfire risk.

Switchyard

The switchyard pad area would be free of vegetation around all electrical equipment. The cleared area surrounding the site and the area inside the switchyard fence would be covered in gravel. An asphalt-paved access driveway would be constructed from Carrizo Gorge Road to the switchyard. The access driveway will be approximately 30-feet-wide, requiring approximately 1.2 acres of land in new right-of-way and 0.3 acres of land on existing SDG&E right-of-way. Therefore, installation or maintenance of associated infrastructure, including such as access and fuel breaks, emergency water sources, transmission line connection) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment would be **less than significant.**

2.12.3.4 Post-Fire Impacts

Guidelines for the Determination of Significance

This impact analysis considers the following CEQA Appendix G Guideline, which asks whether the Proposed Project would:

- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Analysis

Topography within the Project site includes primarily level land and gently rolling slopes in the proposed development footprint. Round Mountain and steeper slopes are located within the western portion of the Project site and would not be disturbed. Additionally, as presented in the Landslide section of Section 2.5.1, Geology and Soils, of this EIR, the Project site is not within a landslide susceptibility area as identified in the County's Geologic Hazards Guidelines, landslides have not been mapped on or adjacent to the site, and evidence of landsliding was not observed. As stated in the Geotechnical Report prepared for the Project site (Appendix F), the potential for landsliding or slope instability to impact the Proposed Project is considered low. The Proposed Project would also conform to design requirements associated with proper site preparation and grading practices.

Considering the topographic conditions of the development footprint, lack of landslide evidence, and implementation of surface drainage recommendations, potential impacts associated with post-fire flooding, runoff, or slope instability would be **less than significant**.

Switchyard

As presented in Section 2.5.2 (Geology and Soils), the switchyard site is not within a landslide susceptibility area as identified in the County's Geologic Hazards Guidelines, landslides have not been mapped on or adjacent to the site, and evidence of landsliding was not observed. As stated in the Geotechnical Report prepared for the Project site (Appendix F), the potential for landsliding or slope instability to impact the switchyard's development is considered low. The switchyard is not expected to increase site or downstream flooding, as it does not include significant alterations to existing hydrological conditions. The switchyard component of the Proposed Project would also conform to design requirements associated with proper site preparation and grading practices. Considering the topographic conditions of the switchyard site,lack of landslide evidence, minimal alterations to existing hydrological conditions andimplementation of surface drainage recommendations, potential impacts associated with post-fireflooding, runoff or slope instability would be **less than significant**.

2.12.4 Cumulative Impact Analysis

Emergency Response/Evacuation Plans

For emergency response, the cumulative study area would be the SDCFA, and CAL FIRE jurisdictional boundaries. The Proposed Project and other projects may have a cumulative impact on the ability of local agencies to protect residents, workers and structures from wildfires. These facilities and other development in the cumulative study area would increase the population and/or activities and ignition sources in the Project area, which may increase the chances of a wildfire and increase the number of people and structures exposed to risk of loss, injury, or death.

The potential cumulative impacts from multiple projects in a specific area can cause fire response service decline and must be analyzed for each project. The Proposed Project along with other solar and/or wind projects in the Proposed Project region represent an increase in potential service demand along with challenges regarding rescue or firefighting within or adjacent to electrical facilities.

Despite the generally low calculated increase in number of calls per year anticipated from the Proposed Project, it contributes to the cumulative impact on fire services, when considered with other anticipated projects in the study area. The cumulative impact results in a situation where response capabilities may erode and service levels may decline. Therefore, the Proposed Project, in combination with cumulative projects, **would result in a cumulatively considerable impact** to an adopted emergency response and emergency evacuation plan (**Impact WF-CU-1)**

Wildfire Risk

The wildfire risk in the vicinity of the Project site has been analyzed and it has been determined that wildfires are likely occurrences, as discussed in the FPP (Appendix N). It is also possible that construction schedules for other projects, should they be approved, would overlap with the Proposed Project's construction schedule. As described above, Proposed Project construction and operation introduces potential ignition sources and additional electrical equipment that does not currently exist on the Project site. Equipment on the Project Site that may be ignition sources during the Proposed Project's construction, operation and decommissioning represents a risk of sparking or igniting nearby fuels, particularly with off-site flammable vegetation and during high wind conditions. Therefore, the Proposed Project, in combination with cumulative projects, **would result in a cumulatively considerable impact to wildfire risk** (**Impact WF-CU-2**).

Infrastructure Contribution to Increased Wildfire Risk

While several of the Proposed Project's components (such as access, fuel breaks, and emergency water sources) have been designed to minimize wildfire risk or contribute to reducing wildfire risk, the Proposed Project would place new electrical equipment and infrastructure in a high wildfire risk location. The Proposed Project and other potential projects occurring in the area, may have a cumulative impact on the ability of local agencies to protect neighboring residents and structures from wildfires. These facilities and other development in the study area would increase the population and/or facilities and ignition sources in the Jacumba area, which may increase the chances of a wildfire and increase the number of people and structures exposed to risk of loss, injury, or death. The Proposed Project along with other solar and/or wind projects in the greater Jacumba region represent an increase in potential service demand along with challenges regarding rescue or firefighting within or adjacent to electrical facilities. Therefore, the installation of Proposed Project infrastructure, in combination with cumulative projects, **would result in a cumulatively considerable impact associated with wildfire risk** (**Impact WF-CU-3**).

Post-Fire Impacts

The Proposed Project would not expose people or structures to significant risks due to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The Proposed Project does not include any structures that would be permanently occupied. The Proposed Project would not be located in area at risk of landslides. Therefore, the Proposed Project **would not result in a cumulatively considerable impact** associated with post-fire impacts.

2.12.5 Significance of Impact Prior to Mitigation

While the Proposed Project has been designed to minimize the risk of fire hazards to the extent feasible and will have minimal occupation during operation, the Proposed Project does propose

new electrical equipment that could exacerbate wildfire risks and thereby expose Proposed Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, the Proposed Project's operational-related impacts would be **potentially significant (Impact WF-1)** and mitigation would be required.

Impacts to wildfire risks exposing Proposed Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire during construction and decommissioning of the Proposed Project would be **potentially significant (Impact WF-2)** and mitigation would be required**.**

The Proposed Project's operation and maintenance would increase the amount of electrical infrastructure on a site that is in a high wildfire risk location; therefore, the installation of the Proposed Project infrastructure would result in a **potentially significant impact (Impact WF-3)** to wildfire risk and mitigation would be required.

The Proposed Project, in combination with cumulative projects, **would result in a cumulatively considerable impact** to an adopted emergency response and emergency evacuation plan (**Impact WF-CU-1).**

The Proposed Project, in combination with cumulative projects, would result in a **cumulatively considerable impact to wildfire risk (Impact WF-CU-2**).

Therefore, the installation of Proposed Project infrastructure, in combination with cumulative projects, **would result in a cumulatively considerable impact associated with wildfire risk** (**Impact WF-CU-3**).

Post fire impacts would be **less than significant**.

2.12.6 Mitigation Measures

M-WF-1 Fire Protection Plan

Fire Protection Measures

The Project's Fire Protection Plan (FPP) provides customized measures that address the identified potential fire hazards on the site. The measures are independently established but will work together to result in reduced fire threat and heightened fire protection. The following measures identified in Section 7 of the FPP will be implemented:

- Fuel Modification throughout the solar facility site from boundaries inward, including beneath PV modules, around the collector substation and adjacent

switchyard, with restrictions on plant species, heights, densities, and locations (Required measure).

- Provide a technical report indicating special precautions for firefighting response (included as Appendix G of the FPP) (Code-exceeding measure).
- Minimum 20-foot interior on-site inverter fore access driveways and a minimum improved 24-foot wide perimeter on-site driveways would be constructed (Required measure).
- Participation in a County Fire Protection and Mitigation Agreement, for funding firefighting and emergency medical resources of which the details will be determined in the Project Fire Protection and Mitigation Agreement (Required measure).
- Project funded annual fuel modification inspections to ensure compliance with this FPP (Code-exceeding requirement).
- Motion sensor illuminated (and/or reflective) signage at main entrance with inverter and electrical grid disconnect and isolation information and identification (Required measure).
- Training program for local fire agencies on the deenergizing process that is controlled by the California Independent System Operator (CAISO), as described in Section 5.2.3 of the FPP. (Required measure).
- Training program for local fire agencies including preparation of a technical training video with County input and customized for this facility that can be easily viewed by new firefighters who rotate through the local fire stations (Code-exceeding measure).
- Preparation of a construction fire prevention plan (CFPP) for this project to be implemented by all contractors working on this project (CFPP included as Appendix A of the FPP) (Code-exceeding measure).
- Portable carbon dioxide (CO2) fire extinguishers mounted at the inverters and medium voltage transformer units.
- Six (6) 10,000-gallon water tanks dedicated for firefighting purposes; one tank will be provided at each driveway entrance to the solar panel areas as defined by geographic isolation from other sections and one tank will be provided near the substation (Required measure).
- System contact information with local fire agencies/stations to assist responding firefighters during an emergency (Required measure).

- Committed on-going maintenance of all facility components for the life of the project (Required measure).
- Maintenance logs to be kept and made available upon request to SDCFA/CAL FIRE (Required measure).
- Consistent placarding and labeling of all components for fire safety/response (Required measure).

Defensible Space and Fuel Modification

The Project would provide defensible space by setting back all PV modules a minimum 30-feet from the solar facility's perimeter fence and modifying the fuels on-site by removing and grading them to a height of 6 inches, or, in the case of perimeter areas, drivable surfaces and vegetation free areas. The perimeter Fuel Modification Zone (FMZ) buffer will include at least 30 feet of modified fuels and will include the 30-foot wide perimeter fire access road, and cleared, contiguous modified fuel areas from the perimeter fence to the outermost panel racks. This area seamlessly meets the modified fuel areas that occur throughout the site where fuels are maintained at a 6-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the project collector substation pad area and 100 feet surrounding the adjacent switchyard.

The entire solar facility site would include modified fuels with fire access roadways and service roads compartmentalizing the low-growing (less than 6-inch) maintained areas beneath all PV modules, surrounding the collector substation pad area, and surrounding the adjacent switchyard.

Fuel modification requirements are detailed in the Project FPP.

M-WF-2 Construction Fire Protection Plan

Risk Reduction Measures

Risk Reduction Measures as identified in the Project Construction Fire Protection Plan (included as Appendix A to the Fire Protection Plan) will be implemented, as appropriate, during the construction phase of the Project to reduce the risk of ignitions. These measures will be enforced through the Site Safety Officer (SSO) and ongoing worker safety training:

- Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. This shall include all contractors and subcontractors if more than one.

- All internal combustion engines used at the Project site shall be equipped with spark arrestors that are in good working order.
- Once initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- The Project will be equipped with at least one and up to two water trucks each of 4,000- gallon capacity. Each truck will be equipped with 50 feet of 0.25-inch fast response hose with fog nozzles. Any hose size greater than 1.5 inches shall use National Hose (NH) couplings.
- During construction, the project site will have at a minimum two pick-up trucks outfitted with Type-6 Skid-Mounted Units, including fire pump, hose, and nozzle, that are staffed with personnel properly trained to use the equipment.
- A cache of shovels, McLeods, and Pulaskis shall be available at staging sites. The amount of equipment will be determined by consultation between SSO and SDCFA/CAL FIRE. Additionally, on-site pickup trucks will be equipped with first aid kits, fire extinguishers, and shovels. Contractor vehicles will be required to include the same basic equipment.
- Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials and provided with a gravel surface.
- A fire watch (i.e., person responsible for monitoring for ignitions) shall be provided during hot work and shall occur for up to one hour following completion of the hot work activities.
- Smoking will not be permitted on the site.
- Each Project construction site, if construction occurs simultaneously at various locations on the site, shall be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires.
- The on-site contractor or Project staff shall coordinate with SDCFA/CAL FIRE to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site.
- All on-site employees shall participate in fire prevention and response training exercises with the SDCFA/CAL FIRE.
- The Project shall implement ongoing fire patrols during the fire season as defined by local and state agencies. The SSO will be assigned as fire patrol to monitor work activities when an activity risk exists for fire compliance. The SSO shall verify

proper tools and equipment are on site, assess any fire agency work restrictions, and serve as a lookout for fire starts, including staying behind (e.g., a fire watch) to make certain no residual fire exists. Fire watch may be performed by any site personnel. A SSO shall perform routine patrols of the Project site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project staff shall notify SDCFA/CAL FIRE of the name and contact information of the current SSO in the event of any change.

- Fires ignited on site shall be immediately reported via SDCFA and CAL FIRE.
- The engineering, procurement, and construction contracts for the Project shall clearly state the fire safety requirements that are the responsibility of any person who enters the site, as described in this CFPP.

Daily Fire Prevention Measures

To limit the risk of fires, all site staff, employees, and contractors shall take the following precautions during Project construction:

- Fire safety shall be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis.
- Smoking will not be permitted in the project site. Combustible materials shall be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation.
- Evacuation routes shall be maintained and free of obstructions. Unavoidable evacuation route blockages shall be coordinated such that a secondary route is identified and available.
- Disposal of combustible waste in accordance with all applicable laws and regulations shall be required.
- Use and storage of flammable materials in areas away from ignition sources shall be required.
- Proper storage of chemicals such that incompatible (i.e., chemically reactive) substances would be separated appropriately shall be required.
- Performance of hot work (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch shall be required. Fire watch may be any site personnel who would watch for accidental ignitions. Hot work permits are required and shall be reviewed and granted by the SSO for all hot work.

- Equipment shall be kept in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease.
- Ensuring that heating units are safeguarded shall be required.
- Immediate reporting of fuel or petroleum leaks. The site mechanic shall ensure that leaks are repaired immediately upon notification.
- Immediate repair and cleanup of flammable liquid leaks shall be required.
- Construction work areas shall be kept free of combustible materials.
- Extension cords shall not be relied on if wiring improvements are needed, and overloading of circuits with multiple pieces of equipment shall be prohibited.
- Turning off and unplugging electrical equipment when not in use.

Red Flag Warning Protocol

Red Flag Warnings are issued by the National Weather Service and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. To ensure compliance with Red Flag Warnings restrictions, the National Weather Service website shall be monitored at the site (http://www.srh.noaa.gov/ridge2/fire/briefing.php). During Red Flag Warnings, construction activities shall be limited and precautions may be taken onsite during periods of a Red Flag Warning, when conditions such as low humidity and high winds are present. Upon announcement of a Red Flag Warning, red flags shall be prominently displayed at the entrance gate and main office, indicating to employees and contractors that restrictions are in place. Additionally, any hot work, grading, or other work that could result in heat, flame, sparks, or may cause an ignition to vegetation shall be limited to low fire hazard, non-hot work, unless within an ignition resistant structure until the Red Flag Warning has been lifted. Areas may be evacuated where personnel may be exposed to higher risks. If vehicles are required to be used during Red Flag Warning conditions, vehicles shall remain only on designated access roads on the site.

M-WF-3 Fire Protection and Mitigation Agreement

As a condition to providing service and pursuant to the Safety Element of the General Plan, the applicant shall enter into a Fire Protection and Mitigation Agreement with the San Diego County Fire Authority prior to approval of a Major Use Permit to make a fair share contribution toward local emergency response capabilities. The funding shall be used by the SDCFA to mitigate risks of wildfires

and to enhance fire suppression and emergency services capabilities for the Proposed Project and the southeast portion of CSA 135.

2.12.7 Conclusion

This section provides a synopsis of the conclusions reached in each of the impact analyses, and the level of impact that would occur after mitigation measures are implemented.

Emergency Response/Evacuation Plans

As presented in Section 2.12.3.1, Emergency Response/Evacuation Plans, the Proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The Proposed Project would meet the emergency response objectives identified in the County General Plan and would not impair an adopted emergency evacuation plan in the Jacumba area. For the reasons stated above, impacts to an adopted emergency response plan or evacuation plan would be **less than significant.**

Wildfire Risk

As presented in Section 2.12.3.2, anticipated impacts to wildfire risk during Proposed Project operations (**Impact WF-1**) would be potentially significant. With the implementation of **M-WF-1** (Fire Protection Plan) and **M-WF-3** (Fire Protection and Mitigation Agreement), as discussed further below, potential impacts to operational wildfire risk would be **less than significant**.

The FPP would ensure compliance with applicable fire codes and wildfire-related regulations and provides fire protection measures to minimize fire risk. Further, a Technical Report for Fire Personnel has been developed and is included as Appendix G of the FPP (Appendix N). This Report provides information about the Proposed Project such that responding fire agency personnel and other first responders have an understanding of potential hazards associated with PV solar facility. The Technical Report provides basic facility information for responding personnel so that they understand the potential site risks and what strategies, tools and equipment, and precautions are required for safely responding to emergencies.

The Proposed Project developer will be required to participate in a Fire Protection and Mitigation Agreement with San Diego County/SDCFA. The Fire Protection and Mitigation Agreement ensures funding for firefighting and emergency resources to comply with General Plan Safety Element Policy S-6.3 for new development, which requires development projects to contribute fair-share funding toward fire services. Funding provided by projects result in capital that can be used toward firefighting and emergency response improvements so that the County's firefighting agencies are able to perform their mission into the future at levels consistent with the General Plan.

Anticipated impacts during construction and decommissioning of the Proposed Project would be potentially significant (**Impact WF-2**). Implementation of mitigation measure **M-WF-2** (CFPP) would reduce this impact to **less than significant**. The CFPP is included as Appendix A of the FPP (Appendix N). The specific risk reduction measures and daily fire prevention measures to be implemented during construction are listed in **M-WF-2**.

Infrastructure Contribution to Increased Wildfire Risk

As presented in Section 2.12.3.3, Infrastructure Contribution to Increased Wildfire Risk, anticipated impacts to wildfire risk associated with Proposed Project-related infrastructure would be potentially significant (**Impact WF-3**). With implementation of mitigation measures **M-WF-1** (FPP) and **M-WF-3** (Fire Protection and Mitigation Agreement), the impact would be **less than significant**.

Post-Fire Impacts

As presented in Section 2.12.3.4, Post-Fire Impacts, anticipated impacts associated with post-fire erosion, flooding, or landslides would be **less than significant**.

Cumulative Impacts

Emergency Response and Emergency Evacuation

As discussed in Section 2.12.4 above, Cumulative Impact Analysis, the Proposed Project, in combination with other cumulative projects, would have a cumulatively considerable impact related to emergency response and emergency evacuation (**Impact WF-CU-1**). With implementation of mitigation measures **M-WF-1** (FPP), **M-WF-2** (CFPP) and **M-WF-3** (Fire Protection and Mitigation Agreement), the Project would result in a **less than significant cumulative impact.**

Wildfire Risk

As presented in Section 2.12.4 above, the Proposed Project, in combination with cumulative projects, would result in a cumulatively considerable impact to wildfire risk (**Impact WF-CU-2**). With implementation of mitigation measures **M-WF-1** (FPP), **M-WF-2** (CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement), the Proposed Project would result in a **less than significant cumulative impact.**

Infrastructure Contribution to Increased Wildfire Risk

As presented in Section 2.12.4, the installation of Proposed Project infrastructure, in combination with cumulative projects, would result in a cumulatively considerable impact associated with

wildfire risk (**Impact WF-CU-3**). With implementation of mitigation measures **M-WF-1** (FPP), **M-WF-2** (CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement), the Proposed Project would result in a **less than significant cumulative impact.**

Post-Fire Impacts

As presented in Section 2.12.3.4, Post-Fire Impacts, anticipated impacts associated with post-fire erosion, flooding, or landslides would **not result in a cumulatively considerable impact**.

Table 2.12-1
Historic Fires within 3 Miles of the Project Site

Fire Year	Fire Name	Total Area Burned (acres)
1941	Unnamed fire	94
1971	Unnamed fire	22
1972	Unnamed fire	676
1980	In-Ko-Pah Fire	25
1982	Tule Fire	4,645
1983	Carrizo Fire	665
2003	Range Fire	29
2003	Jewell Fire	42
2005	Railroad Fire	38
2006	Gunn 2 Fire	7
2008	Carrizo Fire	47
2008	Carrizo Fire	12
2012	Border 6 Fire	62
2012	Border 12 Fire	121
2013	Border Fire	62
2014	Jacumba Fire	27

Source: Cal Fire 2017

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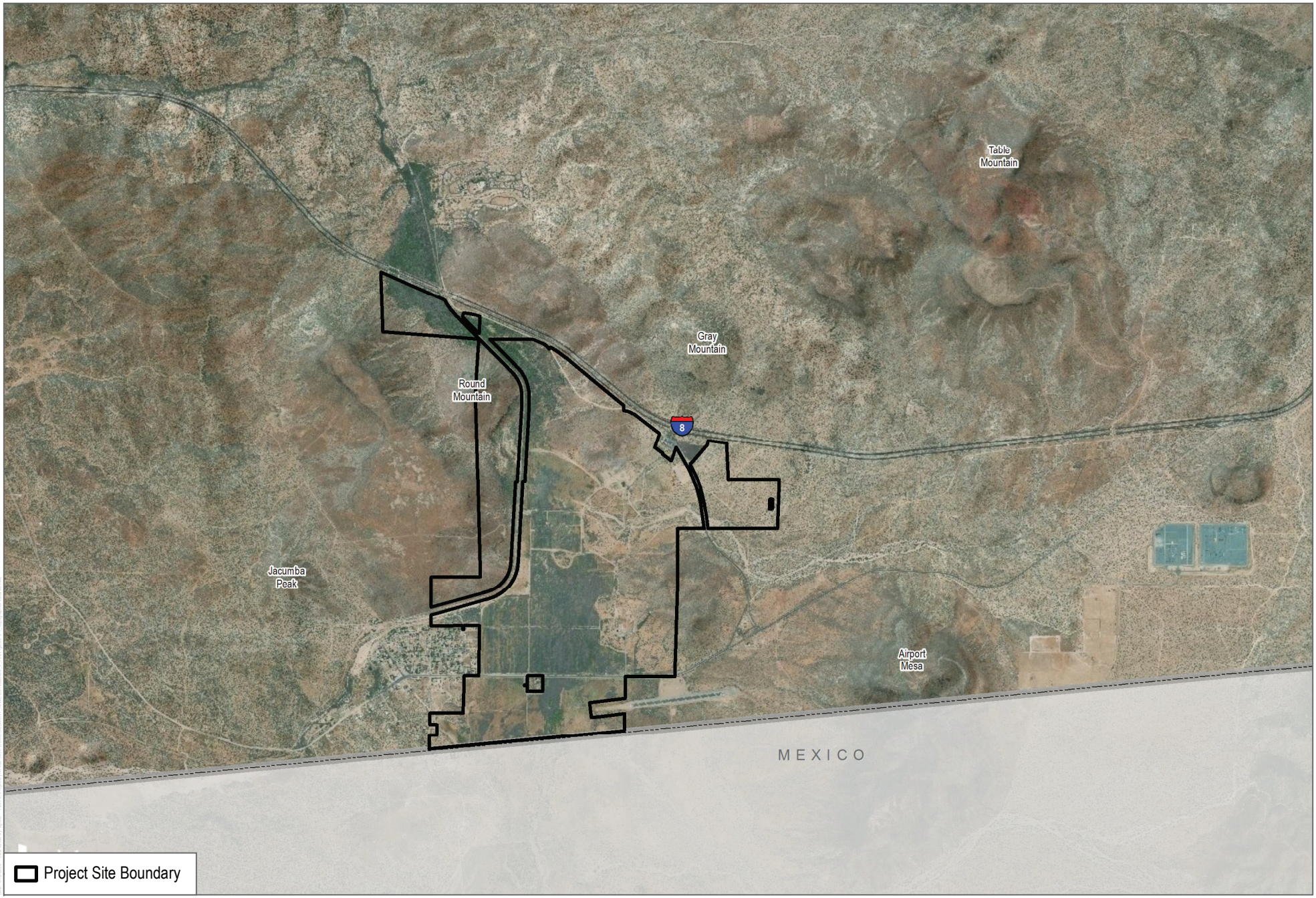

SOURCE: SANGIS 202020; Bing Maps

DUDEK

0 2,000 4,000 Feet

FIGURE 2.12-1

Topographic Features in the Proposed Project Area

JVR Energy Park Project EIR

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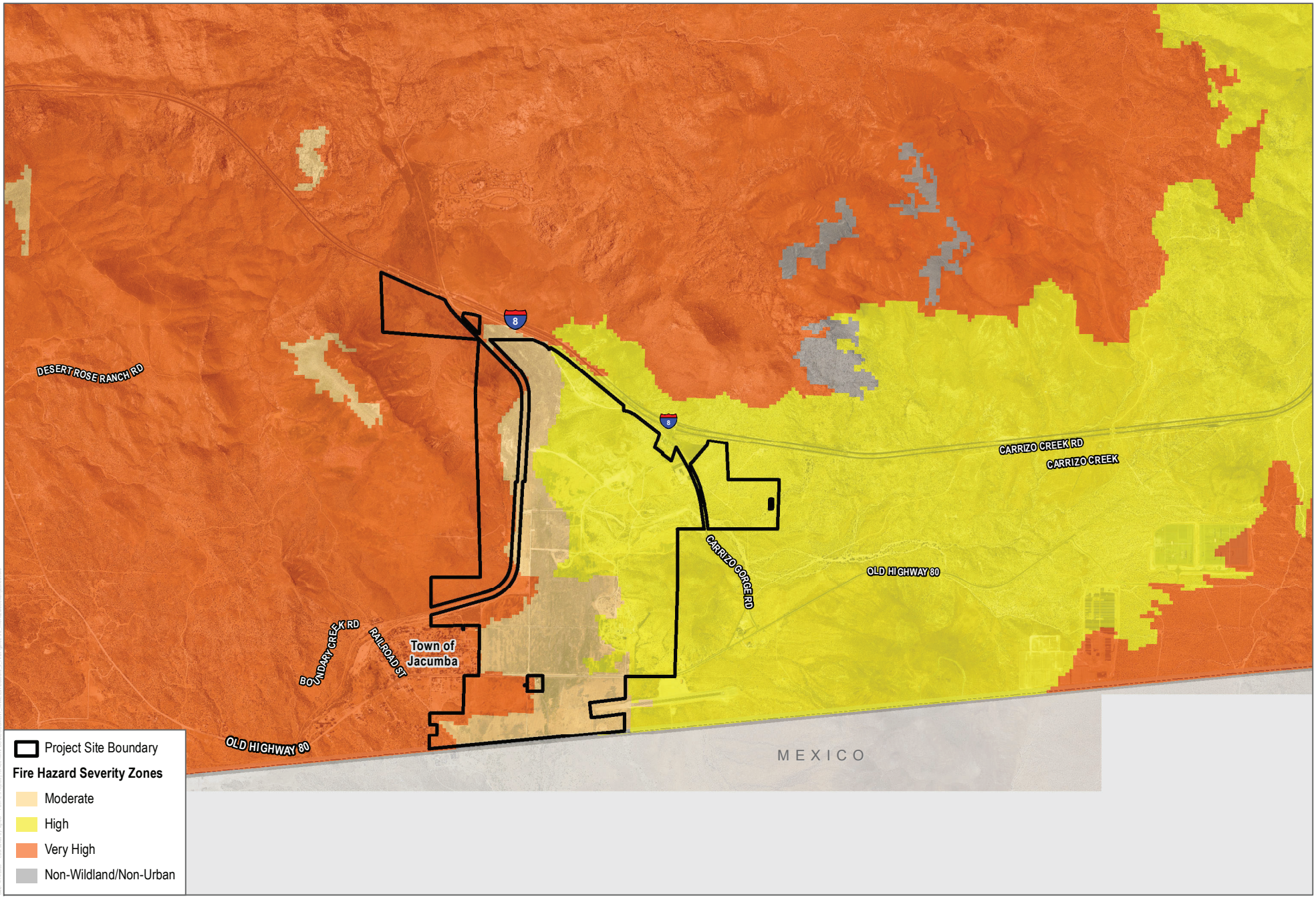

SOURCE: CALFIRE 2019; SANGIS 2017, 2020

DUDEK

0 2,000 4,000 Feet

FIGURE 2.12-2

Fire Hazard Severity Zones in Proposed Project Area

JVR Energy Park Project EIR

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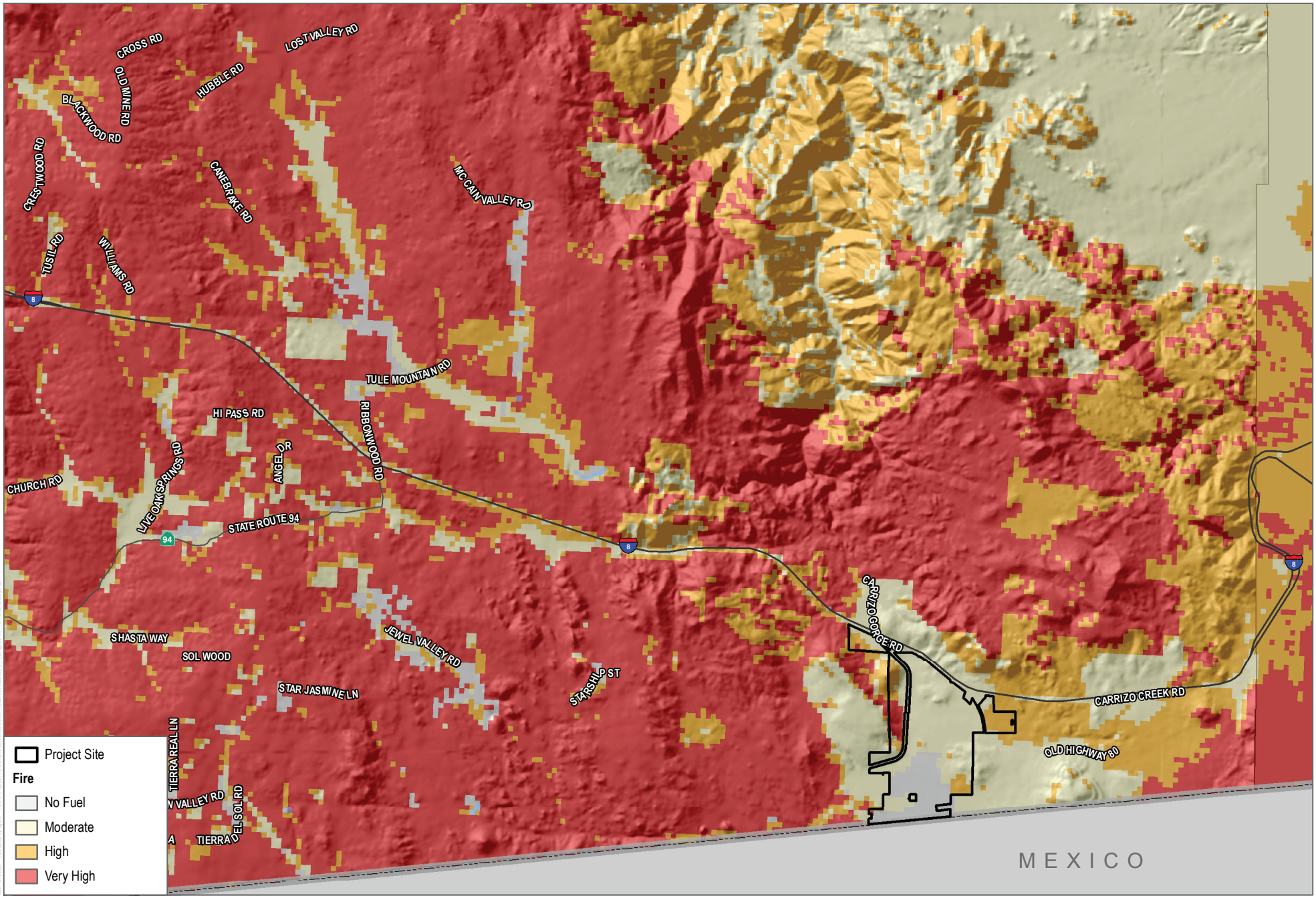

SOURCE: CALFIRE 2019; SANGIS 2017, 2020

DUDEK

0 1 2 Miles

FIGURE 2.12-3

Fire Threat Ranking in Proposed Project Area

JVR Energy Park Project EIR

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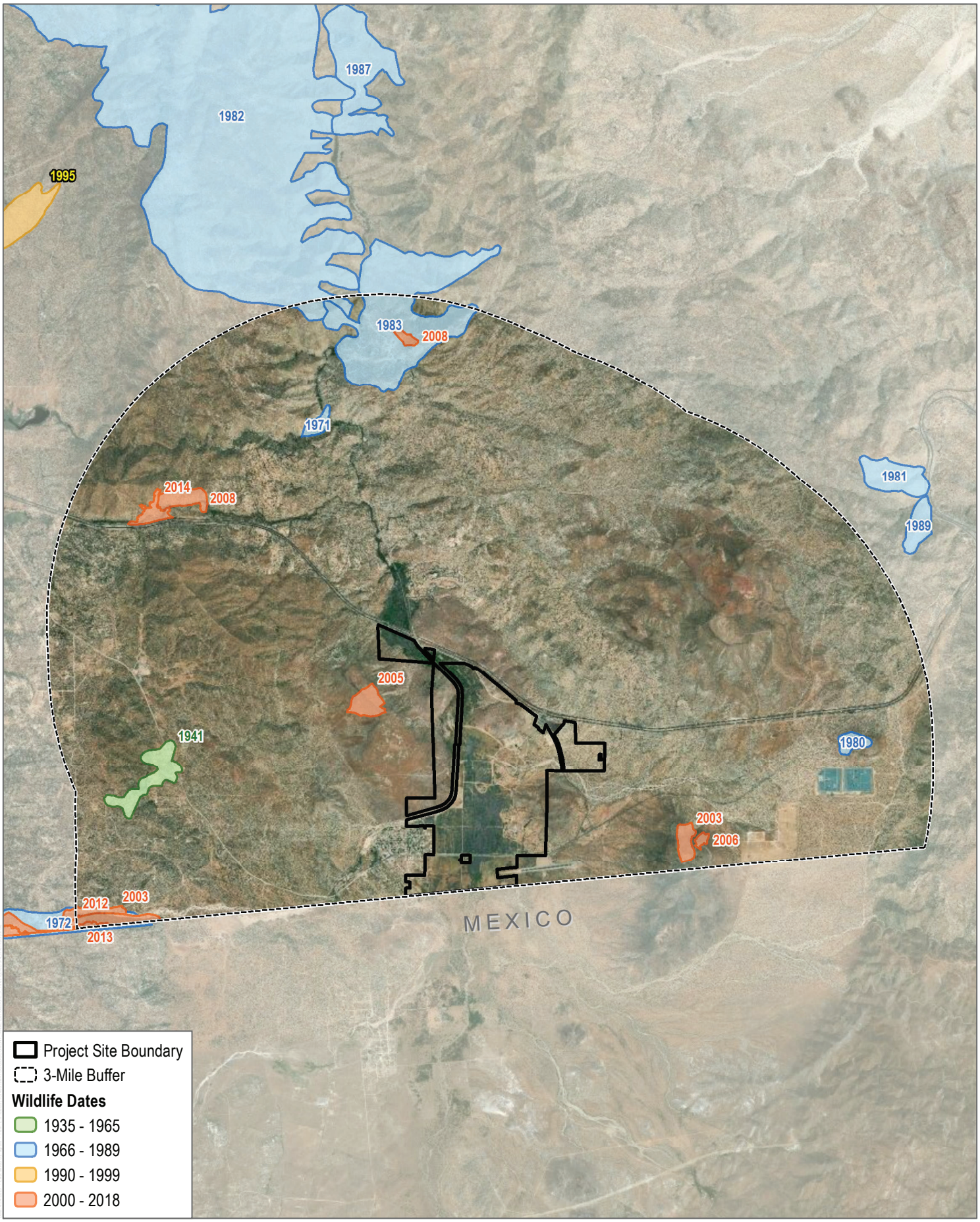

SOURCE: CalFire 2017; Bing Maps

DUDEK

0 1 2 Miles

FIGURE 2.12-4

Fire History Map

JVR Energy Park Project EIR

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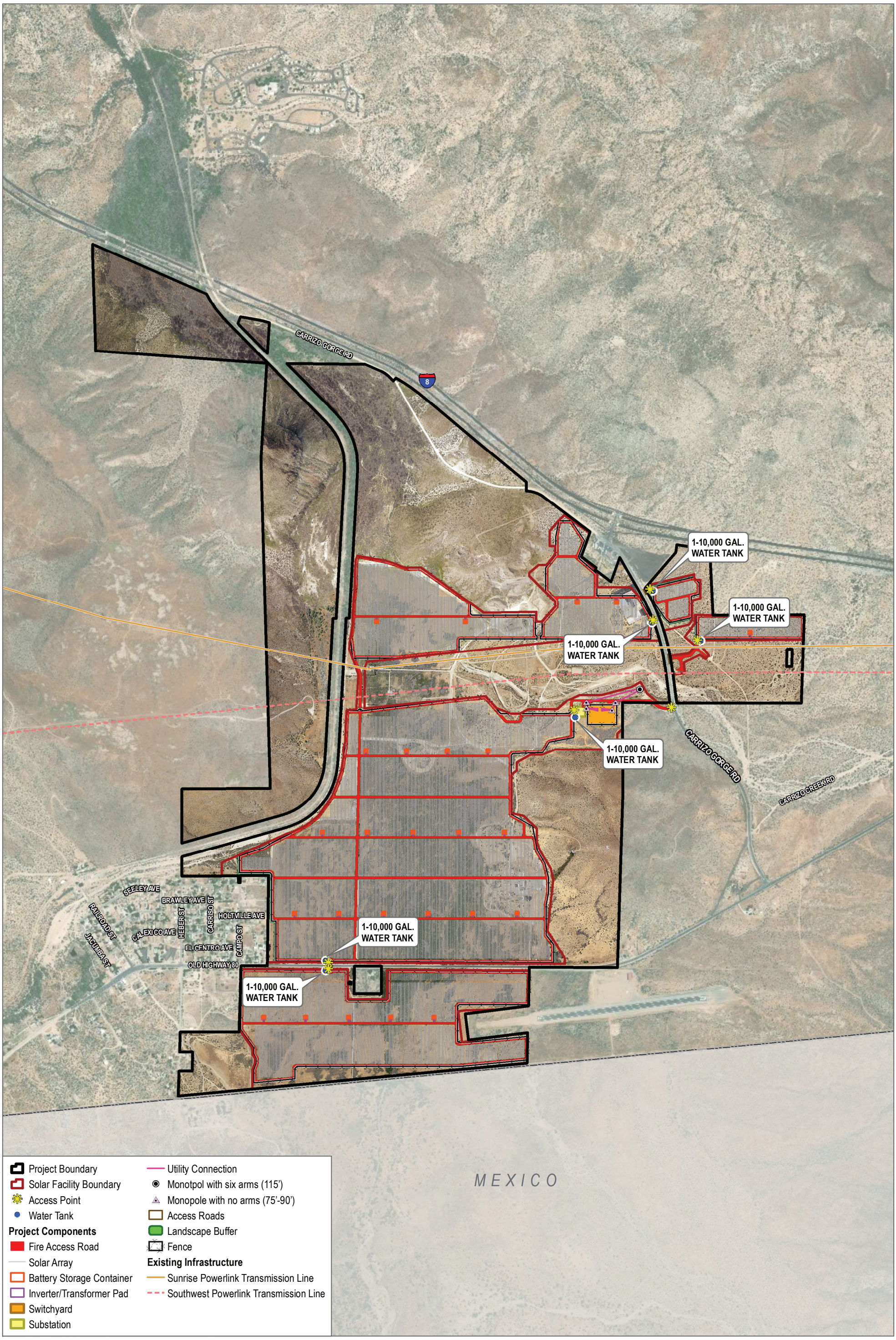

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 2.12-5

Fire Response Access and Water Tank Locations Plan

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CHAPTER 3 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

3.1 Effects Found Not Significant as Part of the EIR Process

According to the California Environmental Quality Act (CEQA) Guidelines, an environmental impact report (EIR) shall focus on the significant effects on the environment (14 CCR 15143). An EIR shall therefore contain a statement indicating the reasons various possible significant effects were not found significant and not discussed in detail (14 CCR 15128). This section of the EIR provides discussions of those effects that were identified as potentially significant during the Initial Study and process but were concluded not to be significant after further analysis. For the purpose of this EIR, the County of San Diego's (County) Guidelines of Determination of Significance apply to both the direct/indirect impacts analysis and the cumulative impact analysis, where applicable. Where the County's Guidelines for Determining Significance do not address the effects considered, Appendix G of the CEQA Guidelines has been used as the basis for this analysis.

The following environmental areas were found to be not significant during the EIR process:

- Agriculture (Section 3.1.1)
- Energy (Section 3.1.2)
- Greenhouse Gas Emissions (Section 3.1.3)
- Land Use and Planning (Section 3.1.4)
- Parks and Recreation (Section 3.1.5)
- Public Services (Section 3.1.6)
- Transportation (Section 3.1.7)
- Utilities and Service Systems (Section 3.1.8)

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3.1.1 Agricultural Resources

This section evaluates impacts to agricultural resources of the Project site and vicinity that could result from implementation of the proposed JVR Energy Park Project (Proposed Project). The analysis focuses on resultant effects to Prime Farmland, Unique Farmland, or Farmland Of Statewide Importance; conflicts with existing zoning for agricultural use, forestland, or a Williamson Act Contract; and loss or conversion of forest land as generated by the Proposed Project.

Information contained in this section is based on the following technical documentation:

- Agricultural Resources Report for the JVR Energy Park Project (Appendix O)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding eliminating agricultural lands due to soil degradation. This concern is addressed in the Agricultural Resources Report and this section of the Environmental Impact Report (EIR). A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

3.1.1.1 Existing Conditions

This section summarizes the existing agricultural resources within the Project area; identifies the resources that could be affected by the Proposed Project; and summarizes the indicators used to assess soil quality, including land use classifications, Stories Index ratings, and farmland mapping and monitoring designations. This section also discusses the agricultural setting and land use designation for the Project site.

This section presents agricultural data and analysis that is based on the information provided in the Land Use Element and the Conservation and Open Space Element of the 2011 San Diego County General Plan (County of San Diego 2011a, 2011b), the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Agricultural Resources (County of San Diego 2015), the County of San Diego Crop Statistics and Annual Report (County of San Diego 2017), and the Mountain Empire Subregional Plan (County of San Diego 2016).

Regional Overview

San Diego County has the fourth highest number of farms of any county in the country, and the third highest number of farms of any county in California. Agriculture is the fifth largest component of the County of San Diego's (County) economy, and provides an array of economic, environmental, and social benefits for the County (County of San Diego 2011b). Agriculture in the County is dependent on the region's unusual microclimates and often has very little relationship to the quality of the soil. Much of the County's climate supports a year-round growing

season that facilitates successful small farms and crop diversification that produces more than 200 agricultural commodities, including high-value specialty crops, nursery products, and fruits (County of San Diego 2011b). In 2017, the value of commercial agriculture in the County rose 1.7% from 2016, largely driven by a 16% increase in the value of vegetable and vine crop products produced. Total production of agriculture in the County was estimated at more than $1.7 trillion and uses approximately 243,029 acres of land in the region (County of San Diego 2017). The highest acreages are for nursery and cut flower products (12,356 acres), fruit and nuts (33,174 acres), and vegetables (3,545 acres) (County of San Diego 2017).

The Project site is located entirely within the Jacumba Subregional Group Area of the Mountain Empire Subregional Plan area. The Mountain Empire Subregional Plan includes goals and policies. The Jacumba Subregional Planning Area has an adopted vision statement (County of San Diego 2011b).

The Mountain Empire Subregional Plan supplements the existing elements of the County General Plan and provides a basis for regulation for this specific unincorporated area. The subregion is rural, but the topography, lack of easily accessible water, and poor soil quality offer little opportunity for instituting any large-scale agricultural operations. However, the Mountain Empire Subregional Plan determined a possible benefit of promoting agricultural uses in the subregion, specifically in Tecate (County of San Diego 2016).

Project Site

The Project site is entirely on private land in the southeastern unincorporated County, immediately east of the community of Jacumba Hot Springs. The Project site is adjacent to residences within the community of Jacumba Hot Springs to the west, but is largely surrounded by undeveloped land. Land ownership surrounding the Project site consists of a mixture of private and public lands. The Project site includes right-of-way easements for Old Highway 80, San Diego Gas & Electric, and the San Diego and Arizona Eastern Railway.

The existing Regional Category for the 1,356-acre Project site is Village, except for an approximately 38-acre parcel in the easternmost portion of the site that is designated as Rural. The General Plan land use designation for most of the Project site is Specific Plan Area (SPA); one parcel is designated as Rural Lands 40 (RL-40) and another parcel is Village Residential (VR-2). Portions of the parcel on the west side of the Project site are designated Public Agency Lands and Rural Lands 80 (RL-80). Zoning for most of the Project site is Specific Plan (S-88). One parcel in the easternmost portion of the site is zoned General Rural (S-92). Parcels in the vicinity of the Jacumba Airport are zoned Open Space, Specific Plan (S-88), and one very small parcel within the village area is zoned Rural Residential (RR) (County of San Diego 2011a).

Historical and Current Agricultural Use

Historical

Historically, the Project site has been used for dairy and agricultural operations. A Historical Resources Technical Report (Appendix D to the Cultural Resources Report (Appendix E)) includes information regarding the history of the Project site. In addition, historical aerial photographs dated 1954, 1980, 1989, 1996, 2002, 2005, 2009, 2010, 2012, 2014, and 2016 were reviewed as part of the Phase I Environmental Site Assessment (Appendix G) to assess the history of the Project site. Based on the aerial photograph review, the Project site was used as agricultural land from at least 1954 to before 1980, then again from at least 2002 through at least 2012; the land appeared to be fallow from 1980 until 2002 (Figure 3.1.1-1, Historical Agricultural Land). According to the Agricultural Resources Report (Appendix O), the Project site is composed of approximately 34% Department of Conservation Farmland Mapping and Monitoring Program (FMMP) Important Farmland: 35.3 acres of Farmland of Local Importance, 275 acres of Prime Farmland, 143.4 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland (Appendix O).

Current

As seen in Figure 3.1.1-2, Zone of Influence Important Farmland, portions of the Project site are designated under the state FMMP as "Farmland of Local Importance," "Farmland of Statewide Importance," "Prime Farmland," and "Unique Farmland." However, most of the Project site is "Other Land," which is defined as land that does not meet the criteria of any other FMMP category (California Department of Conservation 2010), and no farmland designations exist on those portions of the Project site. Common examples of land designated as "Other Land" include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confirmed livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres (California Department of Conservation 2017). Adjacent and nearby land uses include residential and commercial to the south west, commercial to the north, an airport to the southeast, and undeveloped land.

The Guidelines for Determining Significance and Report Format and Content Requirements – Agricultural Resources (County Guidelines) (County of San Diego 2015) requires that agricultural operations within 0.25 miles of a project site be identified, including lands under Williamson Act contracts, FMMP designations, agricultural preserves, or any active agricultural operations. The Proposed Project's surrounding parcels do not meet the criteria for any FMMP category; there are no Williamson Act Contract lands within 0.25 miles of the Project site, and no agricultural preserves exist within 0.25 miles of the Project site (Appendix O). An agricultural preserve is an area devoted to agricultural use, open space use, recreational use, or any combination of such uses, and compatible uses that are designated by the County. Agricultural preserves are established for

defining the boundaries of those areas where the County will be willing to enter into contracts pursuant to the Williamson Act. Landowners within a preserve may enter into a contract with the County to restrict their land to the uses stated above, whereby the assessment on their land will be based on its restricted use rather than on its market value.

Additionally, there are no active irrigated croplands or other crop production within the Proposed Project's zone of influence (ZOI[1]). Irrigated crop farming operations occurred historically on site, but based on current site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of any agricultural activities currently occurring on the Project site. Small ranch operations are scattered throughout the Project region.

Climate

Jacumba Hot Springs experiences warm summer months and cool winters. Average temperatures vary greatly within the region. Mean maximum temperatures in the summer months reach the high-80s to low-90s degrees Fahrenheit. Temperatures may fall below freezing in the winter, with snow levels occasionally below 2,500 feet (WRCC 2019).

There are two generally used climate rating systems that can be applied to a particular area to determine what plants and agricultural crops are appropriate for that area: the United States Department of Agriculture (USDA) Hardiness Rating and the Sunset Climate Zone, described below.

USDA Hardiness Rating. The Project site is in USDA Hardiness Zone 8b (USDA 2012). This zone is defined as having average minimum temperatures between 15°F and 20°F. Popular plants that tend to grow very well in Zone 8b include broccoli, cauliflower, cabbage, lettuce, spinach, peas, onions, potatoes, tomatoes, peppers, beans, and squash (National Gardening Association 2019).

Sunset Climate Zone. The County has assigned climate zones as a way of accounting for the variability of microclimate conditions and climate suitability throughout the County. The Project site is located within Climate Zone 13 on the County's Area Climates and Generalized Western Plant Climate Zones ("Sunset Zones") map (County of San Diego 2006). Zone 13 covers low-elevation desert areas (considered subtropical) and is the most extensive of the County's desert plant climate zones. Zone 13 includes the extensive agricultural uses in the Borrego Valley. Zone 13 is assigned a moderate rating due to the temperature extremes characteristic of this zone. These temperature extremes exclude some of the subtropical plants grown in Zones 22 to 24, but

[1] The zone of influence (ZOI) methodology is taken from the Department of Conservation's Land Evaluation Site Assessment (LESA) Model and includes a minimum area of 0.25 miles beyond project boundaries and includes the entire area of all parcels that intersect the 0.25-mile boundary. The ZOI developed by the Department of Conservation is the result of several iterations during development of the LESA Model for assessing an area that would generally be a representative sample of surrounding land use (County of San Diego 2015).

numerous subtropicals with high heat requirements thrive in this climate, such as dates, grapefruit, and beaumontia and thevetia (ornamentals) (County of San Diego 2006).

Water

There are five existing wells on the Project site. The Proposed Project would involve the use of existing on-site wells (Well #2 and Well #3) for groundwater supply. The Proposed Project is anticipated to require up to 112 acre-feet during construction (approximately 1 year), 10 acre-feet per year for ongoing operations and maintenance, and 50 acre-feet for decommissioning and dismantling of the solar facility. The current groundwater storage in the Jacumba Valley alluvial aquifer, including the portion of the alluvial aquifer located in Mexico, is conservatively estimated to be 9,005 acre-feet based on groundwater level data and updated interpreted depth to bedrock using additional well logs (see Appendix J).

Soil Quality

According to the USDA Natural Resources Conservation Service (USDA NRCS 2014), the Project site is composed of 12 soil types that fit under five general categories: Indio soils, Lost Posta soils, Ramona soils, Reiff soils, and Rositas soils (see Table 3.1.1-1, Soil Quality). The USDA Soil Survey report for the San Diego area classifies crop suitability for various soil types. Indio soils comprise 34.44% of the total on-site soil type and are used for irrigated cropland and livestock grazing. La Posta soils contain brown, slightly acidic and neutral, loamy coarse sand formed from weathered acidic igneous rock. Ramona soils comprise 2.22% of the total on-site soil type and are used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Reiff soils comprise 2.01% of the total on-site soil type, and Rositas soils comprise 5.36% of the total on-site soil type.

Slope

The viability of soil can be based on a number of factors, including the soil type's slope, which affects the soil's susceptibility to erosion. Indio soils are on alluvial fans, lacustrine basins, and flood plains, and have slopes of 0% to 3%. Reiff soils are on flood plains and alluvial fans, and slopes are 0% to 9%. La Posta soils range from 5% to 30% slopes. Rositas soils are on dunes and sand sheets; slope ranges from 0% to 30% with hummocky or dune micro relief.

3.1.1.2 Regulatory Setting

There are laws, regulations, policies, and programs that aim to protect, preserve, and promote agriculture. The following discussion details the most relevant regulations, policies, and programs that could be applicable to the Proposed Project and agricultural resources.

3.1.1.2.1 Federal Regulations

No federal regulations are applicable to the Proposed Project.

3.1.1.2.2 State Regulations

Department of Conservation Farmland Mapping and Monitoring Program

In response to the need to assess the location, quality, and quantity of agricultural lands and conversion of such lands over time, in 1982, the California Department of Conservation established the FMMP. The goal of the FMMP is to provide consistent and impartial data to decision makers to assess the suitability of agricultural lands in California. The FMMP categories are based on local soil characteristics and irrigation status, with the best-quality land identified as Prime Farmland or Farmland of Statewide Importance. Some soils in the County are listed as Candidate Soils for Prime Farmland or Statewide Importance, but these soils include a much broader range of soils than the Prime Agricultural Land definition in California Government Code Section 51201(c) (County of San Diego 2015). The FMMP classifies land into five mapping categories based on soil and climatic conditions: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. In addition, the FMMP identifies nonagricultural lands as either Urban and Built-Up Land or Other Land. Important Farmland Maps are updated every 2 years.

The FMMP identifies farmlands as follows (California Department of Conservation 2010):

- **Prime Farmland.** Prime Farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Unique Farmland consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but it may include nonirrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee. Based

on the County's Guidelines (County of San Diego 2015), the following lands are to be included in the "Farmland of Local Importance" category:

- All farmable lands within San Diego County that do not meet the definitions of Prime, Statewide, or Unique but are currently irrigated pasture or nonirrigated crops.
- Nonirrigated land with the soils qualifying for Prime Farmland or Farmland of Statewide Importance.
- Lands that would have Prime or Statewide designation and have been improved for irrigation but are now idle.
- Lands with a General Plan Land Use designation for agricultural purposes.
- Lands that are legislated to be used only for agricultural (farmland) purposes.

- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for Grazing Land is 40 acres.

Williamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act (Government Code Section 51200 et seq.), enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based on farming and open space uses as opposed to the full potential market value of the land. The goal of the Williamson Act program is to encourage preservation of agricultural land and prevent its premature conversion to urban uses.

3.1.1.2.3 Local

County of San Diego Board of Supervisors Policy I-38 – Agricultural Preserves

This policy establishes procedures for implementing Williamson Act contracts in the County and for establishing agricultural preserves. This County Board of Supervisors policy also outlines criteria for the establishment, modification, and de-establishment of an agricultural preserve. An agricultural preserve is an area devoted to agricultural use, open space use, recreational use, or any combination of such uses, and compatible uses that are designated by the County. Preserves are established for defining the boundaries of those areas where the County will be willing to enter into contracts pursuant to the Williamson Act. Landowners within a preserve may enter into a contract with the County to restrict their land to the uses stated above, whereby the assessment on their land will be based on its restricted use rather than on its market value. The Project site is not located on an agricultural preserve.

County of San Diego General Plan

Agricultural resources are covered in both the Land Use Element and the Conservation and Open Space Element of the County's General Plan. Each element is discussed below.

Land Use Element

Despite numerous constraints to agriculture in the County, such as high water and land costs, the County has a robust agricultural economy. Agriculture contributes to the character of the County, particularly in the Semi-Rural and Rural Lands regional categories, supplying County residents with local agricultural products and contributing significantly to the local economy. A goal of these regional land use categories is the preservation of local agriculture, which includes a diverse mix of high-value commodities and takes advantage of a long—in some cases year-round—growing season. Incompatibility of adjacent land uses can present a constraint to the viability of local agriculture. As residential and other potentially incompatible development occurs in traditionally agricultural areas, careful attention should be given to the compatibility of these nonagricultural uses and to site design techniques that would reduce or avoid potential conflicts. An applicable General Plan goal and policies are as follows (County of San Diego 2011a):

- **Policy LU-5.3, Rural Land Preservation**. Ensure the preservation of existing open space and rural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) when permitting development under the Rural and Semi-Rural Land Use Designations. (Open space and rural lands are primary areas that provide carbon sequestration benefits for the Region.)
- **Policy LU-6.4, Sustainable Subdivision Design**. Require that residential subdivisions be planned to conserve open space and natural resources, protect agricultural operations including grazing, increase fire safety and defensibility, reduce impervious footprints, use sustainable development practices, and, when appropriate, provide public amenities.
- **Goal LU-7, Agricultural Conservation**. A land use plan that retains and protects farming and agriculture as beneficial resources that contribute to the County's rural character.
    - **Policy LU-7.1, Agricultural Land Development**. Protect agricultural lands with lower-density land use designations that support continued agricultural operations.

Conservation and Open Space Element

The primary focus on the Conservation and Open Space Element is to provide direction to future growth and development in the County as it relates the utilization of natural and cultural resources, the protection and preservation of open space, and the provision of park and recreation resources

(County of San Diego 2011b). The following goal and policies in the Conservation and Open Space Element relate to the Proposed Project:

- **Goal COS-6, Sustainable Agricultural Industry**. A viable and long-term agricultural industry and sustainable agricultural land uses in the County of San Diego that serve as a beneficial resource and contributor to the County's rural character and open space network.
  - **Policy COS-6.2, Protection of Agricultural Operations**. Protect existing agricultural operations from encroachment of incompatible land uses by doing the following:
    - Limiting the ability of new development to take actions to limit existing agricultural uses by informing and educating new projects as to the potential impacts from agricultural operations
    - Encouraging new or expanded agricultural land uses to provide a buffer of non-intensive agriculture or other appropriate uses (e.g., landscape screening) between intensive uses and adjacent non-agricultural land uses
    - Allowing for agricultural uses in agricultural areas and designing development and lots in a manner that facilitates continued agricultural use within the development.
    - Requiring development to minimize potential conflicts with adjacent agricultural operations through the incorporation of adequate buffers, setbacks, and project design measures to protect surrounding agriculture
    - Supporting local and state right-to-farm regulations
    - Retain or facilitate large and contiguous agricultural operations by consolidation of development during the subdivision process.
    - Discourage development that is potentially incompatible with intensive agricultural uses, including schools and civic buildings where the public gather, daycare facilities under private institutional use, private institutional uses (e.g., private hospitals or rest homes), residential densities higher than two dwelling units per acre, and offices and retail commercial.
- **Policy COS-6.3, Compatibility with Recreation and Open Space**. Encourage siting recreational and open space uses and multi-use trails that are compatible with agriculture adjacent to the agricultural lands when planning for development adjacent to agricultural land uses.
  - Recreational and open space uses can serve as an effective buffer between agriculture and development that is potentially incompatible with agriculture uses.

Mountain Empire Subregional Plan

The Mountain Empire Subregional Plan contains goals and policies that outline growth management and resource preservation for the communities of Tecate, Potrero, Boulevard, and Jacumba. The following goal relates to agricultural resources (County of San Diego 2016):

- **Agricultural Goal:** Encourage the expansion and continuance of agricultural uses in the subregion.

County of San Diego Purchase of Agricultural Conservation Easement Program

The County has initiated an agricultural conservation program known as the Purchase of Agricultural Conservation Easement (PACE) Program. The "Mitigation Bank and Credits" are an expanded component of the PACE Program, approved by the Board of Supervisors in September 2014. With this expanded component, easement lands acquired by the County under the PACE Program can be used as off-site mitigation for agricultural impacts resulting from private development projects. Applicants may purchase PACE credits to mitigate for agricultural impacts at a 1:1 ratio. One credit is equal to 1 acre of agricultural land (County of San Diego 2014).

To purchase PACE mitigation credits, a project applicant must have an approved discretionary project with a condition of approval requiring agricultural mitigation (County of San Diego 2014). Since 2013, 24 properties covering approximately 1,760 agricultural acres have been preserved at an average cost of $2,859 (County of San Diego 2018). The cost of credits is determined by the fee in effect on the date of purchase. Credits, which are non-refundable and non-transferrable, can only be purchased after a project has been approved.

County of San Diego Local Agricultural Resources Assessment Model

In determining whether impacts to agricultural resources are significant, the California Environmental Quality Act (CEQA) Guidelines references the California Agricultural Land Evaluation and Site Assessment Model, prepared by the California Department of Conservation, as an optional methodology that may be used to assess the relative value of agriculture and farmland.

In the past, the Land Evaluation and Site Assessment Model has been applied to various agricultural properties throughout the County to assess agricultural importance in association with proposed discretionary land use permits. After several years of practical experience with application of the Land Evaluation and Site Assessment Model in San Diego County, the inadequacy of the model in capturing the unique and varied character of San Diego agriculture has become apparent.

The County approved a local methodology that is used to determine the importance of agricultural resources in the unincorporated areas of the County, known as the Local Agricultural Resources

Assessment (LARA) Model. The LARA Model takes into account the following factors to determine the importance of agricultural resources: three Required Factors (water, climate, and soil quality) and three Complementary Factors (surrounding land uses, land use consistency, and slope). The analysis provided in Section 3.1.1.3 provides descriptions of the Project site's rating for each LARA Model factor, including justification for the factor ratings assigned to the Project site. Each factor received a rating of high, moderate, or low importance based on site-specific information, as detailed in the LARA Model Instructions (County of San Diego 2015) (see Appendix A of Appendix O, LARA Model Instructions). The factor ratings for the Project site are summarized below. The final LARA Model result is based on the combination of factor ratings, in accordance with the County Guidelines (see Table 2, Interpretation of LARA Model Results, in County of San Diego 2015).

3.1.1.3 Analysis of Project Impacts and Determination as to Significance

Per the County's Agricultural Guidelines (County of San Diego 2015), an affirmative response to, or confirmation of, any one of the following guidelines will generally be considered a significant impact to agricultural resources with project implementation. Four categories of potential significant impacts could pertain to the Proposed Project: direct impacts to important on-site agricultural resources, indirect impacts to agricultural resources, conflicts with agricultural zoning or Williamson Act Contracts, and cumulative impacts to surrounding agricultural resources with Proposed Project implementation. Each of these potential impact categories is assessed in the following subsections, with the significance guidelines included in each subsection.

For the purposes of this analysis, the switchyard (as described in Chapter 1, Project Description, Location, and Environmental Setting) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, this EIR highlights the specific analysis of the operation of the switchyard under each threshold of significance in the event responsible agencies have CEQA obligations to the switchyard.

3.1.1.3.1 Definition of Impacts

This section defines the types of impacts considered to analyze the potential effects of the Proposed Project on agricultural resources. These impacts are discussed in more detail below.

Direct Impacts

Direct impacts occur when a project would adversely impact locally important agricultural soils on a site that is determined to be important pursuant to the County LARA Model. In San Diego County, important agricultural soils include not only soils with the USDA Land Capability Classification ratings of I and II, or Storie Index ratings of 80 or higher, but also soils of lesser quality as defined by the soil candidate listing for Prime Farmland and Farmland of Statewide

Importance compiled by the USDA Natural Resources Conservation Service for San Diego County. Agricultural resources may be considered locally important even though soil quality in San Diego County is generally low, with very few soils having the above-stated Land Capability Classification and Storie Index ratings that define Prime Agricultural Land.

When considering the significance of direct impacts, the focus of a CEQA analysis is on impacts to physical resources. In the case of agriculture, the physical resources include those areas of the site that contain soil of a sufficiently high quality to support crop production. The California Department of Conservation's FMMP categories are based on local soil characteristics and irrigation status, with the best quality land identified as Prime Farmland or Farmland of Statewide Importance. The FMMP soil criteria for Prime Farmland and Farmland of Statewide Importance are the measures used to define high-quality soil. This approach recognizes the market-driven nature of agriculture by focusing on the underlying physical resource in the analysis of impacts versus focusing on the actual agricultural commodity that may be produced at a site. By focusing on underlying physical resources, this approach recognizes that conversion of a particular agricultural use may not be a significant environmental impact if the agricultural use is not dependent on a valuable agricultural resource, such as good soil (County of San Diego 2015).

Indirect Impacts

Various project features can cause significant indirect impacts to agriculture. One example is the placement of public trails on agricultural lands. Trails on agricultural lands can result in increased trespassing, theft, and disease to crops. A project proposed near an active agricultural use also has the potential to cause significant indirect effects to agricultural resources because of the potential incompatibility between the proposed use and existing agricultural activities. Adverse impacts caused by incompatible development near agricultural uses include the following (County of San Diego 2015):

- Farm practice complaints
- Pesticide use limitations
- Liability concerns
- Economic instability caused by urbanization and changing land values
- Trespassing, theft, and vandalism
- Damage to equipment, crops, and livestock
- Crop and irrigation spraying limitations due to urban use encroachment
- Introduction of urban use pollutants entering farm water sources
- Competition for water
- Development affecting recharge of groundwater

- Soil erosion and stormwater runoff emanating from urban use
- Shading of crops from inappropriate buffering
- Importation of pests and weeds from urban areas or introduced pest populations from unmaintained landscaping
- Increased traffic
- Effects of nighttime lighting on growth patterns of greenhouse crops
- Interruption of cold air drainage

3.1.1.3.2 Direct Impacts to Important Agricultural Resources

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance and Report Format and Content Requirements – Agricultural Resources (County of San Diego 2015) was used to evaluate direct, indirect, and cumulative impacts of the Proposed Project. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

According to the County's Guidelines, significant impact to important on-site agricultural resources would result if (County of San Diego 2015):

> The project site has important agricultural resources as defined by the Local Agricultural Resources Assessment (LARA) Model; and the project would result in the conversion of agricultural resources that meet the soil quality criteria for Prime Farmland or Farmland of Statewide Importance, as defined by the FMMP; and as a result, the project would substantially impair the ongoing viability of the Project site for agricultural use.

Analysis

A portion of the Project site was historically farmed, but based on site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of current agricultural activity occurring on the Project site (see Appendix D of Appendix E).

Zoning for most of the Project site is Specific Plan (S-88). One parcel in the easternmost portion of the site is zoned General Rural (S-92). Parcels in the vicinity of the Jacumba Airport are zoned Specific Plan (S-88), and one very small parcel within the village area is zoned Rural Residential (RR).

As previously discussed, the LARA Model takes into account the following primary factors to determine the importance of agricultural resources: water, climate, and soil quality. In addition, the LARA Model takes into account the following three additional Complementary Factors:

surrounding land uses, land use consistency, and slope. The analysis of the Project site using the LARA Model is discussed below.

Primary LARA Model Factors

With regards to water, the Proposed Project's location in the Jacumba Valley alluvial aquifer, as well as the presence of existing wells, would imply that the water rating is moderate based on the County Guidelines (see Table 3, Water Rating, in County of San Diego 2015). Due to the location of the Project site outside of the County Water Authority Area, the presence of wells, and the location on an aquifer, the Proposed Project's water quality rating is moderate.

The Project site is located within Climate Zone 13 on the County's Area Climates and Generalized Western Plant Climate Zones ("Sunset Zones") map (County of San Diego 2006). According to Table 6 in the County Guidelines, Zone 13 is a "Moderate" LARA Model Rating (County of San Diego 2015). Zone 13 covers low-elevation desert areas (considered subtropical) and is the most extensive of the County's desert plant climate zones. Zone 13 includes the extensive agricultural uses in the Borrego Valley. Zone 13 is assigned a moderate rating due to the temperature extremes characteristic of this zone.

According to the Soil Quality Matrix Interpretation shown in Table 8 of the County Guidelines (County of San Diego 2015), the Project site has a soil quality rating of moderate importance, and approximately 600 acres is available for agricultural use (see Figure 3.1.1-3, Soils). The Proposed Project's LARA Model determined the soil agricultural viability rating to be moderate, since the Project site has a Soil Quality Matrix score of less than one-third, but the Project site has over 10 contiguous acres of Prime Farmland or Statewide Importance Soils (Appendix O). These soils on site have a Land Capability Classification ratings of I, IIe, IIIs, or IIIe. Class I contains soils having few limitations for cultivation, Class II contains soils having some limitations for cultivation, and Class III contains soils having severe limitations for cultivation. The main limitations are risk of erosion; interference of water with plant growth; and shallow, droughty, or stony soils. The soils found on site have a Storie Index rating ranging between Grade 1 (81–100, excellent quality) and Grade 4 (21–40, poor quality).

Complementary LARA Model Factors

In regard to surrounding land uses, the overall area of the ZOI is approximately 11,254 acres, of which the majority is composed of parcels greater than 2 acres containing elements of rural lifestyle. There are no existing agricultural preserves within the ZOI. More than 50% of the land within the ZOI is compatible with agriculture; therefore, the surrounding land use rating is considered "high."

In regard to land use consistency, the median parcel size within the Project site is approximately 22.1 acres (962,676 square feet), and the median parcel size within the Proposed Project ZOI is 0.2 acres (8,712 square feet) (refer to Appendix B of Appendix O for a list of the ZOI parcels and acreages). Therefore, since the Project site's median parcel size is larger than the Proposed Project ZOI's median parcel size by 10 acres or more, the Land Use Consistency Rating is "low."

The average slope for the area of the Project site that is available for agricultural use is 0% to 10% (see Figure 3.1.1-4, Slopes). Therefore, based on Table 11, Slope Rating, in the County Guidelines (County of San Diego 2015), the Project site would have a slope rating of "high" due to average slope being less than 15%.

LARA Model Result

Based on the LARA Model factor ratings, shown in Table 3.1.1-2, LARA Model Factor Ratings, the required factors of water, climate, and soil quality are rate "moderate." For the Complementary Factors, surrounding land uses and slope are rated "high," and land use consistency is rated "low." Therefore, as shown in Table 3.1.1-2 and Table 3.1.1-3, Interpretation of LARA Model Results, the Project site falls into Scenario 6, which means that the Project site is not considered an important agricultural resource.

Although the Proposed Project would impact approximately 600 acres of County-designated Candidate Soils for Prime Farmland or Farmland of Statewide Importance, as discussed above, the Project site has been determined not to be an important agricultural resource. Therefore, direct impacts to on-site agricultural resources would be **less than significant**.

Switchyard

The Proposed Project would include a 138-kilovolt switchyard located adjacent to the proposed collector substation. The size of the switchyard would be approximately 140,000 square feet.

The switchyard would be built on land designated under the state FMMP as "Other Land" (California Department of Conservation 2010), which does not meet the criteria of any other FMMP category (California Department of Conservation 2010), and no farmland designations exist on those portions of the Project site. Therefore, the switchyard would not be built on land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Therefore, there would be **no impact** as a result of the switchyard**.**

3.1.1.3.3 Indirect Impacts to Agricultural Resources

Guidelines for the Determination of Significance

For purposes of this EIR, the County's Guidelines for Determining Significance and Report Format and Content Guidelines – Agricultural Resources (County of San Diego 2015) applies to the direct and indirect impact analyses and the cumulative impact analysis.

A significant indirect impact to important off-site agricultural resources would result if:

- The project proposes a non-agricultural land use within one-quarter mile of an active agricultural operation[2] or land under a Williamson Act contract (Contract) and as a result of the project, land use conflicts between the agricultural operation or Contract land and the proposed project would likely occur and could result in conversion of agricultural resources to a non-agricultural use.
- The project proposes a school, church, day care or other use that involves a concentration of people at certain times within one mile of an agricultural operation or land under Williamson Act contract and as a result of the project, land use conflicts between the agricultural operation or Williamson Act contract land and the Proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use.
- The project would involve other changes to the existing environment, which due to their location or nature, could result in the conversion of off-site agricultural resources to a non-agricultural use or could adversely impact the viability of agriculture on land under a Williamson Act Contract.

Analysis

A proposed project near an active agricultural use has the potential to cause significant indirect impacts to agricultural resources because of the potential incompatibility between the proposed use and existing agricultural activities. Adverse impacts caused by incompatible development near agricultural uses include farm practice complaints; pesticide use limitations; liability concerns; economic instability caused by urbanization and changing land values; trespassing, theft, and

[2] The term "active agricultural operation" refers to the routine and ongoing commercial operations associated with a farm, grove, dairy, or other agricultural business, and includes the following: (a) the cultivation and tillage of soil; crop rotation; fallowing for agricultural purposes; the production, cultivation, growing, replanting and harvesting of any agricultural commodity including viticulture, vermiculture, apiculture, or horticulture; (b) the raising of livestock, fur bearing animals, fish or poultry, and dairying; (c) any practices performed by a farmer on a farm as incident to or in conjunction with those farming or grove operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market; and (d) ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management. All such activities must be consistent with the economics of commercial agricultural operations and other similar agricultural activities (County of San Diego 2011a).

vandalism; damage to equipment, crops, and livestock; crop and irrigation spraying limitations due to urban use encroachment; introduction of urban use pollutants entering farm water sources; competition for water; development affecting recharge of groundwater; soil erosion and stormwater runoff emanating from urban use; shading of crops from inappropriate buffering; importation of pests and weeds from urban areas or introduced pest populations from unmaintained landscaping; increased traffic; effects of nighttime lighting on growth patterns of greenhouse crops; and interruption of cold air drainage.

The closest active agricultural operations to the Project site are located approximately 25 miles to the east in Dixieland, California. The agricultural operations in Dixieland are composed primarily of irrigated row crops and dairy farms. There are no active agricultural operations within 0.25 miles of the Project site. There are also no areas under a Williamson Act Contract within 0.25 miles of the Project site. Therefore, the Proposed Project would not involve changes to the existing environment that, due to their location or nature, could indirectly result in the conversion of off-site agricultural resources to non-agricultural use, or could adversely impact the viability of agriculture on land under a Williamson Act Contract.

The Proposed Project does not propose a school, church, daycare, or other use that involves a heavy concentration of people at certain times of the day within 1 mile of an agricultural operation or land under a Williamson Act Contract.

The Project site is composed of approximately 1,356 acres within the ZOI of 11,254 acres (see Figure 3.1.1-2). As previously discussed, approximately 11,200.2 acres within the ZOI is composed of parcels greater than 2 acres and contains elements of rural lifestyle (see Appendix O). More than 50% of the land within the ZOI is compatible with agriculture; therefore, the surrounding land use rating is considered “high.” However, there are no agricultural preserves or Williamson Act lands in the ZOI, and no active agricultural production or operation exists within the ZOI. Thus, the Proposed Project would not obstruct, interrupt, or detract from potential agricultural operations within the ZOI or be detrimental to surrounding properties. Accordingly, the Proposed Project would not result in any additional pressure to convert nearby agricultural lands, due to the closest active agricultural lands being 25 miles east.

The Proposed Project would not involve other changes to the existing environment that, due to their location or nature, could result in the conversion of off-site agricultural resources to a non-agricultural use, or could adversely impact the viability of agriculture on land under contract. The Proposed Project would not require the extension of water or sewer infrastructure that could potentially induce urban growth in the ZOI.

In conclusion, due to the lack of surrounding off-site agricultural resources and operations, impacts to off-site agricultural resources is unlikely. The Project site is located approximately 25 miles from the closest active agricultural operation. Off-site agricultural impacts would be **less than significant**.

Switchyard

The switchyard would be built on land designated under the state FMMP as "Other Land" (California Department of Conservation 2010). The switchyard would not obstruct, interrupt, or detract from existing agricultural operations within the ZOI; would not be located within 0.25 miles of an active agricultural operation or land under a Williamson Contract; and would not be detrimental to surrounding agricultural properties. Therefore, impacts as a result of the switchyard to off-site agricultural impacts would be **less than significant.**

Conflicts with Agricultural Zoning and Williamson Act Contracts

Guidelines for the Determination of Significance

For purposes of this EIR, the County's Guidelines apply to the direct, indirect, and cumulative impact analyses (County of San Diego 2015), which states that a significant indirect impact to agricultural resources would result if a project conflicts with Agricultural Zoning or Williamson Act Contract.

Analysis

The 2011 County General Plan is applicable to the Proposed Project. The relevant policies related to agricultural use at the Project site as contained in the Conservation and Open Space Element of the General Plan (County of San Diego 2011b) are discussed in Table 3.1.1-4, Agricultural Goals and Policies.

Due to the Proposed Project's location within the Jacumba portion of the Mountain Empire Subregional Plan area, the Proposed Project is also subject to the Mountain Empire Subregional Plan. Proposed Project consistency with the San Diego County General Plan and the Mountain Empire Subregional Plan is provided in Table 3.1.1-4. As evaluated in Table 3.1.1-4, the Proposed Project would not conflict with applicable goals or policies related to agriculture. The Proposed Project would not conflict with Agricultural Zoning or Williamson Act Contracts, and impacts would be **less than significant**.

Switchyard

The switchyard would be built on land that does not have any Williamson Act Contract lands and would not conflict with agricultural zoning. Therefore, impacts would be **less than significant**.

3.1.1.4 Cumulative Impact Analysis

Per CEQA Guidelines Section 15130(b)(1), a list of projects has been compiled based on past, present, and probable future projects that could cumulatively contribute to the Proposed Project's impacts. The geographic extent for the analysis of cumulative impacts associated with agricultural resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County. The cumulative projects mapped by the FMMP as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are shown in Figure 3.1.1-5, Cumulative Projects FMMP, and cumulative projects mapped with soils that are designated by the County as Prime Farmland Soil Candidates and Farmland of Statewide Importance Soil Criteria are shown in Figure 3.1.1-6, Cumulative Project Soils.

In addition to the Project site, two of the cumulative projects are located on FMMP-designated lands: Campo Wind Project with Boulder Brush Facilities and Cameron Solar. The Campo Wind facilities proposed on the Campo Reservation are outside of the state's and County's authority and are not subject to the County's LARA Model. The Boulder Brush Facilities portion of that project would be located on private land that is not considered to be an important agricultural resource according to the LARA Model. In addition, 16 of the cumulative projects are partially located on soils that are designated by the FMMP as Prime Farmland or Farmland of Statewide Importance, which would affect 56.05 acres of agricultural land cumulatively (Appendix O). The Tule Wind Project was estimated to have 1 acre of direct impacts to agricultural lands. These impacts were determined to have a less-than-significant impact due to the low soil rating and the relatively small impact of less than 1 acre within 12,239 acres of public lands, respectively.

Six cumulative projects were determined to potentially have direct impacts because the project locations have known agricultural resources on site, contain County-designated soils, and/or are within a climate zone rated "moderate." Five of the six projects were not required to prepare an Agricultural Resources Technical Report or a LARA Model because impacts to agricultural resources were determined to be insignificant not requiring further evaluation. Therefore, none of the listed cumulative projects would directly or indirectly impact important agricultural resources as a result of the conversion of agricultural land. Therefore, no direct or indirect impact is anticipated to occur as a result of these projects.

Two of the cumulative projects would occur on land designated as an agricultural preserve: Boulevard Solar and Tule Wind. The small agricultural operations in the area have coexisted with residential land uses surrounding the operations. These sites are most likely already limited in their use of pesticides and irrigation spraying due to the proximity of neighboring residences. The Tule Wind project is located near the McCain Valley Agricultural Preserve. In 2010, there was livestock grazing within the McCain Valley area. However, according to the Bureau of Land Management Resource Management Plan (BLM 2008), wells that have supported historic grazing cattle have gone dry and have not been re-drilled. In addition, grazing policies have changed and public lands

are not available for livestock grazing in accordance with the San Diego County Resource Management Plan (BLM 2008). The Bureau of Land Management Resource Management grazing permit for the McCain Valley area expired on September 18, 2010. At this time, no livestock grazing is permitted. As such, the Tule Wind project would not interfere with active agricultural operations or convert farmland to non-agricultural use.

For the reasons described above, a cumulatively significant conversion of agricultural land to a nonagricultural use would not occur. Surrounding existing agricultural operations are small. Conversion of agricultural land to a nonagricultural use would be less than significant due to lack of suitable agricultural land and small impact of wind turbines to agricultural resources. Cumulative projects would occur in proximity to existing agricultural operations; however, it is not anticipated that cumulative projects would have adverse indirect impacts to the viability of surrounding agricultural land. **Impacts to agricultural land would not be cumulatively considerable**, and no mitigation measures are required.

3.1.1.5 Significance of Impacts Prior to Mitigation

The Proposed Project would result in the conversion of agricultural resources that meet the County candidate soil quality criteria for Prime Farmland or Farmland of Local/Statewide Importance, as defined in the County's Guidelines for Determination of Significance. A majority of the Project site is mapped by FMMP as "Other Land," with additional Prime Farmland, Farmland of Statewide/Local Importance, and Unique Farmland, and the LARA Model determined the soil agricultural viability rating to be moderate. However, the Project site does not have important agricultural resources, as defined by the LARA Model. As a result, the Proposed Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be **less than significant**.

The Proposed Project would lead to a non-agricultural land use. However, there are no active agricultural operations within 0.25 miles of the Project site. Therefore, the Proposed Project would not conflict with applicable policies related to agriculture. **No significant impacts** related toconformance with agricultural policies would occur.

The Project site is not considered to be an important agricultural resource according to the LARA Model. Therefore, direct impacts to on-site agricultural resources would be **less than significant.**

3.1.1.6 Mitigation Measures and Design Considerations

No mitigation measures related to direct, indirect, or cumulative impacts to agricultural resources are necessary.

3.1.1.7 Project Effects After Mitigation

Direct, indirect and cumulative impacts to agricultural resources would be **less than significant**. No mitigation measures related to agricultural resources are necessary.

Table 3.1.1-1
Soil Quality

Soil Type	Acres on Site	Acres Unavailable for Agricultural Use	Acres Available for Agricultural Use	Proportion of Project Site	Candidate for Prime Farmland or Statewide Importance	Score
AcG	131.58	127.863	3.75	0.0028	No	0
CeC	91.04	86.25	4.79	0.0035	No	0
InA	42.10	7.38	34.72	0.0256	Yes(PF)	0.0256
InB	119.78	58.21	61.57	0.0454	Yes (PF)	0.0454
IoA	305	152.82	152.26	0.1123	Yes (FSS)	0.1123
LcE2	4.82	4.13	0.69	0.0005	No	0
RaC	6.05	6.05	0	0	Yes (FSS)	0
RaD2	24	14.98	8.73	0.0064	No	0
RkA	272	4.61	267.44	0.1973	Yes (PF)	0.1973
RsC	72.62	43.64	28.97	0.0214	Yes (FSS)	0.0214
SrD	61.70	58.49	3.21	0.0024	No	0
SvE	225.06	191.51	33.54	0.0247	No	0
Totals*	**1355.56**	**755.90**	**599.67**	**0.4424**	**N/A**	**0.402**

Source: Appendix O.

* Totals may not sum precisely due to rounding. The Project site itself is 1,356 acres. The additional 10 acres shown here includes the easement for Old Highway 80, which traverses the Project site.

AcG, Acid igneous rock land; CeC, Carrizo very gravelly sand 0%–9% slopes; InA, Indio silt loam, 0%–2% slopes; InB, Indio silt loam 2%–5% slopes; IoA, Indio silt loam, saline, 0%–2% slopes; LcE2, La Posta rocky loamy coarse sand, 5%–30% slopes, eroded; RaC, Ramona Sandy Loam, 5%–9% slopes; RaD2, Ramona sandy loam, 9%–15% slopes; RkA, Reiff fine sandy loam, 0%–2% slopes; RsC, Rositas loamy coarse sand, 2%–9% slopes; SrD, Sloping gullied land; SvE, Stony land

N/A = not applicable; PF = Prime Farmland; FSS = Farmland of Statewide Significance

Table 3.1.1-2
LARA Model Factor Ratings

	High	Moderate	Low
Required Factors			
Climate		X	
Water		X	
Soil Quality		X	
Complementary Factors			
Surrounding Land Uses	X		
Land Use Consistency			X
Slope	X		

Source: Appendix O.

Table 3.1.1-3
Interpretation of LARA Model Results

LARA Model Results			LARA Model Interpretation
Possible Scenarios	*Required Factors*	*Complementary Factors*	
Scenario 1	All three factors rated high	At least one factor rated high or moderate	**The site is an important agricultural resource**
Scenario 2	Two factors rated high, one factor rated moderate	At least two factors rated high or moderate	
Scenario 3	One factor rated high, two factors rated moderate	At least two factors rated high	
Scenario 4	All factors rated moderate	All factors rated high	
Scenario 5	At least one factor rated low importance	N/A	**The site is *not* an important agricultural resource**
Scenario 6	**All other model results**		

Source: County of San Diego 2015
Note: N/A = not applicable

Table 3.1.1-4
Agricultural Goals and Policies

Goal or Policy	Proposed Project Consistency
General Plan – Conservation and Open Space Element	
GOAL COS-6 Sustainable Agricultural Industry. A viable and long-term agricultural industry and sustainable agricultural land uses in the County of San Diego that serve as a beneficial resource and contributor to the County's rural character and open space network.	The Project site is largely undeveloped and does not contain any existing major agricultural uses or irrigated croplands. Agricultural operations were historically located on site, but based on current site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of current agriculture occurring on the Project site. As seen in Figure 3.1.1-2, Zone of Influence Important Farmlands, portions of the Project site are designated under the state Farmland Mapping and Monitoring Program as Prime Farmland, Farmland of State/Local Importance, and Unique Farmland, but these areas make up approximately 29% of the Project site and 6% of the Zone of Influence (ZOI).
COS-6.2 Protection of Agricultural Operations. Protect existing agricultural operations from encroachment of incompatible land uses by doing the following: • Limiting the ability of new development to take actions to limit existing agricultural uses by informing and educating new projects as to the potential impacts from agricultural operations • Encouraging new or expanded agricultural land uses to provide a buffer of non-intensive agriculture or other appropriate uses	The closest active agricultural operations are located approximately 25 miles east of the Project site in Dixieland, California. The agricultural operations in the surrounding area are composed primarily of irrigated row crops and dairy farms. However, land use conflicts between these agricultural operations and the Proposed Project would not be likely. The Proposed Project would not impact these operations because the Project site is 25 miles west of active agricultural operations.

Table 3.1.1-4
Agricultural Goals and Policies

Goal or Policy	Proposed Project Consistency
(e.g., landscape screening) between intensive uses and adjacent non-agricultural land uses • Allowing for agricultural uses in agricultural areas and designing development and lots in a manner that facilitates continued agricultural use within the development • Requiring development to minimize potential conflicts with adjacent agricultural operations through the incorporation of adequate buffers, setbacks, and project design measures to protect surrounding agriculture • Supporting local and state right-to-farm regulations • Retain or facilitate large and contiguous agricultural operations by consolidations of development during the subdivision process.	
Discourage development that is potentially incompatible with intensive agricultural uses includes schools and civic buildings where the public gather, daycare facilities under private institutional use, private institutional uses (e.g., private hospitals or rest homes), residential densities higher than two dwelling units per acre, and office and retail commercial.	The Proposed Project does not propose a school, church, daycare, or other use that would involve a heavy concentration of people at certain times of the day, nor does the Proposed Project propose residential uses.
COS-6.3 Compatibility with Recreation and Open Space. Encourage siting recreational and open space uses and multi-use trails that are compatible with agriculture adjacent to the agricultural lands when planning for development adjacent to agricultural land uses. Recreational and open space uses can serve as an effective buffer between agriculture and development that is potential incompatible with agriculture uses.	The Proposed Project would not propose development adjacent to agricultural land uses.
General Plan – Land Use Element	
LU-5.3 Rural Land Preservation. Ensure the preservation of existing open space and rural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) when permitting development under the Rural and Semi-Rural Land Use Designations.	The Project site does not include any existing open space easements. The Project site includes a small area (37.88 acres) designated Rural Lands as well as jurisdictional aquatic resources as defined by Section 404 of the Clean Water Act. However, the Project site does not have important agricultural resources, as defined by the LARA Model. And the Project only proposes an interim use of the site; the solar facility (except for switchyard) would be decommissioned after 35 years. As a result, the Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. Mitigation would ensure impacts to wetlands and jurisdictional resources are reduced to less than significant levels. During operation of the Project, water demand would not exceed the threshold of 50% reduction in groundwater storage, nor would the Project result in adverse impacts to groundwater dependent habitat or well interference habitat near groundwater wells. Implementation of PDF-HYD-2

Table 3.1.1-4
Agricultural Goals and Policies

Goal or Policy	Proposed Project Consistency
	(GMMP) would ensure the groundwater wells used will be monitored throughout the implementation of the Project. Therefore, impacts to groundwater as a result of the proposed Project would be less than significant, and no mitigation measures would be required. In addition, as discussed in Section 2.7, Hydrology and Water Quality, the Project site would consist of primarily permeable surfaces to allow for groundwater recharge similar to that under current conditions. The Project would take into consideration the existing natural features throughout the site to avoid sensitive environmental resources to the extent practicable. In addition, the agricultural operations in the surrounding area are composed primarily of irrigated row crops and dairy farms, but no such operations occur within 0.25 miles of the Project site. Additionally, since no areas under a Williamson Act Contract are within 0.25 miles of the Project site, the Proposed Project would not involve changes to the existing environment that, due to their location or nature, could indirectly result in the conversion of off-site agricultural resources to non-agricultural use, or could adversely impact the viability of agriculture on land under a Williamson Act Contract. The Proposed Project would not introduce sensitive receptors that could object to ongoing agricultural operations. Additionally, the Proposed Project would not obstruct, interrupt, or detract from potential agricultural operations within the ZOI, or be detrimental to surrounding properties. Accordingly, the Proposed Project would not result in any additional pressure to convert surrounding agricultural lands. Lastly, there are no agricultural preserves and no active agricultural production exists within 0.25 miles of the Project site.
GOAL LU-7 Agricultural Conservation. A land use plan that retains and protects farming and agriculture as beneficial resources that contribute to the County's rural character. **LU-7.1 Agricultural Land Development.** Protect agricultural lands with lower density land use designations that support continued	The Project does not propose to change any zoning or land use designations on the site, and as such, will not impact any nearby agricultural operations. The Project site does not have important agricultural resources, as defined by the LARA Model. As a result, the Proposed Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. The Project site is largely an undeveloped ranch land and does not contain any current major agricultural

Table 3.1.1-4
Agricultural Goals and Policies

Goal or Policy	Proposed Project Consistency
agricultural operations.	uses or irrigated croplands. Based on current site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of current agricultural activity occurring on the Project site. As seen in Figure 3.1.1-2, Zone of Influence Important Farmlands, portions of the Project site are designated under the state Farmland Mapping and Monitoring Program as Prime Farmland, Farmland of Local/State Importance, or Unique Farmland.
LU-7.2 Parcel Size Reduction as Incentive for Agriculture. Allow for reductions in lot size for compatible development when tracts of existing historically agricultural land are preserved in conservation easements for continued agricultural use.	There are no active agricultural operations in the Proposed Project's ZOI. Consequently, the Proposed Project would not obstruct, interrupt, or detract from existing agricultural operations within the ZOI, or be detrimental to surrounding properties. Since there are no active agricultural lands within 0.25 miles of the Project Site, this would not result in any additional pressure to convert surrounding agricultural lands. The Proposed Project does not propose residential uses; therefore, the Proposed Project would not conflict with surrounding agricultural uses as it pertains to introduction of residential uses to the area.
Mountain Empire Subregional Plan	
Agricultural Goal. Encourage the expansion and continuance of agricultural uses in the subregion.	The site also has portions that have been used as historical field or pasture agricultural lands. However, the Proposed Project would not conflict with a Williamson Act Contract or agricultural preserve. The Proposed Project would not change the rural characteristic of the area, as there are no active agricultural operations in the Proposed Project's Zone of Influence (ZOI). Consequently, the Proposed Project would not obstruct, interrupt, or detract from existing agricultural operations within the ZOI, or be detrimental to surrounding properties. Since there are no active agricultural lands within 0.25 miles of the Project site, this would not result in any additional pressure to convert surrounding agricultural lands. In addition, the solar facility (except for switchyard) would be decommissioned after 35 years. As a result, the Proposed Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. Further, no residential or dense urban development is proposed that may conflict with existing agricultural uses. The surrounding area is composed

Table 3.1.1-4
Agricultural Goals and Policies

Goal or Policy	Proposed Project Consistency
	predominantly of rural land with a small portion of commercial land to the northeast and residential land associated with the community of Jacumba Hot Springs to the west. The Proposed Project would not involve changes to the existing environment that, due to their location or nature, could indirectly result in the conversion of off-site agricultural resources to non-agricultural use, or could adversely impact the viability of agriculture on surrounding land.

Source: Appendix O



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020;

DUDEK

0 500 1,000 Feet

FIGURE 3.1.1-1

Historical Agricultural Land

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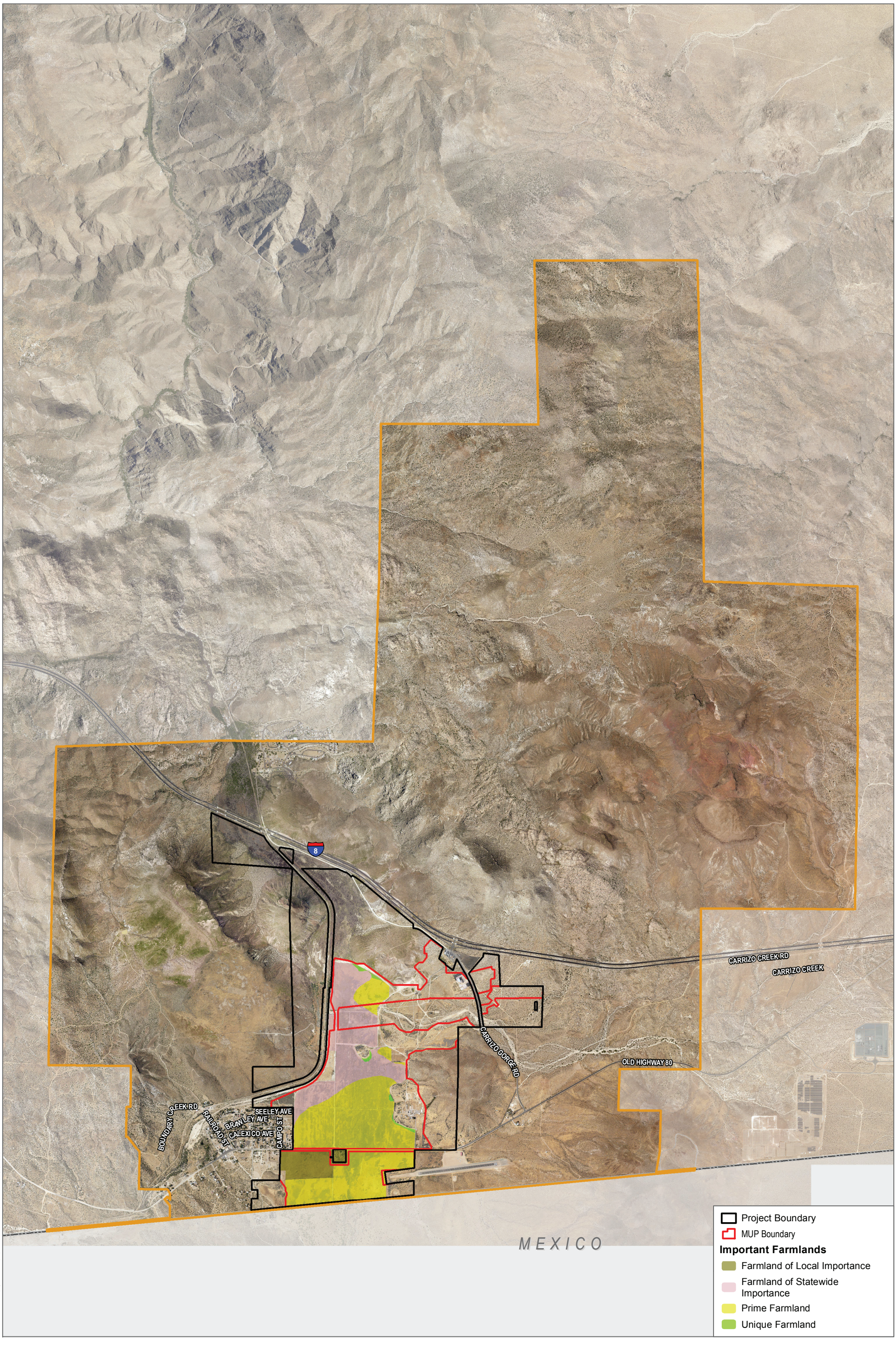

SOURCE: Kimley-Horn 2020; USDA 2019; SANGIS 2017, 2020

DUDEK

0 2,000 4,000 Feet

FIGURE 3.1.1-2

Zone of Influence Important Farmland

JVR Energy Park Project EIR

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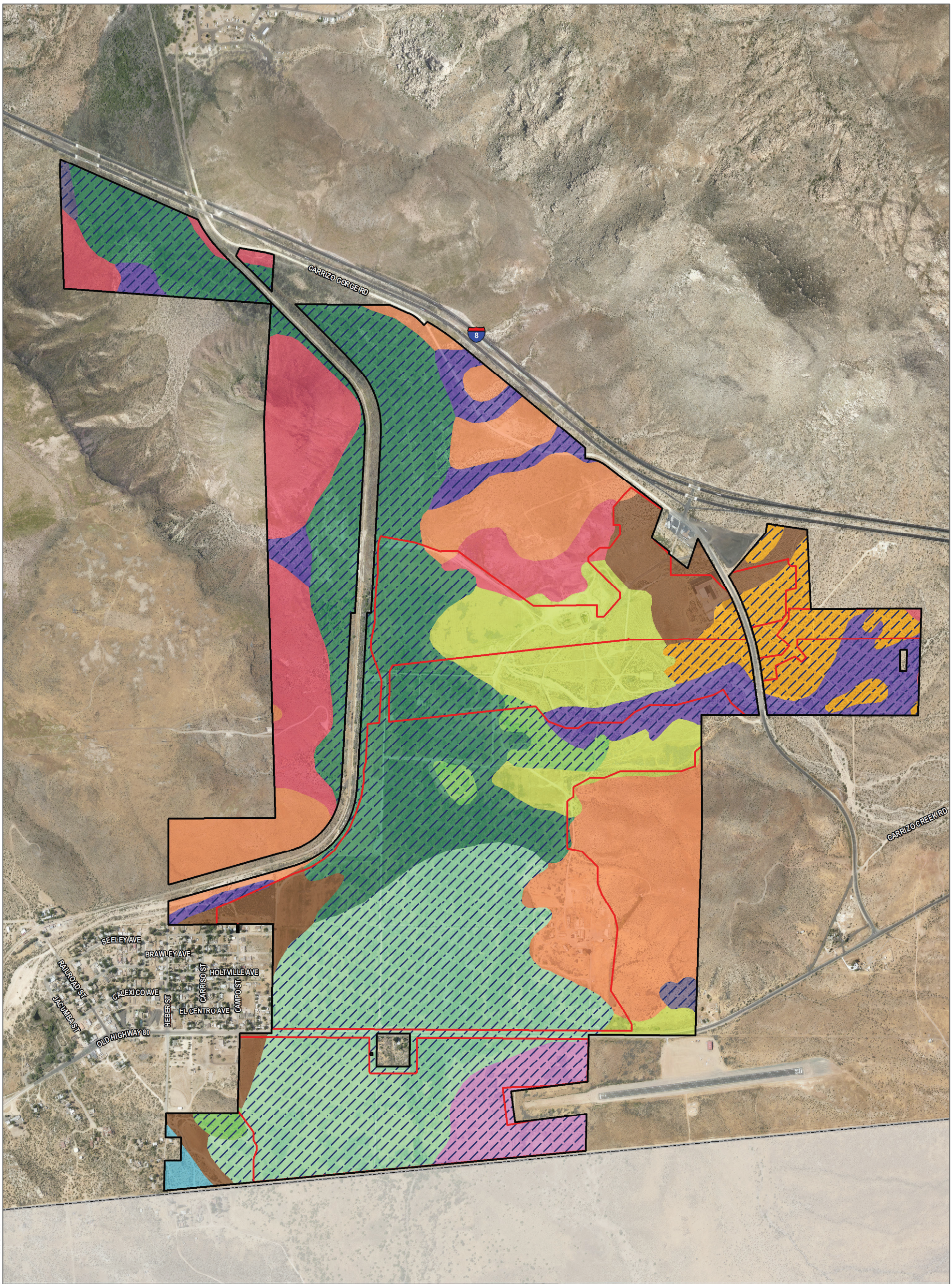

SOURCE: Kimley-Horn 2020; USDA 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 3.1 .1-3

Soils

JVR Energy Park Project EIR

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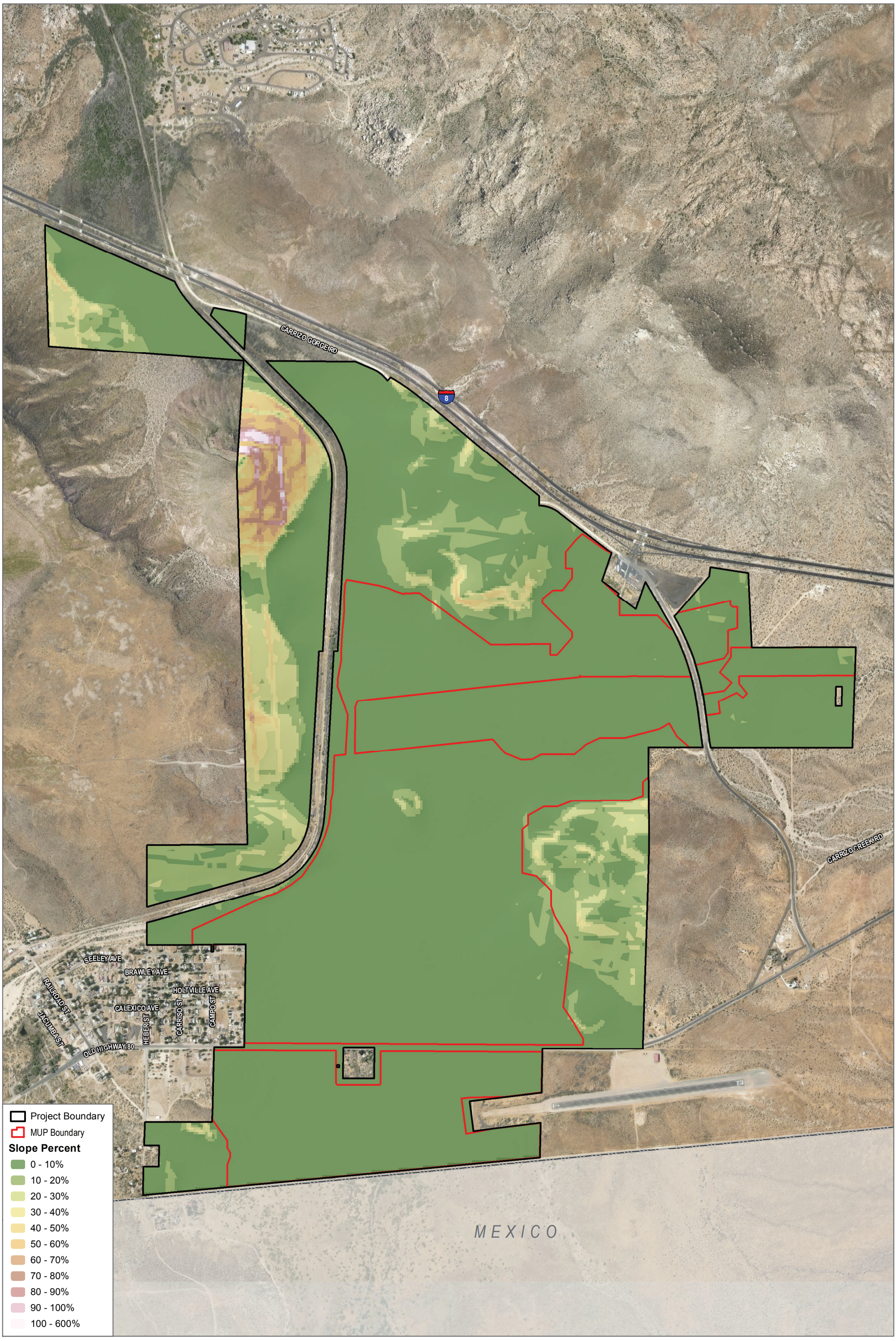

SOURCE: SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 3.1.1-4

Slopes

JVR Energy Park Project EIR

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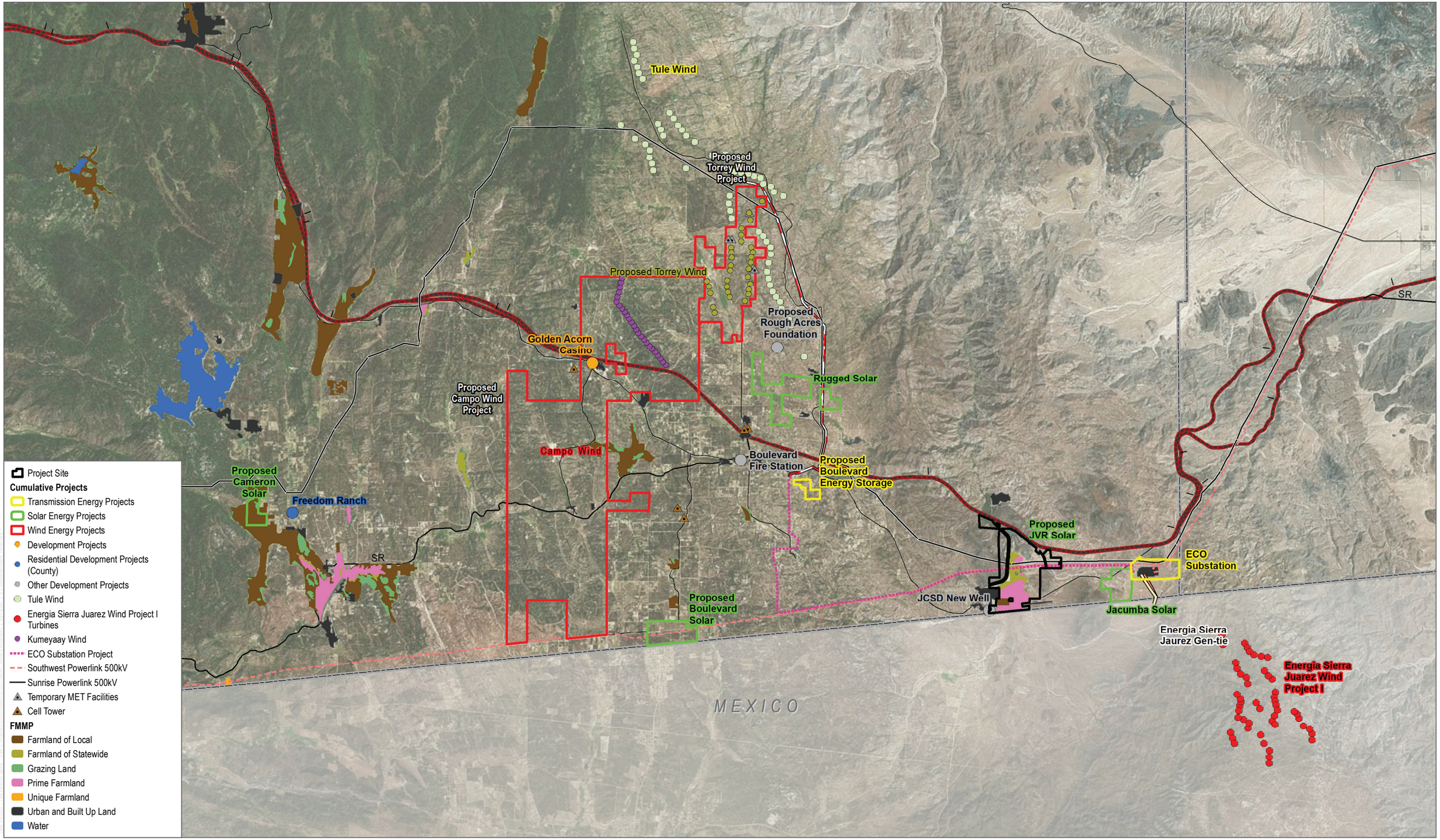

SOURCE: County of San Diego 2019; SANGIS 2020; Bing Maps

DUDEK

0 1 2 Miles

FIGURE 3.1.1-5

Cumulative Projects FMMP

JVR Energy Park Project EIR

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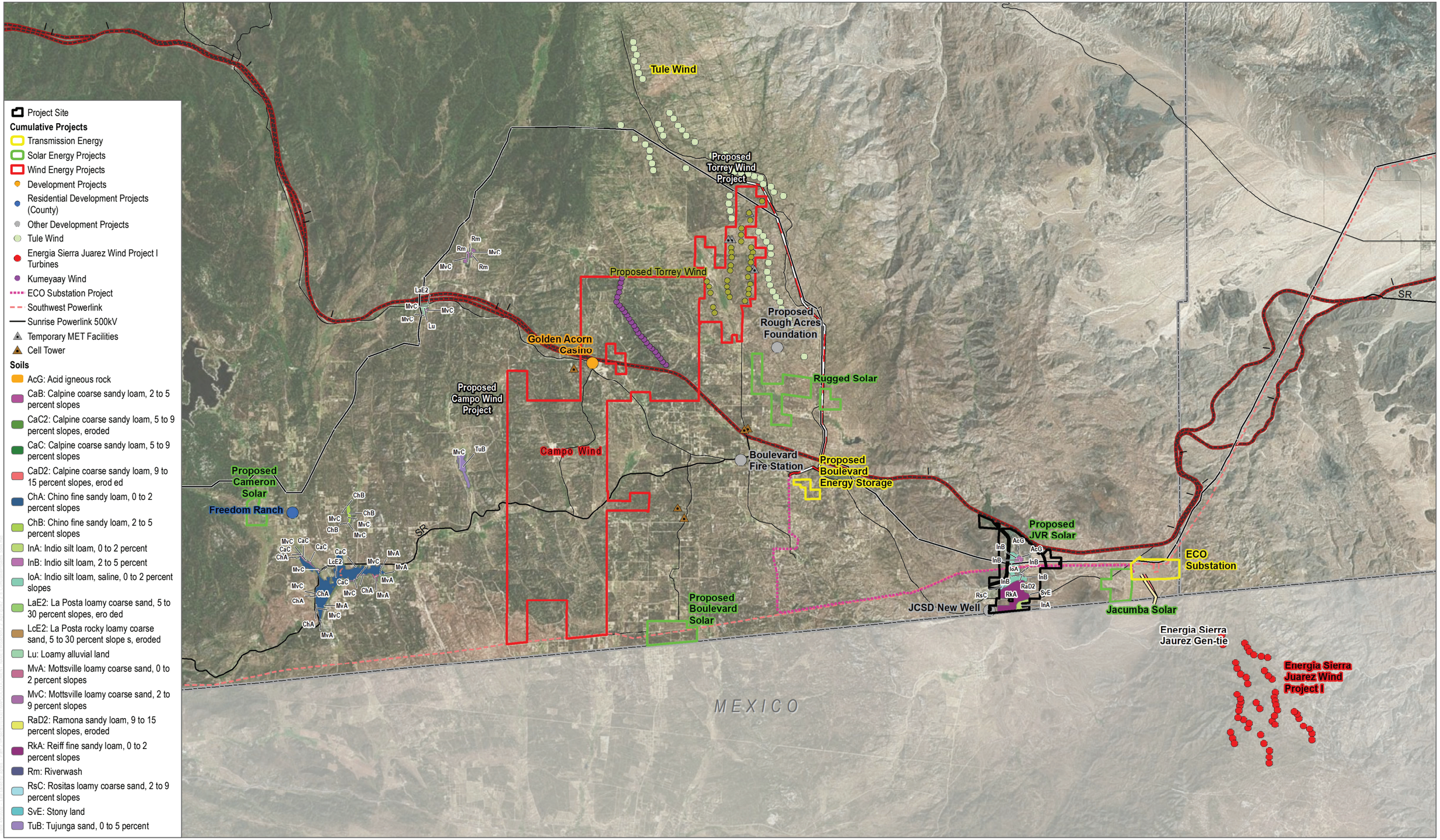

SOURCE: County of San Diego 2019; SANGIS 2020; Bing Maps

DUDEK

0 1 2 Miles

FIGURE 3.1.1-6

Cumulative Project Soils

JVR Energy Park Project EIR

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3.1.2 Energy

This section of the Environmental Impact Report (EIR) discusses the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy to ensure that energy implications are considered in project-related decision-making processes. As such, this section analyzes the energy impacts of the proposed JVR Energy Park Project (Proposed Project). Specifically, this section summarizes the existing conditions on the Project site, discusses the regulatory framework, and discloses estimated energy use during construction, decommissioning, and operation of the Proposed Project. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demands of the Proposed Project, as well as potential service delivery impacts. Information in this section is based on the following technical report prepared for the Proposed Project:

- Air Quality Technical Report for JVR Energy Park Project (Appendix C)
- Greenhouse Gas Emissions Technical Report for JVR Energy Park Project (Appendix P)

3.1.2.1 Existing Conditions

Environmental Setting

The environmental setting for the Proposed Project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed below. In summary, in 2016 (the latest calendar year for which data is uniformly available for all three types of energy sources), California's estimated annual energy use included the following:

- Approximately 282,896 gigawatt hours of electricity (EIA 2017a)
- Approximately 23 billion therms of natural gas (approximately 6.4 billion cubic feet of natural gas per day) (EIA 2017b)
- Approximately 16 billion gallons of gasoline (CARB 2018)

Electricity

Electricity usage in California for different land uses varies substantially by the types of uses in a building, types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita has remained stable for more than 30 years, and the national average has steadily increased (CEC 2015a).

San Diego Gas & Electric (SDG&E) provides electric services to 3.6 million customers through 1.4 million electric meters located in a 4,100-square-mile service area that includes San Diego County and southern Orange County (SDG&E 2018). SDG&E is a subsidiary of Sempra Energy and would provide electricity to the Proposed Project. According to the California Public Utilities Commission (CPUC), SDG&E customers consumed approximately 19,169 million kilowatt-hours (kWh) of electricity in 2015 (CPUC 2016).

SDG&E receives electric power from a variety of sources. In 2016, 43% of SDG&E's power came from eligible renewable energy sources, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources. This is an improvement of 11% that SDG&E maintained in 2014 (CPUC 2016, 2018).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200 to 7,800 kWh per person (CEC 2015a).

In San Diego County, the California Energy Commission (CEC) reported an annual electrical consumption of approximately 21.6 billion kWh in 2015 for residential use (CEC 2016a).

Natural Gas

CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Pacific Gas & Electric (PG&E), Southern California Gas (SoCalGas), SDG&E, Southwest Gas, and several smaller natural gas utilities. CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage (CPUC 2017). SDG&E provides natural gas service to San Diego and Orange Counties. SDG&E is a wholesale customer of SoCalGas and currently receives all of its natural gas from the SoCalGas system (CPUC 2017).

The CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2017).

In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California (CPUC 2017). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails, and

Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and CPUC often participates in Federal Energy Regulatory Commission proceedings to represent the interests of California natural gas consumers (CPUC 2017).

Most of the natural gas transported through interstate pipelines, and some California-produced natural gas is delivered through the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the natural gas delivered to California's gas consumers in 2012 (CPUC 2017).

PG&E and SoCalGas own and operate several natural gas storage fields that are located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2017).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017).

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources, and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

There are more than 35 million registered vehicles in California, and those vehicles consume an estimated 18 billion gallons of fuel each year (CEC 2017; DMV 2017). Gasoline and other vehicle fuels are commercially provided commodities and would be available to the Proposed Project through commercial outlets.

Petroleum currently accounts for approximately 92% of California's transportation energy consumption (CEC 2017). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels and energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may likely continue and accelerate (CEC 2017). Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

Existing Infrastructure

The Proposed Project is within the SDG&E service area. Much of the Proposed Project development footprint is currently fallowed agricultural fields. The Project site is bisected by the Southwest Powerlink and Sunrise Powerlink transmission lines.

3.1.2.2 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years

2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2013, 2015). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the U.S. Environmental Protection Agency to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

State

The discussion below focuses primarily on those policies, regulations, and laws that directly pertain to energy-related resources. Refer to Section 3.1.3, Greenhouse Gas Emissions, of this EIR, which addresses various policies, regulations, and laws targeted to the reduction of GHG emissions that are expected to achieve co-benefits in the form of reduced demand for energy-related resources and enhanced efficiencies in the consumption of energy-related resources.

Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

Senate Bill (SB) 1078 established the California Renewables Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus

federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 3.1.3 of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduce energy used in the state. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and non-residential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015b). The 2016 Title 24 standards are the current applicable building energy efficiency standards and became effective on January 1, 2017. The 2019 Standards will continue to improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 Standards will go into effect on January 1, 2020.

Title 24 also includes Part 11, the California's Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise

residential, and state-owned buildings, as well as schools and hospitals. The 2016 CALGreen standards became effective on January 1, 2017. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use
- 50% diversion of construction and demolition waste from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency

Similar to Title 24, Part 6, the proposed 2019 CALGreen standards will build upon the 2016 CALGreen standards for residential and non-residential construction and will go into effect on January 1, 2020.

Integrated Energy Policy Report

The CEC is responsible for preparing integrated energy policy reports that identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2015 Integrated Energy Policy Report discusses the state's policy goal to require that new residential construction be designed to achieve zero net energy standards by 2020, and that new non-residential construction be designed to achieve zero net energy standards by 2030 (CEC 2016b), which is relevant to this EIR. Refer to Section 3.1.3 of this EIR for additional information on the state's zero net energy objectives and how the state's achievement of its objectives would serve to beneficially reduce the Proposed Project's GHG emissions profile and energy consumption.

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of zero-emissions vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations (e.g., San Diego Association of Governments) to include a Sustainable Communities Strategy in their regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and VMT, which influence the consumption of petroleum-based fuels.

Local

SDG&E Individual Integrated Resource Plan

SDG&E's Conforming Portfolio identifies a need for approximately 700 gigawatt-hours of incremental renewable power in addition to the assumed increases in energy efficiency and behind-the-meter solar, to meet the 2030 planning target (approximately 4% of the total energy in the portfolio) (SDG&E 2018). SDG&E's Conforming Portfolio demonstrates that SDG&E has reduced its GHG emissions in the early years of the planning period, reflecting SDG&E's current position in relation to its RPS targets, with approximately 45% of its current energy mix coming from delivering renewable resources in 2018 as compared to an RPS requirement of 29%, its aggressive adoption of energy storage, and no coal resources. SDG&E is fully compliant with RPS and long-term contracting requirements. SDG&E continues to procure to meet resource-specific renewable procurement mandates, as required, but does not expect to procure additional resources for RPS compliance purposes until after 2030. SDG&E is forecasted to reach 49% renewable energy in 2021, 98% of which will be from long-term contracts (SDG&E 2018).

County of San Diego General Plan

The County of San Diego General Plan takes steps to address energy by including policies for improving energy efficiency, reducing waste, recycling, and managing water use. The General Plan also seeks to reduce energy consumption through minimizing VMT; approving land use patterns that support increased density in areas where there is infrastructure to support it; creating increased opportunities for transit, pedestrians, and bicycles; and encouraging and approving green building and land development conservation initiatives. The following policies identified in the

General Plan's Conservation and Open Space Element are applicable to the Project (County of San Diego 2011):

- **COS-14.1: Land Use Development Form.** Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.
- **COS-14.2: Villages and Rural Villages.** Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.
- **COS-14.3: Sustainable Development.** Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.
- **COS-14.5: Building Siting and Orientation in Subdivisions.** Require that buildings be located and oriented in new subdivisions and multi-structure non-residential projects to maximize passive solar heating during cool seasons, minimize heat gains during hot periods, enhance natural ventilation, and promote the effective use of daylight.
- **COS-14.7: Alternative Energy Sources for Development Projects.** Encourage development projects that use energy recovery, photovoltaic, and wind energy.
- **COS-15.4: Title 24 Energy Standards.** Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.
- **COS-16.2: Single-Occupancy Vehicles.** Support transportation management programs that reduce the use of single-occupancy vehicles.
- **COS-17.2: Construction and Demolition Waste.** Require recycling, reduction and reuse of construction and demolition debris.
- **COS-19.1: Sustainable Development Practices.** Require land development, building design, landscaping, and operational practices that minimize water consumption.

The Proposed Project's consistency with applicable General Plan policies is evaluated in Section 3.1.4, Land Use and Planning, of this EIR.

Climate Action Plan

The County of San Diego (County) developed a Climate Action Plan (CAP) that is a comprehensive strategy to reduce GHG emissions in the unincorporated communities of the County.

In January 2018, the Planning Commission recommended adoption of the final CAP to the County Board of Supervisors. On February 14, 2018, the County Board of Supervisors adopted the CAP (County of San Diego 2018).

A lawsuit was then filed challenging the CAP and the County's related approvals (San Diego Superior Court Case No. 37-2018-00014081-CU-TT-CTL). On January 16, 2019, the County of San Diego Superior Court entered judgment in the suit (San Diego Superior Court Case No. 37-2018-00014081-CU-TT-CTL). The judgment, among other things, issued a writ of mandate directing the County to set aside the approval of the CAP and the Final Supplemental Environmental Impact Report (SEIR) to the 2011 General Plan Update Program Environmental Impact Report and declared that the CAP and the "certification of the Final SEIR to the 2011 General Plan Update Program EIR are legally inadequate and may not be used to provide the basis for CEQA review of GHG impacts of development proposals in the unincorporated County."

The County subsequently appealed the Superior Court's judgment to the Fourth Appellate District, Division One (Case No. D075478). On June 12, 2020, the appellate court affirmed the trial court's order with respect to the CAP and the Final SEIR.

Renewable Energy Plan

The County's Renewable Energy Plan researches and develops renewable energy options in the County. The planning effort covers the residential, commercial, and industrial sectors of the County, with a particular focus on unincorporated areas, and presents a comprehensive approach to renewable energy and energy efficiency (County of San Diego 2017).

3.1.2.3 Analysis of Proposed Project Effects and Determination as to Significance

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not explicitly address energy. Therefore, for this EIR, Appendix G of the CEQA Guidelines was used to assess the Proposed Project's direct, indirect, and cumulative impacts. Appendix G does not prescribe a threshold for the determination of significance. Rather, Appendix G focuses on reducing and minimizing inefficient, wasteful, and unnecessary consumption of energy. Therefore, for the purpose of this EIR, a significant impact to energy would result if the Proposed Project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

To ensure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the CEQA Guidelines was used to identify the potential energy implications of the Proposed Project. The following list of energy impact possibilities and potential conservation measures are analyzed below:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The Proposed Project is a 643-acre solar energy facility, which includes a switchyard that would be transferred to SDG&E after construction. For the purposes of this analysis, the switchyard (as described in Section 1.2.1) is a component of the Project and has been analyzed as part of the whole of the action. However, this EIR highlights the specific analysis of the switchyard under each threshold of significance in the event responsible agencies have CEQA obligations related to the switchyard.

3.1.2.3.1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Electricity

Construction and Decommissioning Use

Temporary electric power for lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be powered

by a diesel generator. The amount of electricity used during construction and decommissioning would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction and decommissioning activities (7 a.m. to 7 p.m.). The majority of the energy used during construction and decommissioning would be from petroleum. The electricity used for construction and decommissioning activities would be temporary and minimal (23 months). Consuming energy to construct a renewable energy project to reduce the state's GHG emissions from energy is not wasteful, inefficient, or unnecessary.

Switchyard

Temporary electric power for lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be used in the switchyard. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. The electricity used for construction activities would be temporary and minimal (9 months).

The electricity used to construct and decommission the Proposed Project and to construct the switchyard would be temporary and minimal and not wasteful, inefficient or unnecessary. Furthermore, the electricity consumed during construction and decommissioning would be a result of activities essential to complete this work.

Operational Use

The Proposed Project would be an un-staffed facility that would be monitored remotely and would only require periodic maintenance (i.e., solar panel washing up to four times annually), inspection, and repair activities when needed. Activities that would require inspection and/or repair would include workers travelling to and from San Diego. These activities would only result in an increase in petroleum use, not electricity. The Proposed Project would have motion-detection security lighting at entrances, which was estimated to use 2,830 kilowatt-hours (kWh) per year. This electricity would be supplied by SDG&E with backup power provided by a diesel generator. The Proposed Project is expected to produce an estimated 211,159 megawatt hours of renewable electricity per year. Therefore, the Proposed Project's generation of renewable energy will far exceed the Proposed Project's minimal electricity demand and would not result in a wasteful use of energy.

Switchyard

Motion-detection lighting will be mounted near the switchyard gates to allow for nighttime emergency repair and routine maintenance access. The lighting would not be a significant source

of electricity use. The electricity used during the operation of the switchyard would not result in the inefficient use of electricity.

Natural Gas

Construction and Decommissioning Use

Natural gas is not anticipated to be required during construction and decommissioning of the Proposed Project. Fuels used for construction and decommissioning would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum," below. There are minimal options for low-horsepower natural gas fueled construction equipment; however, there are no plans to use this type of equipment for this project. Any minor amounts of natural gas that may be consumed as a result of Proposed Project construction and decommissioning would be temporary and negligible, and not inefficient, wasteful, or unnecessary, and would not have an adverse effect.

Switchyard

Natural gas is not anticipated to be required during construction of the switchyard. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum," below. Any minor amounts of natural gas that may be consumed as a result of switchyard construction would be temporary and negligible, and would not have an adverse effect.

Operational Use

The Proposed Project would not have natural gas service. There would be no natural gas consumption during operation.

Switchyard

The switchyard would not have natural gas service and therefore would be no natural gas consumption during operation.

Petroleum

Construction and Decommissioning Use

Petroleum would be consumed throughout construction and decommissioning of the Proposed Project. Fuel consumed by construction and decommissioning equipment would be the primary energy resource expended over the course of construction and decommissioning, and VMT associated with the transportation of construction materials and construction worker commutes

would also result in petroleum consumption. Heavy-duty construction equipment associated with construction and decommissioning activities, and haul trucks involved in relocating dirt around the Project site would rely on diesel fuel. Construction workers would travel to and from the Project site throughout the duration of construction and decommissioning. It is assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during construction and decommissioning. The California Emissions Estimator Model (CalEEMod) was used to estimate construction and decommissioning equipment usage; results are included in Appendix C of this EIR. Based on that analysis, diesel-fueled construction and decommissioning equipment would operate for an estimated 72,328 hours, as summarized in Table 3.1.2-1, Hours of Operation for Construction and Decommissioning Equipment – JVR Energy Park Project.

Fuel consumption from construction and decommissioning equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction and decommissioning phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel use from construction and decommissioning equipment is shown in Table 3.1.2-2, Construction and Decommissioning Equipment Diesel Demand – JVR Energy Park Project.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction and decommissioning phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled. Based on data from similar projects in the general vicinity of the Project site, the worker mix was assumed to include 50% coming from San Diego (72 miles from the project) and 50% from El Centro (44 miles from the project). Vendor trips were assumed to come entirely from San Diego.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 3.1.2-3, Construction and Decommissioning Worker Vehicle Gasoline Demand – JVR Energy Park Project; Table 3.1.2-4, Construction and Decommissioning Vendor Truck Diesel Demand – JVR Energy Park Project; and Table 3.1.2-5, Construction and Decommissioning Haul Truck Diesel Demand – JVR Energy Park Project. As shown in Tables 3.1.2-2 through 3.1.2-5, the Proposed Project is estimated to consume 857,544 gallons of petroleum during the construction and decommissioning phases. There are no other transportation options to bring equipment, supplies, and workers to the site, beyond the consumption of petroleum for conventionally fueled vehicles. Despite the proximity of rail lines to the Proposed Project, there is no nearby location where equipment and supplies could be delivered to the Project by rail. Furthermore, the Proposed Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes.

Additionally, in accordance with mitigation measure **M-AQ-1**, the Proposed Project would use Tier 4 Interim construction and decommissioning equipment and electrical or natural gas-powered construction equipment where feasible (for equipment less than 50 horsepower), and worker carpooling would be encouraged to reduce petroleum usage. Therefore, petroleum use during construction and decommissioning would be short term (approximately 22 months), and would not be wasteful or inefficient or unnecessary.

Switchyard

Petroleum would be consumed throughout construction of the switchyard. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities, and haul trucks involved in relocating dirt around the switchyard would rely on diesel fuel. Construction workers would travel to and from the switchyard throughout the duration of construction. It is assumed that construction workers would travel to and from the switchyard in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during construction. CalEEMod was used to estimate construction equipment usage; results are included in Appendix C of this EIR. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 5,188, hours, as summarized in Table 3.1.2-6, Hours of Operation for Construction Equipment – Switchyard.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel use from construction equipment is shown in Table 3.1.2-7, Construction Equipment Diesel Demand – Switchyard.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 3.1.2-8, Construction Worker Vehicle Gasoline Demand – Switchyard; Table 3.1.2-9, Construction Vendor Truck Diesel Demand – Switchyard; and Table 3.1.2-10, Construction Haul Truck Diesel Demand – Switchyard. As shown in Tables 3.1.2-7 through 3.1.2-10, the switchyard is estimated

to consume 33,826 gallons of petroleum during the construction and decommissioning phases (this is included in the proposed project total above). By comparison, approximately 22.1 billion gallons of petroleum would be consumed in California over the course of the switchyard's construction phases based on the California daily petroleum consumption estimate of approximately 52.9 million gallons per day (CEC 2016a). There are no other transportation options to bring equipment, supplies, and workers to the site, beyond the consumption of petroleum for conventionally-fueled vehicles. Despite the proximity of rail lines to the Proposed Project, there is no nearby location where equipment and supplies could be delivered to the Project by rail. Furthermore, the Proposed Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Therefore, the switchyard's petroleum use would not be wasteful or inefficient during construction because it would be temporary and relatively minimal.

Operational Use

The majority of fuel consumption resulting from the Proposed Project's operational phase would be attributable to workers traveling to and from the Project site during periodic maintenance and inspection, and worker vehicles traveling around the Project site.

Petroleum fuel consumption associated with motor vehicles and water trucks traveling to and from the Project site during operation is a function of VMT. To estimate a worst-case conservative scenario, emissions were calculated based on water being delivered to the site weekly (the anticipated frequency is four times per year). As shown in the Appendix P, the annual VMT attributable to the Proposed Project operations is expected to be 315,360 VMT per year. Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO_2 emissions from operations to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. The worker vehicles were assumed to be gasoline powered, and the water trucks were assumed to be diesel.

Calculations for annual mobile-source fuel consumption are provided in Table 3.1.2-11, Petroleum Consumption – JVR Energy Park Operation. Mobile sources from the Proposed Project would result in approximately 23,394 gallons of gasoline per year and 1,636 gallons of diesel consumed per year beginning in 2021. The Proposed Project would include a 1.5 megawatts diesel emergency generator at the substation. The generator was assumed to operate for testing and maintenance approximately 30 minutes each month for a total of up to 52 hours per year, in accordance with San Diego Air Pollution Control District Rule 69.4.1. The diesel generators for the Proposed Project are anticipated to use up to 3,898 gallons of diesel per year.

Over the lifetime of the Proposed Project, the fuel efficiency of the vehicles being used by the employees for commuting and periodic maintenance and inspection activities is expected to increase, and such vehicles may even employ alternative fuels and/or may be electric. As such, the

amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. The approach also includes efforts to support and accelerate the number of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by 2020, and 13% by 2035 for light-duty passenger vehicles in the planning area for the San Diego Association of Governments. As such, operation of the Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

In summary, although the Proposed Project would slightly increase petroleum use during operation as a result of maintenance of the site and a diesel generator, the use would not be wasteful or inefficient, and, due to efficiency increases, would diminish over time. Furthermore, the Proposed Project would generate approximately 7,390,568 MWh of renewable electricity over its lifetime. Given these considerations, petroleum energy consumption associated with the Proposed Project would not be considered inefficient or wasteful.

Switchyard

During operation, an occasional maintenance truck would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance of the facility on an as-needed basis.

Calculations for annual mobile-source fuel consumption are provided in Table 3.1.2-12, Petroleum Consumption – Switchyard Operation. Mobile sources from the switchyard would result in approximately 528 gallons of gasoline per year and 37 gallons of diesel consumed per year beginning in 2021. As such, operation of the switchyard would result in a negligible increase in associated operational trips. Given these considerations, energy consumption associated with operation of the switchyard would not be considered inefficient or wasteful**.**

Summary

The Proposed Project would use electricity, natural gas, and petroleum products during the construction, operation, and decommissioning phases. However, the amount of energy used would not be inefficient or wasteful. Furthermore, due to the remote location of the Project site there are no alternative means of transporting materials or workers to the site (such as rail, bus) that would reduce energy use further. Finally, the Proposed Project would produce up to 211,159 megawatt hours of renewable electricity per year. Therefore, the Proposed Project would have a **less than significant** impact.

3.1.2.3.2 Conflict with Energy Standards, Regulations, Plans, and Policies

The Proposed Project would be consistent with applicable standards, regulations, plans, and policies in place to reduce energy consumption. It is anticipated that worker vehicles would meet the applicable standards of AB 1493 (vehicles manufactured in 2009 or later), and as a result would likely consume less energy as fuel efficiency standards are increased and vehicles are replaced. The Proposed Project would also support the goals within SB 100, AB 2514, and SB 32 for the production of renewable energy. The Proposed Project is expected to produce an estimated 211,159 megawatt hours of renewable electricity per year. Moreover, the Proposed Project would support the implementation of the County's Renewable Energy Plan through implementation of additional renewable energy generation facilities within the County. Lastly, refer to Section 3.1.4 for a detailed analysis of the Proposed Project's consistency with energy-related policies in the County's General Plan. For reasons stated, the Proposed Project would be consistent with all applicable energy plans and policies; therefore, impacts would be **less than significant**.

Switchyard

The switchyard would meet the Title 24 and CalGreen standards to reduce energy demand and increase energy efficiency. Additionally, worker vehicles would meet the applicable standards of AB 1493, and as a result would likely consume less energy as fuel efficiency standards are increased and vehicles are replaced. Moreover, the switchyard would support the implementation of the County's Renewable Energy Plan through implementation of additional renewable energy generation facilities within the County. For reasons stated, the switchyard would be consistent with all applicable energy plans and policies; therefore, impacts would be **less than significant**.

3.1.2.4 Cumulative Impact Analysis

Potential cumulative impacts on energy would result if the Proposed Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction, decommissioning, and/or operation. The geographic extent for the analysis of cumulative impacts related to energy includes the areas serviced by the energy service providers for the Proposed Project. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. Projects that would mostly include construction, such as transportation infrastructure or renewable energy projects, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would not typically involve substantial ongoing energy use. Other large renewable energy generation projects (see Table 1-4, Cumulative Scenario – Reasonably

Foreseeable, Approved, and Pending Projects, in Chapter 1, Project Description) would result in an increase in regional renewable energy supply.

As described previously, the Proposed Project would not result in wasteful, inefficient, or unnecessary use of energy given the Proposed Project's minimal energy use and production of renewable energy. Cumulative projects that include long-term energy demand, such as residential developments, would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. CALGreen would implement increasingly stringent energy efficiency standards that would require the Proposed Project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set in the AB 32 Scoping Plan (CARB 2017), which would seek to make all newly constructed residential homes produce a sustainable amount of renewable energy through the use of on-site photovoltaic solar systems. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

Given the Proposed Project would generate 7,390,568 MWh of renewable energy over its lifetime, the Proposed Project would not contribute to a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, including a substantial demand on energy resources or services such that new regional energy facilities would be required to be constructed as a result of the incremental increase in energy demand resulting from the Proposed Project. Furthermore, the Proposed Project would generate additional renewable energy itself reducing the need for non-renewable energy generating facilities and increasing the amount of clean energy available to consumers in the region. Therefore, the Proposed Project would have a less than cumulatively considerable impact with respect to significant cumulative impacts related to the wasteful or inefficient use of energy.

Switchyard

As discussed above, in consideration of cumulative energy use, the switchyard would not contribute to a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, including a substantial demand on energy resources or services such that new regional energy facilities would be required to be constructed as a result of the incremental increase in energy demand resulting from the switchyard. The switchyard would aid the Proposed Project in transmitting renewable electricity to the grid, helping to avoid wasteful energy practices. Furthermore, the switchyard would aid the Proposed Project in generating additional renewable energy itself reducing the need for non-renewable energy generating facilities and increasing the amount of clean energy available to consumers in the region. Therefore, the switchyard would not contribute to a cumulative impact to the wasteful or inefficient use of energy.

3.1.2.5 Significance of Impacts Prior to Mitigation

The Proposed Project would use 99 MWh of electricity over its lifetime while it would generate approximately 7,390,568 MWh of renewable electricity. As such, the Proposed Project would not result in the wasteful or inefficient use of electricity, and impacts would be **less than significant**. The Proposed Project would not conflict with an applicable plan, policy or regulation; therefore, impacts would be **less than significant**.

3.1.2.6 Mitigation Measures

No mitigation would be required.

3.1.2.7 Conclusion

The Proposed Project would use 99 MWh of electricity over its lifetime while it would generate approximately 7,390,568 MWh of renewable electricity. As such, the Proposed Project would not result in the wasteful or inefficient use of electricity, and impacts would **be less than significant**.

Table 3.1.2-1
Hours of Operation for Construction and Decommissioning Equipment – JVR Energy Park

Phase	Hours of Equipment Use
Site Mobilization	0
Demolition of Old Farm	320
Site Prep, Grading, Stormwater Protections	3,840
Fence Installation	960
Pile Driving	2,560
Landscaping Installation	1,920
Tracker and Module Installation	10,560
DC Electrical	11,520
Underground Medium AC Voltage Electrical	3,200
Inverter Installation	640
BESS Installation	640
Commissioning	0
Perimeter Fence Removal	264
System Disassembly and Removal	28,000
Energy Storage System	1,056
Site Cleanup & Restoration	352
Trenching – Switchyard	176
Site Preparation 1 – Switchyard	2,184
Conductor Installation 1	168
Site Preparation 2 – Switchyard	552
Paving – Switchyard	616
Site Preparation – Gen-Tie	352
Operate Air Tools	640
Structure Installation	248
Conductor Installation 2	168
Erect Structures	84
Conductor Removal 1	168
Operate Air Tools	640
Structure Removal	8
Conductor Removal 2	168
Remove Structures	84
Total	**72,328**

Source: Appendix P.

Table 3.1.2-2
Construction and Decommissioning
Equipment Diesel Demand – JVR Energy Park

Phase	Pieces of Equipment[a]	Equipment CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Site Mobilization	0	0.00	10.21	0.00
Demolition of Old Farm	2	87.59	10.21	8,578.82
Site Prep, Grading, Stormwater Protections	8	12.41	10.21	1,215.84
Fence Installation	2	114.78	10.21	11,242.12
Pile Driving	8	311.58	10.21	30,516.65
Landscaping Installation	3	30.62	10.21	2,998.97
Tracker and Module Installation	11	0.00	10.21	0.00
DC Electrical	12	8.40	10.21	822.84
Underground Medium AC Voltage Electrical	4	3.61	10.21	353.41
Inverter Installation	2	363.83	10.21	35,635.03
BESS Installation	2	36.74	10.21	3,598.38
Commissioning	0	0.00	10.21	0.00
Perimeter Fence Removal	1	3.61	10.21	353.41
System Disassembly and Removal	35	363.83	10.21	35,635.03
Energy Storage System	3	36.74	10.21	3,598.38
Site Cleanup & Restoration	2	10.07	10.21	986.69
Trenching – Switchyard	1	3.26	10.21	319.42
Site Preparation 1 – Switchyard	13	84.65	10.21	8,290.87
Conductor Installation 1	1	1.55	10.21	151.71
Site Preparation 2 – Switchyard	3	25.94	10.21	2,540.32
Paving – Switchyard	7	12.28	10.21	1,202.81
Site Preparation – Gen-Tie	4	10.52	10.21	1,030.52
Operate Air Tools	1	13.62	10.21	1,333.73
Structure Installation	1	0.48	10.21	47.48
Conductor Installation 2	1	8.69	10.21	850.91
Erect Structures	1	2.66	10.21	260.64
Conductor Removal 1	1	1.86	10.21	182.62
Operate Air Tools	1	13.62	10.21	1,333.72
Structure Removal	1	0.48	10.21	47.48
Conductor Removal 2	1	10.55	10.21	1,033.29
Remove Structures	1	3.20	10.21	313.21
			Total	**154,474.30**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-3
Construction and Decommissioning Worker
Vehicle Gasoline Demand – JVR Energy Park

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Site Mobilization	100	1.90	8.78	216.57
Demolition of Old Farm	800	15.03	8.78	1,712.13
Site Prep, Grading, Stormwater Protections	48,000	22.22	8.78	2,530.31
Fence Installation	1,200	44.43	8.78	5,060.62
Pile Driving	2,400	182.28	8.78	20,760.57
Landscaping Installation	16,000	147.00	8.78	16,742.39
Tracker and Module Installation	4,960	440.99	8.78	50,227.18
DC Electrical	24,000	881.99	8.78	100,454.34
Underground Medium AC Voltage Electrical	40	183.75	8.78	20,927.98
Inverter Installation	700	29.40	8.78	3,348.47
BESS Installation	300	29.40	8.78	3,348.47
Commissioning	40	14.70	8.78	1,674.24
Perimeter Fence Removal	1,320	3.61	8.78	410.97
System Disassembly and Removal	70,000	808.57	8.78	92,091.80
Energy Storage System	13,200	152.47	8.78	17,365.88
Site Cleanup & Restoration	880	10.16	8.78	1,157.72
Trenching – Switchyard	88	1.67	8.78	190.58
Site Preparation 1 – Switchyard	714	13.58	8.78	1,546.30
Conductor Installation 1	504	9.58	8.78	1,091.50
Site Preparation 2 – Switchyard	184	3.45	8.78	392.65
Paving – Switchyard	198	3.64	8.78	414.37
Site Preparation – Gen-Tie	110	2.02	8.78	230.21
Operate Air Tools	640	11.76	8.78	1,339.40
Structure Installation	124	2.28	8.78	259.51
Conductor Installation 2	84	1.54	8.78	175.80
Erect Structures	84	1.54	8.78	175.80
Conductor Removal 1	504	5.82	8.78	663.06
Operate Air Tools	640	7.39	8.78	841.98
Structure Removal	124	1.43	8.78	163.13
Conductor Removal 2	84	0.97	8.78	110.51
Remove Structures	84	0.97	8.78	110.51
			Total	**345,734.95**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-4
Construction and Decommissioning Vendor Truck Diesel Demand – JVR Energy Park

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Site Mobilization	200	21.65	10.21	2,120.04
Demolition of Old Farm	40	0.25	10.21	24.75
Site Prep, Grading, Stormwater Protections	5,400	580.28	10.21	0.00
Fence Installation	120	0.75	10.21	73.94
Pile Driving	0	0.00	10.21	0.00
Landscaping Installation	80	1.00	10.21	98.37
Tracker and Module Installation	8,400	900.87	10.21	88,233.73
DC Electrical	0	0.00	10.21	0.00
Underground Medium AC Voltage Electrical	9,000	965.21	10.21	94,536.14
Inverter Installation	80	8.58	10.21	840.32
BESS Installation	2,800	300.29	10.21	29,411.24
Commissioning	0	0.00	10.21	0.00
Perimeter Fence Removal	0	0.00	10.21	0.00
System Disassembly and Removal	7,000	695.86	10.21	68,154.82
Energy Storage System	3,080	306.18	10.21	0.00
Site Cleanup & Restoration	0	0.00	10.21	0.00
Trenching – Switchyard	0	0.00	10.21	0.00
Site Preparation 1 – Switchyard	210	22.73	10.21	2,226.04
Conductor Installation 1	336	36.36	10.21	3,561.67
Site Preparation 2 – Switchyard	184	19.84	10.21	1,942.74
Paving – Switchyard	0	0.00	10.21	0.00
Site Preparation – Gen-Tie	22	2.36	10.21	231.10
Operate Air Tools	0	0.00	10.21	0.00
Structure Installation	372	39.90	10.21	3,907.49
Conductor Installation 2	0	0.00	10.21	0.00
Erect Structures	0	0.00	10.21	0.00
Conductor Removal 1	336	33.40	10.21	3,271.43
Operate Air Tools	0	0.00	10.21	0.00
Structure Removal	372	36.98	10.21	3,621.94
Conductor Removal 2	0	0.00	10.21	0.00
Remove Structures	0	0.00	10.21	0.00
			Total	**302,255.76**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Table 3.1.2-5
Construction and Decommissioning Haul Truck Diesel Demand – JVR Energy Park

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Site Mobilization	0	0.00	10.21	0.00
Demolition of old farm	40	0.21	10.21	20.92
Site Prep, Grading, Stormwater Protections	33,000	580.28	10.21	56,834.23
Fence Installation	0	0.00	10.21	0.00
Pile Driving	0	0.00	10.21	0.00
Landscaping Installation	0	0.00	10.21	0.00
Tracker and Module Installation	0	0.00	10.21	0.00
DC Electrical	0	0.00	10.21	0.00
Underground Medium AC Voltage Electrical	0	0.00	10.21	0.00
Inverter Installation	0	0.00	10.21	0.00
BESS Installation	0	0.00	10.21	0.00
Commissioning	0	0.00	10.21	0.00
Perimeter Fence Removal	0	0.00	10.21	0.00
System Disassembly and Removal	0	0.00	10.21	0.00
Energy Storage System	0	0.00	10.21	0.00
Site Cleanup & Restoration	0	0.00	10.21	0.00
Trenching – Switchyard	0	0.00	10.21	0.00
Site Preparation 1 – Switchyard	0	0.00	10.21	0.00
Conductor Installation 1	0	0.00	10.21	0.00
Site Preparation 2 – Switchyard	30	1.15	10.21	112.69
Paving – Switchyard	0	0.00	10.21	0.00
Site Preparation – Gen-Tie	0	0.00	10.21	0.00
Operate Air Tools	0	0.00	10.21	0.00
Structure Installation	0	0.00	10.21	0.00
Conductor Installation 2	0	0.00	10.21	0.00
Erect Structures	0	0.00	10.21	0.00
Conductor Removal 1	0	0.00	10.21	0.00
Operate Air Tools	0	0.00	10.21	0.00
Structure Removal	0	0.00	10.21	0.00
Conductor Removal 2	0	0.00	10.21	0.00
Remove Structures	0	0.00	10.21	0.00
			Total	**56,967.84**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO2 = carbon dioxide; MT = metric ton

Table 3.1.2-6
Hours of Operation for Construction Equipment – Switchyard

Phase	Hours of Equipment Use
Trenching – Switchyard	176
Site Preparation 1 – Switchyard	2,184
Conductor Installation 1	168
Site Preparation 2 – Switchyard	552
Paving – Switchyard	616
Site Preparation – Gen-Tie	352
Operate Air Tools	640
Structure Installation	248
Conductor Installation 2	168
Erect Structures	84
Total	**5,188**

Source: Appendix P.

Table 3.1.2-7
Construction Equipment Diesel Demand – Switchyard

Phase	Pieces of Equipment[a]	Equipment CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Trenching – Switchyard	1	3.26	10.21	319.42
Site Preparation 1 – Switchyard	13	84.65	10.21	8,290.87
Conductor Installation 1	1	1.55	10.21	151.71
Site Preparation 2 – Switchyard	3	25.94	10.21	2,540.32
Paving – Switchyard	7	12.28	10.21	1,202.81
Site Preparation – Gen-Tie	4	10.52	10.21	1,030.52
Operate Air Tools	1	13.62	10.21	1,333.73
Structure Installation	1	0.48	10.21	47.48
Conductor Installation 2	1	8.69	10.21	850.91
Erect Structures	1	2.66	10.21	260.64
			Total	**16,028.41**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-8
Construction Worker Vehicle Gasoline Demand – Switchyard

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Trenching – Switchyard	88	1.67	8.78	190.58
Site Preparation 1 – Switchyard	714	13.58	8.78	1,546.30

Table 3.1.2-8
Construction Worker Vehicle Gasoline Demand – Switchyard

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Conductor Installation 1	504	9.58	8.78	1,091.50
Site Preparation 2 – Switchyard	184	3.45	8.78	392.65
Paving – Switchyard	198	3.64	8.78	414.37
Site Preparation – Gen-Tie	110	2.02	8.78	230.21
Operate Air Tools	640	11.76	8.78	1,339.40
Structure Installation	124	2.28	8.78	259.51
Conductor Installation 2	84	1.54	8.78	175.80
Erect Structures	84	1.54	8.78	175.80
			Total	**5,816.12**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-9
Construction Vendor Truck Diesel Demand – Switchyard

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Trenching – Switchyard	0	0.00	10.21	0.00
Site Preparation 1 – Switchyard	210	22.73	10.21	2,226.04
Conductor Installation 1	336	36.36	10.21	3,561.67
Site Preparation 2 – Switchyard	184	19.84	10.21	1,942.74
Paving - Switchyard	0	0.00	10.21	0.00
Site Preparation – Gen-Tie	22	2.36	10.21	231.10
Operate Air Tools	0	0.00	10.21	0.00
Structure Installation	372	39.90	10.21	3,907.49
Conductor Installation 2	0	0.00	10.21	0.00
Erect Structures	0	0.00	10.21	0.00
			Total	**11,869.04**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-10
Construction Haul Truck Diesel Demand – Switchyard

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Trenching – Switchyard	0	0	10.21	0.00
Site Preparation 1 – Switchyard	0	0	10.21	0.00

Table 3.1.2-10
Construction Haul Truck Diesel Demand – Switchyard

Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Conductor Installation 1	0	0	10.21	0.00
Site Preparation 2 – Switchyard	30	1.15	10.21	112.69
Paving - Switchyard	0	0	10.21	0.00
Site Preparation – Gen-Tie	0	0	10.21	0.00
Operate Air Tools	0	0	10.21	0.00
Structure Installation	0	0	10.21	0.00
Conductor Installation 2	0	0	10.21	0.00
Erect Structures	0	0	10.21	0.00
			Total	**112.69**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: CO_2 = carbon dioxide; MT = metric ton

Table 3.1.2-11
Petroleum Consumption – JVR Energy Park Operation

Fuel	MT CO_2	Kilograms CO_2 per Gallon	Gallons
Gasoline Vehicles	205.40	8.78	23,393.82
Diesel Vehicles	16.70	10.21	1,635.53
Diesel Generator	39.80	10.21	3,898.23
		Total	**28,927.58**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: MT = metric ton; CO_2 = carbon dioxide

Table 3.1.2-12
Petroleum Consumption – Switchyard Operation

Fuel	MT CO_2	Kilograms CO_2 per Gallon	Gallons
Gasoline Vehicles	4.64	8.78	528.31
Diesel Vehicles	0.38	10.21	36.94
		Total	**565.25**

Sources:
[a] Appendix P.
[b] The Climate Registry 2018.
Notes: MT = metric ton; CO_2 = carbon dioxide

3.1.3 Greenhouse Gas Emissions

This section of the Environmental Impact Report (EIR) discusses the significance of the proposed JVR Energy Park Project (Proposed Project) greenhouse gas (GHG) emissions by analyzing the increase in GHG emissions that would result, directly or indirectly, from implementation of the Proposed Project, and examining the Proposed Project relative to relevant planning and policy benchmarks.

The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical reports prepared for the Proposed Project:

- Greenhouse Gas Emissions Technical Report for the JVR Energy Park Project (Appendix P)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding evaluating the construction, operational, and cumulative impacts of the Proposed Project on the environment. These concerns are considered in the preparation of this section where applicable. A copy of NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

3.1.3.1 Existing Conditions

Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in the Earth's energy balance, including variations in the sun's energy reaching the Earth, changes in the reflectivity of the Earth's atmosphere and surface, and changes in the "greenhouse effect," which affects the amount of heat retained by the Earth's atmosphere (EPA 2017).

The "greenhouse effect" is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and are the most significant driver of observed climate change (EPA 2017; IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further below under Potential Effects of Climate Change.

Greenhouse Gases

As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also the California Environmental Quality Act [CEQA] Guidelines Section 15364.5). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, hydrochlorofluorocarbons, perfluorocarbons, and SF_6, and are associated with certain industrial products and processes.

The following paragraphs provide a summary of the GHGs that are estimated in the California Emissions Estimator Model (CalEEMod) and relevant to this section's analysis.[1,2]

Carbon Dioxide (CO_2). CO_2 is a naturally occurring gas and a by-product of human activities, and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of coal, oil, natural gas, and wood.

[1] Climate-forcing substances include GHGs and other substances, such as black carbon and aerosols. This section's analysis focuses on the GHGs that are estimated by CalEEMod. However, a brief description of other climate-forcing substances is provided in Appendix P for information purposes.

[2] The descriptions of these GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (IPCC 1995), IPCC Fourth Assessment Report (IPCC 2007), the California Air Resources Board's Glossary of Terms Used in GHG Inventories (CARB 2018), and U.S. Environmental Protection Agency's Glossary of Climate Change Terms (EPA 2016).

Methane (CH_4). CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide (N_2O). Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and the use of N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Sulfur Hexafluoride (SF_6). SF_6 is a potent greenhouse gas; over a 100-year period, SF_6 is 23,900 times more effective at trapping infrared radiation than an equivalent amount of carbon dioxide. SF_6 is also a very stable chemical, with an atmospheric lifetime of 3,200 years.

The most common use for SF_6 is as an electrical insulator in high-voltage equipment that transmits and distributes electricity. Since the 1950s, the U.S. electric power industry has used SF_6 widely in circuit breakers, gas-insulated substations, and other switchgear used in the transmission system to manage the high voltages carried between generation stations and customer load centers. Fugitive emissions of SF_6 can escape from gas insulated substations and switchgear through seals and can also be released during equipment installation and when equipment is opened for servicing. Several factors affect SF_6 emissions from electric power systems, such as the type and age of the equipment (e.g., older circuit breakers can contain up to 2,000 pounds of SF_6, while modern breakers usually contain less than 100 pounds) and the handling and maintenance procedures practiced by the utilities.

GHGs in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (IPCC 2007).

The Intergovernmental Panel on Climate Change (IPCC) developed global warming potential (GWP) values to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e).

CalEEMod (Version 2016.3.2) (CAPCOA 2017) used in this analysis assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC's Fourth Assessment Report (IPCC 2007).

Sources of Greenhouse Gas Emissions

Per the U.S. Environmental Protection Agency's (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016, total U.S. GHG emissions were approximately 6,511 million metric tons (MMT) CO_2e in 2016 (EPA 2018). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81% of total GHG emissions (5,313 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 94% of CO_2 emissions in 2016 (4,966 MMT CO_2e). Relative to 1990, gross U.S. GHG emissions in 2016 were higher by 5%, down from a high of 16% above 1990 levels in 2007. GHG emissions decreased from 2015 to 2016 by 2% (83 MMT CO_2e), and overall, net emissions in 2016 were 12% below 2005 levels (EPA 2018).

According to California's 2000–2016 GHG emissions inventory (2018 edition), California emitted 429 MMT CO_2e in 2016, including emissions resulting from out-of-state electrical generation (CARB 2017a). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2016 are presented in Table 3.1.3-1, Greenhouse Gas Emissions Sources in California.

Between 2000 and 2015, per-capita GHG emissions in California have dropped from a peak of 14.0 MT per person in 2001 to 10.8 MT per person in 2015, representing a 23% decrease. In addition, total GHG emissions in 2015 were approximately 11 MMT CO_2e less than 2014 emissions (CARB 2017a).

According to the GHG inventory data compiled by the Energy Policy Initiative Center (EPIC), in 2010, San Diego County emitted 34.5 MMT CO_2e (EPIC 2013). As outlined in Table 3.1.3-2, San Diego County Greenhouse Gas Emissions by Sectors, 42% of these emissions were generated by on-road transportation sources. Similar to emissions trends statewide, electricity generation is the second biggest emitter.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The IPCC's 2014 Synthesis Report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global

climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010a, 2010b). A brief summary of current and future climate change impacts to resource areas in California, as discussed in Safeguarding California: Reducing Climate Risk (CNRA 2014), is provided below. Additional discussion is provided in Appendix P.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events; significant shifts in water availability and water quality; changes in pollinator lifecycles; temperature fluctuations; increased risks from invasive species and weeds, agricultural pests, and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration, range shift, and novel combinations of species; pathogens, parasites, and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; and threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss occurs).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea level rise. Increasing temperatures and reduced snowpack negatively impact the availability of a steady flow of snowmelt to hydroelectric reservoirs. Higher temperatures also reduce the capacity of thermal power plants since power plant cooling is less efficient at higher ambient temperatures. Natural gas infrastructure in coastal California is threatened by sea level rise and extreme storm events.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions. These factors contribute to decreased forest growth, geographic shifts in tree distribution, loss of fish and wildlife habitat, and decreased carbon absorption.

Ocean and Coastal Ecosystems and Resources. Sea level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves is likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies.

Transportation. The transportation industry is vulnerable to climate change risks, including sea level rise and erosion, which threaten many coastal California roadways, airports, seaports, transit systems, bridge supports, and energy and fueling infrastructure. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of people and goods, or potentially block evacuation routes and emergency access driveways. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter time. Increased risk of flooding has a variety of public health concerns including water quality, public safety, property damage, displacement and post-disaster mental health problems. Prolonged and intensified droughts can also negatively affect groundwater reserves and result in increased overdraft and subsidence.

In March 2016, the California Natural Resources Agency (CNRA) released Safeguarding California: Implementation Action Plans, a document that shows how California is acting to convert the recommendations contained in the 2014 Safeguarding California plan into action (CNRA 2016). Additionally, in May 2017, the CNRA released the draft Safeguarding California Plan: 2017 Update, which is a survey of current programmatic responses for climate change and contains recommendations for further actions (CNRA 2017).

The CNRA released Safeguarding California Plan: 2018 Update in January 2018, which provides a roadmap for state agencies to protect communities, infrastructure, services, and the natural

environment from climate change impacts. The 2018 Safeguarding California Plan includes 69 recommendations across 11 sectors and more than 1,000 ongoing actions and next steps developed by scientific and policy experts across 38 state agencies (CNRA 2018).

Carbon Sequestration

Carbon sequestration is the process by which CO_2 is removed from the atmosphere and deposited into a carbon reservoir (e.g., vegetation). Trees and vegetation take in CO_2 from the atmosphere during photosynthesis, break down the CO_2, store the carbon within plant parts, and release the oxygen back into the atmosphere (CARB 2015). A development that removes or disturbs existing vegetation results in potential release of sequestered carbon to the atmosphere as CO_2, which would not have been released had there been no land use type change. The planting of new trees and vegetation would store new carbon as their wood mass increases via normal growth.

3.1.3.2 Regulatory Setting

The following text describes executive orders, legislation, regulations, court decisions, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

Federal

Massachusetts v. EPA. In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the EPA Administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, perfluorocarbons, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling in *Massachusetts v. EPA*, the George W. Bush Administration issued Executive Order (EO) 13432 in 2007 directing EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 by model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On April 2, 2018, the EPA Administrator signed the Mid-term Evaluation Final Determination, which finds that the model year 2022–2025 GHG standards are not appropriate in light of the record before the EPA and, therefore, should be revised (EPA 2018).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty

pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

The Current Administration. President Trump and the EPA have stated their intent to halt various federal regulatory activities to reduce GHG emissions. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and potential responses from California and other states are speculative at this time.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. Refer to Appendix P for an expanded list of state laws, regulations, and policies related to GHG emissions and climate change.

State Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

Assembly Bill 32 and CARB's Climate Change Scoping Plan. In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is

required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with Health and Safety Code Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050." The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals (CARB 2014).

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are energy transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), agriculture water waste management, and natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal (CARB 2014).

Based on CARB's research efforts presented in the First Update, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies (CARB 2014).

In January 2017, CARB released The 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017b). This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed later in this section under the heading SB 32 and AB 197). The Second Update was approved by CARB's Governing Board on December 14, 2017 (CARB 2017b).

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32, AB 197, and EO B-55-18. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target, make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities, and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified a 2030 emissions reduction target that requires CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also adds two members of the Legislature to CARB as nonvoting members, requires CARB to make available and update (at least annually via its website) emissions data for GHGs and other pollutants from reporting facilities, and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan. EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This executive order directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCPs) in the state; SB 1383 (2016) required CARB to approve and implement the SLCP reduction strategy. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (SLCP Reduction Strategy) in

March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, schools, and hospitals. The CALGreen 2016 standards became effective on January 1, 2017.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368. SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2. SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030 be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

AB 1493. In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (2002) required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles primarily used for noncommercial personal transportation. The bill specifically required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. The near-term (2009–2012) standards were estimated to result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards were estimated to result in a reduction of about 30%.

EO S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code, Section 65080(b)(2)(K), an SCS does not (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the San Diego Association of Governments (SANDAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SANDAG completed and adopted its 2050 RTP/SCS in October 2011 (SANDAG 2011). In November 2011, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. In July 2017, the California Supreme Court held that SANDAG's EIR did not have to use EO S-3-05's 2050 goal of an 80% reduction in GHG emissions from 1990 levels as a threshold because the EIR sufficiently informed the public of the potential impacts.

Although the EIR for SANDAG's 2050 RTP/SCS was pending before the California Supreme Court, in 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines, and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted San Diego Forward: The Regional Plan. Like the 2050 RTP/SCS, this planning document meets CARB's 2020 and 2035 reduction targets for the region (SANDAG 2015). In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). CARB's GHG standards for model year 2017 to 2025 vehicles are estimated to reduce GHG emissions by 34% in 2025. The Zero Emissions Vehicle (ZEV) program acts as the focused advanced technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (EVs) in the 2018 to 2025 model years. The Clean Fuels Outlet regulation relatedly ensures that fuels, such as electricity and hydrogen, are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

President Trump and the EPA have stated their intent to halt various federal regulatory activities to reduce GHG emissions. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and potential responses from California and other states are speculative at this time.'

In August 2019, the EPA and NHTSA jointly published a notice of proposed rulemaking for Part One of the Safer Affordable Fuel-Efficient Vehicle Rule (SAFE Rule). The SAFE Rule proposed new and amended CO_2, Corporate Average Fuel Economy (CAFE), and GHG emissions standards for passenger cars and light trucks. Further, Part One of this rule proposed to withdraw the State of California's waiver, afforded under the Clean Air Act (CAA) to set GHG and ZEV standards separate from the federal government. Part One of the SAFE Rule became effective in November 2019. CARB has provided adjustment factors for pollutants, including NO_2, PM_{10}, and $PM_{2.5}$, and CO, from light-duty vehicle exhaust to account for Part One of the SAFE Rule.

However, corresponding adjustment factors for GHG emissions are not available at this time. In March 2020, EPA and NHTSA announced Part Two of the SAFE Rule, which would set amended fuel economy and CO2 standards for passenger cars and light trucks for model years 2021–2026. Part Two would become effective 60 days after publication in the Federal Register. The impact of Parts One and Two of the SAFE Rule on GHG emissions factors in California has not been quantified by CARB in the Emissions Factor model (EMFAC) or related modeling tools. These modeling tools would need to be amended, or corresponding adjustment factors published, to quantitatively assess the impact on GHG emissions. Therefore, the quantitative methodology used to project GHG emissions for the Proposed Project does not include the impact of the SAFE Rule. At the time of this writing, the methodology represents current guidance and best available data from CARB.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less emissions than 1990 levels by 2050. In furtherance of this EO, the governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236. AB 1236 (2015) as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of EV charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and

there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. In August 2016, the County of San Diego (County) Board of Supervisors adopted Ordinance No. 10437 (N.S.), adding a section to its County Code related to the expedited processing of electric-vehicle charging station permits consistent with AB 1236.

SB 350. In 2015, SB 350, the Clean Energy and Pollution Reduction Act, was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

EO B-48-18. EO B-48-18 (2018) launches an 8-year initiative to accelerate the sale of EVs through a mix of rebate programs and infrastructure improvements. The order also sets a new EV target of five million EVs in California by 2030. EO B-48-18 includes funding for multiple state agencies including the California Energy Commission to increase EV charging infrastructure and CARB to provide rebates for the purchase of new EVs and purchase incentives for low-income customers.

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020 (CalRecycle 2015).

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model

Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97. SB 97 (2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant (OPR 2008).

Subsequent to the release of the Governor's Office of Planning and Research's advisory and its development of proposed CEQA Guidelines provisions, the California Natural Resources Agency adopted CEQA Guidelines amendments in December 2009, which became effective in March 2010. With respect to GHG emissions, the amended CEQA Guidelines state that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that lead agencies may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). The amended CEQA Guidelines also state that lead agencies should consider the following when assessing the significance of impacts from GHG emissions on the environment: the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009a), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016

(CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

Biological Diversity v. California Department of Fish and Wildlife. In its decision in *Center for Biological Diversity v. California Dep't of Fish and Wildlife* (*Newhall*) 62 Cal.4th 204 (2015), the California Supreme Court set forth several options that lead agencies may consider for evaluating the cumulative significance of a project's GHG emissions:

1. A calculation of emissions reductions compared to a "business as usual" (BAU) scenario based upon the emissions reductions in CARB's Scoping Plan, including examination of the data to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals.
2. A lead agency might assess consistency with AB 32's goals by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities.
3. Use of geographically specific GHG emission reduction plans to provide a basis for tiering and streamlining of project-level CEQA analysis.
4. A lead agency may rely on existing numerical thresholds of significance for GHG emissions, though use of such thresholds is not required.

There is no applicable existing numerical threshold of significance for GHG emissions and the *Newhall* decision specifically found that use of a numerical threshold is not required.

Local

San Diego Air Pollution Control District

The San Diego Air Pollution Control District (SDAPCD) does not have established GHG rules, regulations, or policies.

County of San Diego

Climate Action Plan

The County developed a Climate Action Plan (CAP) as a comprehensive strategy to reduce GHG emissions in the unincorporated communities of San Diego County. A draft CAP was released on August 10, 2017, for public review. The plan includes six chapters: (1) Introduction; (2) Greenhouse Gas Emissions Inventory, Projections, and Reductions Targets; (3) Greenhouse Gas Reduction Strategies and Measures; (4) Climate Change Vulnerability, Resiliency, and Adaptation; (5) Implementation and Monitoring; and (6) Public Outreach and Engagement.

Concurrent with the release of the draft CAP, the County published implementation tools for the County to use when conducting a CEQA analysis. This includes a general plan land use conformity determination and CAP Consistency review checklist. In January 2018, the Planning Commission recommended adoption of the final CAP to the County Board of Supervisors. On February 14, 2018, the County Board of Supervisors adopted the CAP (County of San Diego 2018).

A lawsuit was then filed challenging the CAP and the County's related approvals (San Diego Superior Court Case No. 37-2018-00014081-CU-TT-CTL). On January 16, 2019, the County of San Diego Superior Court entered judgment in the suit (San Diego Superior Court Case No. 37-2018-00014081-CU-TT-CTL). The judgment, among other things, issued a writ of mandate directing the County to set aside the approval of the CAP and the Final Supplemental Environmental Impact Report to the 2011 General Plan Update Program Environmental Impact Report and declared that the CAP and the "certification of the Final SEIR to the 2011 General Plan Update Program EIR are legally inadequate and may not be used to provide the basis for CEQA review of GHG impacts of development proposals in the unincorporated County."

The County subsequently appealed the Superior Court's judgment to the Fourth Appellate District, Division One (Case No. D075478). On June 12, 2020, the appellate court affirmed the trial court's order with respect to the CAP and the Final SEIR. Accordingly, the County remains enjoined from using the CAP as the basis for CEQA review of GHG impacts of development proposals in the County.

General Plan

The County's General Plan (County of San Diego 2011) includes smart growth and land use planning principles designed to reduce vehicle miles traveled (VMT) and result in a reduction in GHG emissions. Climate change and GHG reduction policies are addressed in plans and programs in multiple elements of the General Plan. In 2018, the County implemented publicly and privately initiated General Plan Amendments which addressed the following areas: Local Coastal Program Update, Active Transportation Plan, Lake Jennings Marketplace, Harmony Grove Village South, Valiano, Otay 250 Sunroad East Otay Mesa Business Park, and Newland Sierra (County of San Diego 2020).

The strategies for reduction of GHG emissions in the General Plan are as follows (County of San Diego 2011):

- **Strategy A-1:** Reduce vehicle trips generated, gasoline/energy consumption, and GHG emissions.
- **Strategy A-2:** Reduce non-renewable electrical and natural gas energy consumption and generation (energy efficiency).
- **Strategy A-3:** Increase generation and use of renewable energy sources.

- **Strategy A-4:** Reduce water consumption.
- **Strategy A-5**: Reduce and maximize reuse of solid wastes.
- **Strategy A-6:** Promote carbon dioxide consuming landscapes.
- **Strategy A-7:** Maximize preservation of open spaces, natural areas, and agricultural lands.

The General Plan also includes climate adaptation strategies to deal with potential adverse effects of climate change. The climate adaptation strategies include the following (County of San Diego 2011):

- **Strategy B-1:** Reduce risk from wildfire, flooding, and other hazards resulting from climate change.
- **Strategy B-2:** Conserve and improve water supply due to shortages from climate change.
- **Strategy B-3:** Promote agricultural lands for local food production.
- **Strategy B-4:** Provide education and leadership.

The County General Plan's Conservation and Open Space Element also includes goals and policies that are designed to reduce GHGs emissions by enhancing the efficiency of energy use in buildings and infrastructure, and promoting the use of renewable energy sources and conservation, and other methods of efficiency. The pertinent goals are identified below.

- **Goal COS-14, Sustainable Land Development.** Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.
- **Goal COS-15, Sustainable Architecture and Buildings.** Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.
- **Goal COS-16, Sustainable Mobility.** Transportation and mobility systems that contribute to environmental and human sustainability and minimize GHG and other air pollutant emissions.
- **Goal COS-17, Sustainable Solid Waste Management.** Perform solid waste management in a manner that protects natural resources from pollutants while providing sufficient, long term capacity through vigorous reduction, reuse, recycling, and composting programs.
- **Goal COS-18, Sustainable Energy.** Energy systems that reduce consumption of non-renewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities.
- **Goal COS-19, Sustainable Water Supply.** Conservation of limited water supply supporting all uses including urban, rural, commercial, industrial, and agricultural uses.

- **Goal COS-20, Governance and Administration.** Reduction of local GHG emissions contributing to climate change that meet or exceed requirements of the Global Warming Solutions Act of 2006.

The Proposed Project's consistency with the General Plan is evaluated below in Section 3.1.3.3, and in Section 3.1.4 Land Use and Planning, of this EIR.

Renewable Energy Plan

The County's Renewable Energy Plan researches and develops renewable energy options in the County. The planning effort covers the residential, commercial, and industrial sectors of the County, with a particular focus on unincorporated areas, and presents a comprehensive approach to renewable energy and energy efficiency (County of San Diego 2017a).

Strategic Plan to Reduce Waste

The County Strategic Plan to Reduce Waste outlines near, mid-, and long-term programs and policies to increase the County's solid waste diversion rate to meet state targets and support other County initiatives. In April 2017, the County adopted a diversion goal of 75% by 2025 (County of San Diego 2017b).

3.1.3.3 Analysis of Proposed Project Effects and Determination as to Significance

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted, or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments (County of San Diego 2013). Accordingly, this EIR analyzes the impacts from the Proposed Project using questions posed in Appendix G.

The Proposed Project's potential impacts on GHGs will be assessed using the GHG thresholds set forth in Appendix G, Environmental Checklist Form:

1. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The Appendix G thresholds for GHGs do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific

mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009b). Additional guidance regarding assessment of GHGs is discussed below.

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Section 1.2.1 of Chapter 1, Project Description) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

CEQA Guidelines

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's greenhouse gas emissions or rely on a "qualitative analysis or other performance based standards" (14 CCR 15064.4[b]). A lead agency may use a "model or methodology" to estimate greenhouse gas emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

OPR Guidance

The OPR's Technical Advisory titled CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the San Diego Air Basin, such as the Proposed Project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

Although the Proposed Project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance of a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB 97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009b). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b). Accordingly, further discussion of the Proposed Project's GHG emissions and their impact on global climate are addressed in Section 3.1.3.5.

In regard to evaluating the Proposed Project's significance with respect to CEQA Guidelines checklist #1, the Proposed Project's emissions were evaluated against the existing site conditions. The Proposed Project's net GHG emissions and impact were further assessed to include the benefit of producing zero GHG emission energy and the avoided GHG emissions associated with its use within the regional power grid.

To address the CEQA Guidelines checklist question #2, whether the Proposed Project is consistent with plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, the Proposed Project was evaluated against AB 32, SANDAG's RTP/SCS, and EO B-55-18.

3.1.3.3.1 Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Project Emissions

Construction

The Proposed Project would include installation of 300,000 PV modules, an underground collection system, on-site collector substation, switchyard, an up to a 90 MW battery energy system, vehicle access, fencing and landscaping. Approximately 643 acres of the Project site would be graded.

For purposes of estimating Proposed Project emissions, and based on information provided by the applicant, it is assumed that construction of the Proposed Project would commence in December 2020[3] and would last approximately 13 months. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate). The majority of the phases listed below would occur concurrently and would not occur sequentially in isolation. Detailed construction equipment modeling assumptions are provided in Appendix P.

- Site Mobilization: 2 weeks
- Demolition of dairy and ranching structures: 1 month
- Site Prep, Grading, and Stormwater Protections: 3 months
- Fence Installation: 3 months
- Landscaping Installation: 4 months
- Pile Driving: 2 months

[3] The analysis assumes a construction start date of December 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

- Tracker and Module Installation: 6 months
- DC Electrical: 6 months
- Underground Medium AC Voltage Electrical: 5 months
- Inverter Installation: 2 months
- Battery Energy Storage System Installation: 2 months
- Commissioning: 1 month

Assuming the earliest start date for operation represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Stationary Sources

The Proposed Project would include a 1.5 MW diesel emergency generator at the on-site collector substation. The generator was assumed to operate for testing and maintenance approximately 30 minutes each month for a total of up to 52 hours per year, in accordance with SDAPCD Rule 69.4.1. The CalEEMod default emission factors for emergency generators were used to estimate emissions from this source. The estimated emissions from the emergency generator engines are shown in Table 3.1.3-3, Estimated Annual Operational Greenhouse Gas Emissions.

Water

Water will be used for panel washing during operation several times per year. It was estimated that up to 10 acre-feet of water would be needed for panel washing. The water would primarily be sourced from on-site groundwater wells with backup water coming from the Jacumba Community Services District. However, this analysis conservatively assumes all water would be provided by Jacumba Community Services District, which would be delivered via water truck. CalEEMod default emission factors were assumed.

Emissions Estimates

The estimated total GHG emissions during construction of would be approximately 5,764 MT CO_2e during construction (as shown in Table 3.1.3-4, Estimated Annual Construction Greenhouse Gas Emissions). Estimated Proposed-Project-generated construction emissions amortized over the Proposed Project life of 35 years would be approximately 165 MT CO_2e per year. The estimated total GHG emissions during decommissioning would be approximately 2,405 MT CO_2e (as shown in Table 3.1.3-5, Estimated Annual Decommissioning Greenhouse Gas Emissions – Proposed Project). Estimated Proposed-Project-generated decommissioning emissions amortized over the

Proposed Project life of 35 years would be approximately 69 MT CO_2e per year. The estimated total one-time loss of sequestered carbon from land use conversion for the Proposed Project would be 8,503 MT CO_2, or 243 MT CO_2 per year amortized over 35 years (as shown in Table 3.1.3-6, Vegetation Removal – Estimated Loss of Sequestered Carbon). As shown in Table 3.1.3-6, Proposed Project GHG emissions generated from operational activities are estimated to be approximately 281 MT CO_2e per year in 2022. Total operational emissions combined with amortized construction, decommissioning, and vegetation removal GHG emissions would be 758 MT CO_2e per year, assuming a 35-year Proposed Project life.

Switchyard

The analysis contained within this section evaluates the GHG emissions from the switchyard only. These emissions were included in the overall Proposed Project's GHG emissions previously discussed.

Construction

The switchyard includes two primary components:

- Construction of a new 138 kV electric switchyard
- Construction of two 138 kV, 550-foot-long (1,100 feet total) 80-foot-high overhead transmission lines (gen-tie) would loop the Proposed Project to an existing SDG&E 138 kV transmission line (originating at East County Substation) that is located adjacent to the Project site.

The switchyard would be located adjacent to the Proposed Project's collector substation. The switchyard would be connected to both the collector substation and the existing SDG&E 138 KV transmission line via a short overhead transmission line, approximately 224 feet in length. The size of the switchyard is approximately 139,392 square feet. The switchyard may include circuit breakers, overhead electrical bus work, switches and controls, and a control building, and the entire switchyard area will be enclosed inside a security fence. The switchyard includes a 30-foot-wide, asphalt paved access driveway for switchyard operations that will provide an interconnection to Carrizo Gorge Road.

For purposes of estimating switchyard emissions, and based on information provided by the applicant, it is assumed that construction of the switchyard would commence in March 2021[4] and would last approximately 10 months. The analysis contained herein is based on the following

[4] The analysis assumes a construction start date of March 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

subset area schedule assumptions (duration of phases is approximate). The majority of the phases listed below would occur concurrently and would not occur sequentially in isolation. Detailed construction equipment modeling assumptions are provided in Appendix B of Appendix P, CalEEMod Outputs.

- Site Preparation 1 – Switchyard: 1 month
- Conductor Installation 1: 1 month
- Site Preparation 2 – Switchyard: 1 month
- Trenching – Switchyard: 1 month
- Paving – Switchyard: 2 weeks
- Site Preparation – Transmission Line: 2 weeks
- Operate Air Tools: 4 months
- Structure Installation: 1.5 months
- Conductor Installation 2: 1 month
- Erect Structures: 1 month

Emissions from the construction phase of the switchyard were estimated using CalEEMod. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant, CalEEMod defaults, and best engineering judgement.

General construction equipment modeling assumptions are provided in Appendix P, Construction Workers, Vendor Trips, and Equipment Use per Day – Switchyard. Default values for equipment mix, horsepower, and load factor provided in CalEEMod were used for all construction equipment. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week. For the purposes of estimating emissions, it was assumed that worker trips and truck trips would be made to the site independently; however, it is likely that workers would drive trucks to and from the site for deliveries rather than driving in a separate vehicle. Therefore, the estimates provides in Appendix P are conservative. Detailed construction equipment modeling assumptions are provided in Appendix P.

The estimated number of workers, vendor trucks, and haul trucks were provided by the applicant. Changes to any standard default values or assumptions are reported in the CalEEMod output (see Appendix P). Based on data from similar projects in the general vicinity of the Project site, the worker mix was assumed to include 50% coming from San Diego and 50% from El Centro. As the Proposed Project's grading would be balanced on site, the haul truck trips are only assumed to be driven within the site. The water trucks are assumed to come from the Jacumba Community

Services District and the vendor trucks delivering materials to the site come from the Port of San Diego. This is a conservative assumption as the water will primarily come from on-site groundwater wells.

Switchyard Construction Emissions Estimates

As shown in Table 3.1.3-7, Estimated Annual Construction Greenhouse Gas Emissions – Switchyard, the estimated total GHG emissions during construction of the switchyard would be approximately 337 MT CO_2e during construction. Estimated switchyard-generated construction emissions amortized over 35 years would be approximately 10 MT CO_2e per year.

Assuming the earliest start date for operation represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Off-Road Equipment

The use of various pieces of off-road equipment is necessary for the different maintenance activities occurring for the switchyard, transmission line tie-in, right-of-way repair, pole brushing, and repair or replacement of equipment. The different types of equipment and daily use estimates were provided by the applicant. The CalEEMod defaults were assumed for the off-road equipment horsepower, emission factors, and load factors.

Switchyard Operational Emissions Estimates

As shown in Table 3.1.3-8, Estimated Annual Operational Greenhouse Gas Emissions – Switchyard, switchyard GHG emissions generated from operational activities are estimated to be approximately 20 MT CO_2e per year in 2022. Total operational emissions combined with amortized construction GHG emissions would be 30 MT CO_2e per year, assuming a 35-year Proposed Project life.

Analysis – Avoided GHG Emissions

The Proposed Project would provide a source of renewable energy to achieve the RPS of 60% by 2030 and 100% by 2045 consistent with the renewable energy targets in the Scoping Plan and required by SB 100 and EO B-55-18. The generation of renewable energy would offset GHG emissions generated by fossil-fuel power plants. As noted above, the Proposed Project would result in 758 MT CO_2e per year over the life of the Proposed Project. The Proposed Project is expected to produce an estimated 211,159 megawatt hours of electricity per year (NREL 2019). The default CalEEMod CO_2 emission factor for SDG&E was 720.49 pounds of CO_2 per megawatt-hour

(pounds CO_2/MWh) from 2009 (CAPCOA 2017). The renewable content for SDG&E for 2009 was 10%. SDG&E reported that 44% of its power mix was renewable in 2017, which would result in 448.30 pounds CO_2/MWh (see Appendix B of Appendix P for more details). Assuming that SDG&E would meet the EO B-55-18 carbon neutrality target in 2045, a linear regression of the SDG&E GHG emission factor was calculated from 2017 to 2044. This would mean that the Proposed Project would avoid less GHG emissions over time. Assuming this, the Proposed Project would avoid a total of 423,254 MT CO_2 from 2022 through 2044. It should be noted that the Proposed Project is expected to be operational through 2057 and thus it would not be avoiding GHG emissions from 2045 through 2057 assuming California meets its goal of becoming 100% carbon neutral by 2045. Table 3.1.3-9, Estimated Annual Operational and Avoided Greenhouse Gas Emissions, shows the total Proposed Project GHG emissions and avoided GHG emissions.

As noted above, including amortized construction emissions and carbon loss, the Proposed Project would emit 26,521 MT CO_2 over a 35-year lifetime. Thus, after subtracting avoided GHG emissions from the Proposed Project's GHG emissions, the Proposed Project would avoid approximately 396,733 MT CO_2e over its lifetime. Accordingly, the Proposed Project would avoid more GHG emissions than it would generate resulting in a **less than cumulatively considerable** contribution to significant cumulative climate change impacts.

Switchyard

The switchyard is a vital component to the Proposed Project, and the Proposed Project could not operate without the switchyard. Therefore, as discussed above, the emissions from the Proposed Project would result in a net avoidance of emissions. As the switchyard comprises approximately 11% of the Proposed Project's construction and operational GHG emissions, it would also result in a net avoidance of GHG emissions after factoring in the Proposed Project's avoided GHG emissions, and would result in a **less than cumulatively considerable** contribution to significant cumulative climate change impacts.

3.1.3.3.2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

To address whether the Proposed Project is consistent with plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, the Proposed Project was evaluated against AB 32, SANDAG's RTP/SCS, and EO B-55-18.

Consistency with CARB's Scoping Plan

As discussed in Section 3.1.3.2, Regulatory Setting, the Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[5] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., LCFS), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 3.1.3-10, Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies, highlights measures that have been, or will be, developed under the Scoping Plan and the Proposed Project's consistency with Scoping Plan measures. To the extent that these regulations are applicable to the Proposed Project, its inhabitants, or uses, the Proposed Project would comply will all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Based on the analysis in Table 3.1.3-10, the Proposed Project would be consistent with the applicable strategies and measures in the Scoping Plan.

The Proposed Project would not impede and may help the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05, B-55-18, and SB 32. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically

[5] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009b).

feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014). EO B-55-18 established the goal to achieve carbon neutrality by 2045.

To begin, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update (CARB 2017b), which states the following:

> The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

In addition, as discussed previously, the Proposed Project is consistent with the strategies in the Scoping Plan and would not conflict with the state's trajectory toward future GHG reductions. Since the specific path to compliance for the state in regard to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the Proposed Project would be speculative and cannot

be identified at this time. The Proposed Project's consistency would assist in meeting the County's contribution to GHG emission reduction targets in California. With respect to future GHG targets under SB 32 and EO S-3-05, CARB has also made clear its legal interpretation is that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40% reduction target by 2030 and EO S-3-05's 80% reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets. The Proposed Project would increase renewable energy production and thus would support the goals within SB 32, EO S-3-05, and EO B-55-18. Based on the considerations previously outlined, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. This impact would be **less than significant**.

Consistency with SANDAG's San Diego Forward: the Regional Plan

Regarding consistency with SANDAG's Regional Plan, the Proposed Project would support the policy objectives of the RTP and SB 375. Table 3.1.3-11, San Diego Forward: The Regional Plan Consistency Analysis, illustrates the Proposed Project's consistency with all applicable goals and policies of San Diego Forward: The Regional Plan (SANDAG 2015). As shown in Table 3.1.3-11, the Proposed Project is consistent with all applicable Regional Plan Policy Objectives or Strategies. Impacts would be **less than significant**.

The Proposed Project would provide a potential reduction in GHG emissions each year of operation if the electricity generated by the solar facility were to be used instead of electricity generated by fossil-fuel sources. Specifically, the Proposed Project would directly aid the state in achieving statewide GHG emission reductions through the increased production of renewable energy as called for under Senate Bill X1 2, Senate Bill 350, and Senate Bill 100, and discussed in the Scoping Plan. The latest of these bills, Senate Bill 100, requires utilities to provide an energy mix containing at least 60% renewables by 2030. The Proposed Project would aid in meeting that target.

Therefore, because the Proposed Project would assist in the attainment of the state's goals by providing a new renewable source of energy that could displace electricity generated by fossil-fuel-fired power plants, the Proposed Project would be consistent with the regulations, plans, goals and objectives of the state and the County adopted to reduce GHG emissions, and would make a **less than cumulatively considerable contribution** to significant cumulative climate change impacts.

County GHG Reduction Plans

The Proposed Project is consistent with County plans and policies adopted to reduce GHG emissions. The County's General Plan includes many goals and policies adopted to reduce GHG

emissions, which the General Plan organizes into "strategies." Strategy A-3 is to increase generation and use of renewable energy sources and includes Conservation and Open Space Policy COS-18.1 (County of San Diego 2011). The Conservation and Open Space Element of the County's General Plan "encourages and supports land use development patterns and transportation choices that reduce pollutants and greenhouse gases" and "encourages renewable energy production." Goal COS-18 promotes sustainable energy and encourages "[e]nergy systems that reduce consumption of non-renewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities." Policy COS-18.1 supports Goal COS-18 and directs the County to work with developers to facilitate the development of alternative energy systems. The Proposed Project is a renewable energy source is therefore consistent with Strategy A-3, Goal COS-18, Policy COS-18.1, and one of the primary purposes of the Conservation and Open Space Element. The Proposed Project would also support the County's Strategic Energy Plan and its community energy strategy goal of minimizing GHG emissions for healthier and more sustainable communities. It supports the key focus area of promoting renewable energy. Therefore, the Proposed Project would be consistent with the County's GHG reduction plans.

Switchyard

The switchyard would support the Proposed Project and the production of renewable energy. It would not conflict with AB 32 or other GHG reducing plans, policies, or regulations. The switchyard would comply with the SF_6 requirements that CARB has in place for reducing the leak rate of gas insulating switchgear. The switchyard is not growth inducing and would have minimal GHG emissions during operation. Therefore, the switchyard would have a **less than cumulatively considerable contribution** to significant cumulative climate change impacts.

3.1.3.4 Cumulative Impact Analysis

Due to the global nature of the assessment of GHG emissions and the effects of global climate change, impacts are analyzed from a cumulative impact context; therefore, this EIR's analysis includes the assessment of Proposed Project impacts as a cumulative impact as discussed in Section 3.1.3.4, Cumulative Impact Analysis.

Switchyard

Due to the global nature of the assessment of GHG emissions and the effects of global climate change, impacts are analyzed from a cumulative impact context; therefore, the switchyard's analysis includes an assessment of switchyard impacts as a cumulative impact, as discussed in Section 3.1.3.4.

3.1.3.5 Significance of Impacts Prior to Mitigation

The Proposed Project would be consistent with applicable GHG reduction plans, and the Proposed Project would avoid more GHG emissions than it would generate; therefore, impacts related to GHG emissions would be **less than significant**.

3.1.3.6 Mitigation Measures

No mitigation is necessary.

3.1.3.7 Conclusion

The Proposed Project would avoid more GHG emissions than it would generate resulting in a **less than cumulatively considerable contribution** to cumulative climate change impacts. The Proposed Project is also consistent with applicable plans, policies, and regulations adopted to reduce GHG emissions, including SB X1 2, SB 350, and SB 100, and County General Plan Strategy A-3. The Proposed Project also supports the County's Strategic Energy Plan. The Proposed Project's amortized construction, decommissioning, and operational emissions, including the loss of sequestered carbon, would be 758 MT CO_2e per year. Further, the Proposed Project would avoid approximately 396,733 MT CO_2e over its lifetime after subtracting total Proposed Project GHG emissions. Therefore, the Proposed Project would make a **less than significant** contribution to cumulative climate change impacts.

Table 3.1.3-1
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total
Transportation	176.1	41%
Industrial	98.8	23%
Electricity (in state)	42.9	10%
Electricity (imports)	25.8	6%
Agriculture	34.4	8%
Residential	30.1	7%
Commercial	21.5	5%
Total	**429.4**	**100%**

Source: CARB 2018.
Note: MMT CO_2e = million metric tons of carbon dioxide equivalent per year.

Table 3.1.3-2
San Diego County Greenhouse Gas Emissions by Sectors

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total
On-road transportation	14.4	42%
Electricity generation	8.3	24%
Natural gas end uses	2.9	8%
Off-road equipment and vehicles	1.4	4%
Civil aviation	1.9	5%
Industrial processes and products	1.8	5%
Waste	0.6	2%
Water-borne navigation	0.1	<1%
Rail	0.32	<1%
Other fuels	1.58	5%
Agriculture (livestock)	0.05	<1%
Wildfires	0.28	<1%
Development (loss of vegetation)	0.18	<1%
Sequestration from land cover	0.66	2%
Total	**34.5**	**100%**

Source: EPIC 2013.
Note: MMT CO_2e = million metric tons of carbon dioxide equivalent per year.

Table 3.1.3-3
Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area[a]	0.00	0.00	0.00	6.73
Energy	0.93	0.00	0.00	0.93
Mobile	217.08	0.01	0.00	217.31
Stationary	4.58	0.00	0.00	4.61

Table 3.1.3-3
Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Water	39.80	0.01	0.00	39.94
			Subtotal	*281.39*
			Amortized Construction Emissions over 35 Years	164.69
			Amortized Loss of Sequestered Carbon over 35 Years	242.94
			Amortized Decommissioning Emissions over 35 Years	68.71
			Total	**757.73**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide.
See Appendix P for complete results.
[a] Emissions from SF_6 are considered an area source.

Table 3.1.3-4
Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	267.40	0.03	0.00	268.22
2021	5,485.95	0.39	0.00	5,495.87
			Total	**5,764.09**
			Amortized Emissions over 35 Years	**164.69**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide.
Construction emissions include CO_2 emissions from blasting activity.
See Appendix P for complete results.

Table 3.1.3-5
Estimated Annual Decommissioning Greenhouse Gas Emissions – Proposed Project

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2057	2,402.75	0.08	0.00	2,404.76
			Amortized Emissions over 35 Years	**68.71**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
Construction emissions include CO_2 emissions from blasting activity.
See Appendix P for complete results.

Table 3.1.3-6
Vegetation Removal – Estimated Loss of Sequestered Carbon

Vegetation Type	CalEEMod Vegetation Land Use Category	CO_2 Emissions Factor (*MT CO_2 per acre*)	Net Loss (acres)	Loss of Sequestered Carbon (*MT CO_2*)
Forest Land	Scrub	14.3	594.62	8,503.07
			Amortized Emissions over 30 Years	**242.94**

Source: CAPCOA 2017.
Notes: MT CO_2 = metric tons carbon dioxide.
See Appendix P for complete results.

Table 3.1.3-7
Estimated Annual Construction Greenhouse Gas Emissions – Switchyard

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	335.53	0.05	0.00	336.90
			Amortized Emissions over 35 Years	**9.63**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
Construction emissions include CO_2 emissions from blasting activity.
See Appendix P for complete results.

Table 3.1.3-8
Estimated Annual Operational Greenhouse Gas Emissions – Switchyard

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area[a]	0.00	0.00	0.00	4.07
Mobile	10.03	0.00	0.00	8.81
Offroad	4.58	0.00	0.00	4.61
			Subtotal	*20.15*
			Amortized Construction Emissions over 35 Years	9.63
			Total	**29.78**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
See Appendix P for complete results.
[a] Emissions from SF_6 are considered an area source.

Table 3.1.3-9
Estimated Annual Operational and Avoided Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area[a]	0.00	0.00	0.00	6.73
Energy	0.93	0.00	0.00	0.93
Mobile	217.08	0.01	0.00	217.31
Offroad	4.58	0.00	0.00	4.61

Table 3.1.3-9
Estimated Annual Operational and Avoided Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Stationary	39.80	0.01	0.00	39.94
			Subtotal	*281.39*
			Amortized Construction Emissions over 35 Years	164.69
			Amortized Loss of Sequestered Carbon over 35 Years	242.94
			Amortized Decommissioning Emissions over 35 Years	68.71
			Total	**757.73**
			Total Proposed Project Emissions over 35-Year Lifetime	**26,520.55**
			Total Avoided GHG Emissions	**423,253.51**
			Net Avoided GHG Emissions	**396,732.96**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
See Appendix B of Appendix P for complete results.
[a] Emissions from SF_6 are considered an area source.

Table 3.1.3-10
Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	**Consistent**. The Proposed Project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low-Carbon Fuel Standard	T-2	**Consistent**. Motor vehicles driven by the Proposed Project's employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Advanced Clean Transit	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Last-Mile Delivery	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Reduction in VMT	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.

Table 3.1.3-10
Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Medium and Heavy-Duty GHG Phase 2	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
High-Speed Rail	T-9	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Energy Efficiency (Natural Gas)	CR-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Combined Heat and Power	E-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Renewables Portfolio Standard (33% by 2020)	E-3	**Consistent.** The Proposed Project would generate 90 MW of solar energy to support the Renewables Portfolio Standard.
Renewables Portfolio Standard (50% by 2050)	N/A	**Consistent.** The Proposed Project would generate 90 MW of solar energy to support the Renewables Portfolio Standard.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.

Table 3.1.3-10
Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Water Sector		
Water Use Efficiency	W-1	**Consistent**. The Proposed Project would use water for dust suppression during construction and panel rinsing during operation. The water used would be sourced from on-site non-potable water wells.
Water Recycling	W-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Water System Energy Efficiency	W-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Reuse Urban Runoff	W-4	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Renewable Energy Production	W-5	**Not applicable**. This measure applies to renewable energy within the water sector. The Proposed Project would not prevent CARB from implementing this measure.
Green Buildings		
1. State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
2. Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
3. Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
4. Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Reduce GHG Emissions by 20% in Oil Refinery Sector	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Refinery Flare Recovery Process Improvements	I-4	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.

Table 3.1.3-10
Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Mandatory Commercial Recycling	RW-3	**Consistent**. The Proposed Project would recycle the maximum extent that is feasible in accordance with state and local regulations.
Increase Production and Markets for Compost and Other Organics	RW-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Anaerobic/Aerobic Digestion	RW-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Extended Producer Responsibility	RW-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Environmentally Preferable Purchasing	RW-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Forests Sector		
Sustainable Forest Target	F-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Reduction of Perfluorocarbons (PFCs in Semiconductor Manufacturing	H-3	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Limit High GWP Use in Consumer Products	H-4	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	**Consistent**. The Proposed Project would use gas insulated switchgear that would be subject to CARB regulations and meet the leak rate mandates.
40% reduction in methane and hydrofluorocarbon (HFC) emissions	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.

Table 3.1.3-10
Proposed Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
50% reduction in black carbon emissions	N/A	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	**Not applicable**. The Proposed Project would not prevent CARB from implementing this measure.

Source: CARB 2008, 2017b.
Notes: GHG = greenhouse gas; CARB = California Air Resources Board; N/A = not applicable; VMT = vehicle miles traveled; SF_6 = sulfur hexafluoride; PFC = perfluorocarbon; GWP = global warming potential.

Table 3.1.3-11
San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
The Regional Plan – Policy Objectives		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	**Not Applicable.** The Proposed Project would not impair the ability of SANDAG to provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to take advantage of new technologies to make the transportation system more efficient and environmentally friendly.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	**Consistent.** The Proposed Project would be located on currently disturbed land used mainly for agriculture. The Proposed Project would not impair existing open space.
Habitat and Open Space Preservation	Protect and restore our region's urban canyons, coastlines, beaches, and water resources.	**Consistent.** The Proposed Project would primarily be located on currently disturbed land used mainly for agriculture. The Proposed Project would not impair existing open space.
Regional Economic Prosperity	Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to invest in transportation projects available to all members of the Community.
Regional Economic Prosperity	Build infrastructure that makes the movement of freight in our community more efficient and environmentally friendly.	**Not Applicable**. The Proposed Project does not propose regional freight movement, nor would it impair SANDAG's ability to preserve and expand options for regional freight movement.

Table 3.1.3-11
San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
Partnerships/Collaboration	Collaborate with Native American tribes, Mexico, military bases, neighboring counties, infrastructure providers, the private sector, and local communities to design a transportation system that connects to the mega-region and national network, works for everyone, and fosters a high quality of life for all.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations.
Partnerships/Collaboration	As we plan for our region, recognize the vital economic, environmental, cultural, and community linkages between the San Diego region and Baja California.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	**Not Applicable.** The Proposed Project would not impair the ability of SANDAG to create great places for everyone to live, work, and play.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	**Not Applicable.** The Proposed Project would not impair the ability of SANDAG to connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	**Consistent.** The Proposed Project would support the goal of producing clean energy for sustainable living.
Environmental Stewardship	Support energy programs that promote sustainability.	**Consistent.** The Proposed Project would support the goal of producing clean energy for sustainable living.
Sustainable Communities Strategy – Strategies		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	**Not Applicable.** The Proposed Project would not include housing or job growth.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	**Consistent.** The Proposed Project would primarily be located on currently disturbed land used mainly for agriculture. The Proposed Project would not impair existing open space.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.	**Consistent**. The Proposed Project would help reduce greenhouse gas emissions through the production of clean renewable energy.
Strategy #4	Address the housing needs of all economic segments of the population.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to address the housing needs of all economic segments of the population.

Table 3.1.3-11
San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
Strategy #5	Implement the Regional Plan through incentives and collaboration.	**Not Applicable**. The Proposed Project would not impair the ability of SANDAG to implement the Regional Transportation Plan through incentives and collaborations.

Source: SANDAG 2015
Notes: SANDAG = San Diego Association of Governments.

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3.1.4 Land Use and Planning

This section of the Draft Environmental Impact Report (EIR) evaluates impacts to land use that could result from future development of the JVR Energy Park Project (Proposed Project). The analysis focuses on resultant effects of the Project regarding issues related to land use and planning.

Comments received in response to the Notice of Preparation (NOP) included concerns regarding consistency with the County of San Diego's General Plan, the Mountain Empire Subregional Plan and the Ketchum Ranch Specific Plan, changes in the community character and its associated land use and planning impacts. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

3.1.4.1 Existing Conditions

3.1.4.1.1 Existing Site

Project Site

The Project site is located on privately owned land consisting of 24 parcels located to the south of Interstate (I) 8, immediately east of the unincorporated community of Jacumba Hot Springs, and immediately north of the U.S./Mexico international border. Historically, the central and southern areas of the Project site were utilized for dairy and agricultural operations. Existing structures associated with these prior uses remain on a portion of the Project site.

An existing transmission corridor crosses the northern area of the Project site. The east-west corridor is located immediately north of the proposed switchyard and adjacent substation sites. Existing transmission infrastructure installed within the corridor includes two 500 kV transmission lines (i.e., Southwest Powerlink and Sunrise Powerlink) on 155-foot tall transmission towers. An additional 138-kv transmission line parallels the 500 kV transmission lines.

Surrounding and existing land uses are described in more detail in Sections 3.1.4.1.2, Surrounding Land Uses, and 3.1.4.1.3, Land Use Regional Category and Land Use Designations, below.

3.1.4.1.2 Surrounding Land Uses

Surrounding lands include the community of Jacumba Hot Springs, primarily rural and/or undeveloped private lands, and local, state, and federal public lands. The discussion below pertains to surrounding land uses in the general area.

North

The northern portion of the Project site is bordered by Carrizo Gorge Road and I-8. Private land to the north of the site across I-8 is zoned S80 and S92 and designated Rural Lands (RL-80). A private resort (De Anza Springs) is located to the northwest of the Project site, to the north of I-8. Access to the resort is provided by Carrizo Gorge road, which is unpaved in the segment paralleling and to the north of I-8. The northeastern corner of the Project site abuts two gas stations that include small convenience stores. The gas stations are on a 1.79-acre area designated Rural Commercial.

Land to the north of I-8 is primarily undeveloped public land, including federal lands that are managed by the Bureau of Land Management (BLM) and further to the northwest Anza-Borrego Desert State Park lands. BLM public lands comprise the prominent mountain terrain of Gray Mountain and Table Mountain. These mountains and the surroundings lands are located within the Table Mountain Resource Management Zone (RMZ), which provides opportunities for landscape viewing, off-highway vehicle use, wildlife and wildflower viewing, hunting and camping (BLM 2008).

East

To the east, the landscape is largely undeveloped and is traversed by several dirt roads. Limited rural residential development occurs to the east of the Project site and along Old Highway 80.

The Jacumba Airport is along the southeastern portion of the Project site, to the south of Old Highway 80. The County of San Diego owns the Airport's facilities including the 2,562-foot long asphalt runway (AirNav 2019), dirt helipad, two metal storage structures and surrounding airport property. According to the County of San Diego, approximately 1,162 "operations" occurred at the airport in 2018 (County of San Diego 2019). The unattended and unlighted airport is used mainly as an operation area for gliders on the weekends (County of San Diego 2018). Jacumba Airport is zoned S80 and County General Plan land use designation is Public/Semi-Public Facilities.

Further to the east of the Project site and Jacumba Airport, Airport Mesa rises from the Jacumba Valley. The majority of the steep sloped Airport Mesa landform is managed by the BLM as the Airport Mesa RMZ. Allowable primary recreation activities in the Airport Mesa RMZ are identified hiking and hunting in the Eastern San Diego Planning Area Recreational Master Plan (BLM 2008); a prohibition of target shooting on Airport Mesa was enacted by the BLM in 2009 (BLM 2009, 2010). Official use is not recorded in this RMZ; however, BLM estimates that the area experiences low annual use (i.e., less than 200 visitors per year; A.S. Williams, personal communication, February 11, 2020).

The Sunrise Powerlink transmission lines extend to the east and beyond the Project site. The existing Jacumba Solar Facility and East County Substation are located approximately 1.75 and 1.9 miles to the east, respectively, of the Project site's eastern boundary. The Jacumba Solar development covers 300 acres, and includes over 80,000 PV modules and a collector substation,

BLM also manages the Jacumba Wilderness located approximately 4 miles east of the Project site in Imperial County. The Jacumba Wilderness is comprised of rugged ridgelines and intervening valleys. The use of this wilderness area is defined in the Wilderness Act of 1964, which permits certain uses, including hiking and camping in the Jacumba Wilderness (BLM 2019).

South

The U.S./Mexico international border fence parallels the southern boundary of the Project site. The local section of the border fence is a straight, 15-foot tall, steel structure that traverses the desert landscape from east to west. The U.S. Customs and Border Protection maintains an increased presence in the area to curtail smuggling and illegal immigration.

A wide valley bordered by the Sierra de Juarez Mountains to the east and hilly terrain to the southwest of Jacumba is located south of the U.S./Mexico international border fence. Scattered rural residential development occurs approximately 2.3 miles southwest of the Project site in Mexico. A small settlement known as Jacume exists approximately 3.2 miles south of the Project site on the Mexican side of the international border. An unofficial border crossing was closed in Jacume in 1998.

West

To the south of Round Mountain and west of the Project site are lands recently acquired by the State of California Department of Parks and Recreation (State Parks) and added to Anza-Borrego Desert State Park (SP). One publicly-owned parcel, owned by State Parks, located at the northwestern corner of the site is zoned S80 and designated Public Agency Land. The eastern portion of Round Mountain is federal land managed by BLM. Existing transmission lines that traverse the Project site continue to the west.

The unincorporated community of Jacumba Hot Springs is located adjacent to the southwestern boundary of the Project site. The community is bisected by Old Highway 80, which functions as the community's main street and sole commercial corridor and access road in the community. Most of the residential development in Jacumba Hot Springs is located to the north Old Highway 80. T. Residences line the highway corridor through the eastern extent of the community. Most properties support one single-family residential structure. In addition to local residences located north of Old Highway 80 (approximately 150 residences are located north of the highway), approximately 20 single-family residences are scattered on the hilly terrain to the south of the highway and west of Jacumba Community Park. The community of Jacumba Hot Springs also includes limited commercial development. The Jacumba Community Park and Jacumba branch of the San Diego County Library are located to the south of Old Highway 80. The Project site borders the Community Park. The Jacumba Elementary School, which is currently closed, is located further to the west.

3.1.4.1.3 Land Use Regional Category and Designations

The County's General Plan Land Use Element guides the intensity, location, and distribution of land uses in the unincorporated County through a two-tier land use framework. The first tier, Regional Categories, establishes a hierarchy for the overall structure and organization of development that differentiates areas by overall character and density, while the second tier, Land Use Designations, disaggregates these categories and provides more precise direction regarding the planned density and intensity of residential, commercial, industrial, open space, and public land uses. The regional categories do not specify allowable land uses, but rather the general regional structure, character, scale, and intensity of development allowed.

The existing Regional Category in the County's General Plan for the majority of the 1,356-acre Proposed Project site is currently Village. There is also an approximately 38-acre parcel in the easternmost portion of the site that is in the Rural Lands Regional Category.

The majority of the Project site, approximately 1,215 acres, is designated as Specific Plan Area (SPA) with 627 acres within the development footprint. The other land use designations within the Project's development footprint include: 0.34-acre of Open Space (Recreation), 0.85-acre of Public/Semi-Public Facilities, 2.7-acres of Rural Commercial, 11.49-acres of Rural Lands (RL-40), 0.27 acre of Village Residential (VR-15), and 0.31-acre of Village Residential (VR-2). These land use designations are shown in Figure 3.1.4-1, Existing Zoning and Land Use Designations. The Proposed Project development footprint would be located primarily on land designated as Specific Plan Area.

3.1.4.1.4 Subregional Plan Area and Community Plan

The Project site lies within the Mountain Empire Subregional Plan Area. The Mountain Empire Subregional Plan (a supplement to the County General Plan) establishes goals and policies to guide development within the subregional plan area. The goals and policies of the Subregional Plan are discussed in Section 3.1.4.2.

The Project site also lies within the Jacumba Subregional Group Area Plan, which is a portion of the Subregional Plan that focuses specifically on Jacumba. While the Jacumba Subregional Group Area Plan does not have specific goals and policies, it presents an overall vision statement and background information as discussed in Section 3.1.4.2.

3.1.4.1.5 Specific Plan Area

In 1986, the County Board of Supervisors approved a General Plan Amendment which designated an approximately 1,300-acre area adjacent to the community of Jacumba as a Specific Plan Area,

requiring the preparation of a comprehensive Specific Plan. A multi-use land use concept was envisioned. The majority of the Project site is located within this Specific Plan Area.

In 1991, an applicant submitted a proposed Jacumba Valley Ranch Specific Plan to the County for this Specific Plan Area. This Specific Plan proposed 1,048 dwelling units, 90-bed congregate care facility, a 200 bed hotel 28.5 acres of commercial, a 285 acre golf course, a 31 acre equestrian center, a 10 acre school site, and 415 acres of open space. In 2002, the proposed Jacumba Valley Ranch Specific Plan was denied by the County due to: (1) unreasonable delay in meeting requests by the County necessary for the preparation of an adequate EIR under CEQA; (2) the Applicant's failure to provide the security required by the Board on November 7, 2001; (3) the Applicant's failure to keep the project's estimated deposit account current as required by the Development Plan; and (4) the Applicant's failure to satisfy the three requirements of the Board of Supervisors' motion approved on November 13, 2002 (County of San Diego 2019).

In 2006, another applicant submitted a proposed Specific Plan (Ketchum Ranch Specific Plan) to the County. This plan proposed various uses, including 1,048 dwelling units, a golf course, a hotel, commercial uses, and supporting infrastructure. The proposed Ketchum Ranch Specific Plan was withdrawn by the applicant in 2011 (County of San Diego 2019).

Based on the current General Plan, the allowable density with the Specific Plan area is 1,110 units. A current Specific Plan proposal could potentially allow for 1,110 units, a water reclamation facility, hotel, visitor-oriented commercial, a recreational vehicle park, a theme park, industrial park, and sand and gravel extraction.

3.1.4.1.6 Zoning

Approximately 629.74 acres of the Project site's development footprint are zoned as Specific Plan (S-88) and approximately 11.5-acres are zoned as General Rural (S92). In addition, approximately 0.10-acre is zoned Freeway Commercial (C44), 0.28 acre is zoned Mobile Home Residential (RMH12), 0.30-acre is zoned Rural Residential (RR), and 1.2-acres is zoned as Open Space (S80). The zone designations within the Project site are shown in Figure 3.1.4-1, Existing Zoning and Land Use Designations.

3.1.4.2 Regulatory Setting

The County has numerous policies, programs, codes, and ordinances that regulate land use development. In order to simplify the volume and complexity of these regulations, this inventory focuses on policies that affect land use designations and zoning.

Federal Regulations

There are no relevant federal policies concerning land use that would be applicable to the Proposed Project.

State Regulations

California Aeronautics Act

The California Aeronautics Act, established by the California Department of Transportation (Caltrans) – Division of Aeronautics, requires the preparation of airport land use compatibility plans (ALUCPs). ALUCPs promote compatibility between airports and the land uses that surround them to the extent that these uses are not already developed with incompatible land uses. They are intended to protect the safety of people, property, and aircraft on the ground and in the air in the vicinity of the airport. They also protect airports from encroachment by new incompatible land uses that could restrict their operations. In late 2006, the San Diego County Regional Airport Authority adopted new ALUCPs for six rural airports operated by the County (Agua Caliente, Borrego Valley, Fallbrook, Jacumba, Ocotillo, and Ramona). On December 1, 2011 the Jacumba ALUCP was amended to include corrections to revisions to applicable text in the 2006 ALUCP. In February 2020, the San Diego Airport Authority released a draft of an updated Jacumba ALUCP for public review. The updated ALUCP has not been adopted by the Airport Authority; therefore, the prior ALUCP is applicable.

California Planning and Zoning Law

The legal framework in which California cities and counties exercise local planning and land use functions is provided in the California Planning and Zoning Law, Sections 65000 through 66499.58. Under state planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. These requirements include the inclusion of seven mandatory elements described in the California Government Code. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and mitigation measures.

California Government Code Section 65450

California Government Code Section 65450 authorizes cities and counties to adopt a specific plan. Specific Plans provide the land use regulations and guidelines governing the permitted land uses, densities, maximum residential units, required public facilities, infrastructure, open space, and amenities for a planned community in compliance with applicable policies and regulations.

California-Baja California Border Master Plan

The California-Baja California Border Master Plan (County of San Diego 2014a) is a binational effort to coordinate planning and delivery of projects at land port of entries and the transportation infrastructure serving them. The California Department of Transportation (Caltrans), in partnership with the Secretariat of Infrastructure and Urban Development of Baja California and the U.S./Mexico Joint Working Committee (JWC), retained the SANDAG Service Bureau to assist in the development of this Plan. The primary objectives of the California-Baja California Border Master Plan are to increase the understanding of Port of Entry (POE) and transportation planning on both sides of the border and create a plan for prioritizing and advancing POE and related transportation projects. The California-Baja California Border Master Plan study area includes an "Area of Influence" and a "Focused Study Area." The Proposed Project is within the Focused Study Area (10 miles north and south of the international border). The 2014 California-Baja California Border Master Plan Update is the most recent update of this plan. The update listed prioritized border crossing or point-of-entry projects, including a Jacumba-Jacumé POE project. The update explained that there was insufficient data to prioritize the Jacumba-Jacumé POE project as it is in early conceptual planning stages with no funding.

Local

County of San Diego General Plan

San Diego County's General Plan is a complex, highly integrated document that serves as the blueprint for growth and development in the unincorporated County. It is based on a set of guiding principles and consists of the following elements: Land Use, Mobility, Conservation & Open Space, Housing, Safety and Noise. Each of these elements contains a set of goals and policies that must be adhered to by all discretionary development projects. In addition to the policy document, the County's General Plan also consists of a Land Use Distribution Map and Mobility Element Network Map. The land use map identifies the type and intensity of future uses on parcels of land throughout the County, whereas the mobility network delineates the road network that is required to accommodate these proposed uses. Finally, the County's General Plan also consists of several Community or Subregional Plans that are intended to provide more precise guidance regarding the character, land uses, and densities within each community planning area. All of these components make up the County's General Plan. The following goals and policies from several General Plan elements were determined to be applicable to the Proposed Project.

Land Use Element

The Land Use Element provides a framework to accommodate future development in an efficient and sustainable manner that is compatible with the character of unincorporated communities and the

protection of valuable and sensitive natural resources (County of San Diego 2011). Currently, the County is faced with both significant growth pressures and severe environmental constraints. While population continues to grow, the supply of land capable of supporting development continues to decrease. In accommodating this growth, the land use plan encourages the provision of diverse housing choices while protecting the established character of existing urban and rural neighborhoods. The Land Use Element provides a description of all land use designations applicable to land within the County and specifies the permitted uses on those land use designations. The General Plan Regional Categories and Land Use Designations are described above.

The following policies of the Land Use Element are applicable to the Proposed Project:

- **Policy LU-2.6: Development near Neighboring Jurisdictions**. Require that development in the proximity of neighboring jurisdictions retain the character of the unincorporated community and use buffers or other techniques where development in the neighboring jurisdiction is incompatible.
- **LU-2.8: Mitigation of Development Impacts**. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.
- **Policy LU-4.6: Planning for Adequate Energy Facilities.** Participate in the planning of regional energy infrastructure with applicable utility providers to ensure plans are consistent with the County's General Plan and Community Plans and minimize adverse impacts to the unincorporated County.
- **Policy LU-4.7: Airport Land Use Compatibility Plans (ALUCP).** Coordinate with the Airport Land Use Commission (ALUC) and support review of Airport Land Use Compatibility Plans (ALUCP) for development within Airport Influence Areas.
- **Policy LU-5.3: Rural Land Preservation.** Ensure the preservation of existing open space and rural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) when permitting development under the Rural and Semi-Rural Land Use Designations.
- **Policy LU-5.5: Projects that Impede Non-Motorized Travel.** Ensure that development projects and road improvements do not impede bicycle and pedestrian access. Where impacts to existing planned routes would occur, ensure that impacts are mitigated and acceptable alternative routes are implemented.
- **Policy LU-6.1: Environmental Sustainability.** Require the protection of intact or sensitive natural resources in support of the long-term sustainability of the natural environment.
- **Policy LU-6.5: Sustainable Stormwater Management.** Ensure that development minimizes the use of impervious surfaces and incorporates other Low Impact Development

techniques as well as a combination of site design, source control, and stormwater best management practices, where applicable and consistent with the County's LID Handbook.

- **Policy LU-6.6: Integration of Natural Features into Project Design.** Require incorporation of natural features (including mature oaks, indigenous trees, and rock formations) into proposed development and require avoidance of sensitive environmental resources.
- **Policy LU-6.9: Development Conformance with Topography.** Require development to conform to the natural topography to limit grading, incorporate and not significantly alter the dominant physical characteristics of a site, and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.
- **Policy LU-6.10: Protection from Hazards.** Require that development be located and designed to protect property and residents from the risks of natural and man-induced hazards.
- **Policy LU-7.1: Agricultural Land Development**. Protect agricultural lands with lower-density land use designations that support continued agricultural operations.
- **Policy LU-7.2: Parcel Size Reduction as Incentive for Agriculture.** Allow for reductions in lot size for compatible development when tracts of existing historically agricultural land are preserved in conservation easements for continued agricultural use.
- **Policy LU-8.1: Density Relationship to Groundwater Sustainability.** Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.
- **Policy LU-8.2: Groundwater Resources.** Require development to identify adequate groundwater resources in groundwater dependent areas, as follows.
    - In areas dependent on currently identified groundwater overdrafted basins, prohibit new development from exacerbating overdraft conditions. Encourage programs to alleviate overdraft conditions in Borrego Valley.
    - In areas without current overdraft groundwater conditions, evaluate new groundwater dependent development to assure a sustainable long-term supply of groundwater is available that will not adversely impact existing groundwater users.
- **Policy LU-8.3: Groundwater Dependent Habitat.** Discourage development that would significantly draw down the groundwater table to the detriment of groundwater-dependent habitat.
- **Policy LU-10.2: Development—Environmental Resource Relationship.** Require development in Semi-Rural and Rural areas to respect and conserve the unique natural features, and rural character, and avoid sensitive or intact environmental resources and hazard areas.

- **Policy LU-12.1: Concurrency of Infrastructure and Services with Development.** Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing.
- **Policy LU-12.2: Maintenance of Adequate Services.** Require development to mitigate significant impacts to existing service levels of public facilities or services for existing residents and businesses. Provide improvements for Mobility Element roads in accordance with the Mobility Element Network Appendix matrices, which may result in ultimate build-out conditions that achieve an improved Level of Service (LOS) but do not achieve a LOS of D or better.
- **Policy LU-13.2: Commitment of Water Supply**. Require new development to identify adequate water resources, in accordance with State law, to support the development prior to approval.
- **Policy LU-18.1: Compatibility of Civic Uses with Community Character.** Locate and design Civic uses and services to assure compatibility with the character of the community and adjoining uses, which pose limited adverse effects. Such uses may include libraries, meeting centers, and small swap meets, farmers markets, or other community gatherings.

Mobility Element

The Mobility Element provides a framework for a balanced, multimodal transportation system for the movement of people and goods within the unincorporated areas of the County. The Mobility Element identifies the County road network so that rights-of-way can be preserved for future motorized and non-motorized roadway purposes (County of San Diego 2011).

The following policies from the Mobility Element are applicable to the Proposed Project:

- **Policy M-2.1: Level of Service Criteria.** Require development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County pursuant to the criteria outlined in the General Plan (Criteria for accepting a road classification with Level of Service E/F). When development is proposed on roads where a failing level of service has been accepted, require feasible mitigation in the form of road improvements or a fair share contribution to a road improvement program, consistent with the Mobility Element road network.
- **Policy M-2.2: Access to Mobility Element Designated Roads.** Minimize direct access points to Mobility Element roads from driveways and other non-through roads to maintain the capacity and improve traffic operations.

- **Policy M-2.3: Environmentally Sensitive Road Design.** Locate and design public and private roads to minimize impacts to significant biological and other environmental and visual resources. Avoid road alignments through floodplains to minimize impacts on floodplain habitats and limit the need for constructing flood control measures. Design new roads to maintain wildlife movement and retrofit existing roads for that purpose. Utilize fencing to reduce road kill and to direct animals to under crossings.
- **Policy M-2.5: Minimize Excess Water Runoff.** Require road improvements to be designed and constructed to accommodate stormwater in a manner that minimizes demands upon engineered stormwater systems and to maximize the use of natural detention and infiltration techniques to mitigate environmental impacts.
- **Policy M-3.3: Multiple Ingress and Egress.** Require development to provide multiple ingress/egress routes in conformance with state law and local regulations.
- **Policy M-4.4: Accommodate Emergency Vehicles.** Design and construct public and private roads to allow for necessary access for appropriately-sized fire apparatus and emergency vehicles while accommodating outgoing vehicles from evacuating residents.
- **Policy M-4.5: Context Sensitive Road Design.** Design and construct roads that are compatible with the local terrain and the uses, scale and pattern of the surrounding development. Provide wildlife crossings in road design and construction where it would minimize impacts in wildlife corridors.

Conservation and Open Space Element

The primary focus of the Conservation and Open Space Element is to provide direction to future growth and development in the County with respect to conservation, management, and utilization of natural and cultural resources, protection and preservation of open space, and provision of park and recreation resources (County of San Diego 2011).

The following policies of the Conservation and Open Space Element are applicable to the Proposed Project:

- **Policy COS-1.1: Coordinated Preserve System.** Identify and develop a coordinated biological preserve system that includes Pre-Approved Mitigation Areas, Biological Resource Core Areas, wildlife corridors, and linkages to allow wildlife to travel throughout their habitat ranges.
- **Policy COS-1.2: Minimize Impacts. Prohibit private development within established preserves**. Minimize impacts within established preserves when the construction of public infrastructure is unavoidable.

- **Policy COS-1.9: Invasive Species.** Require new development adjacent to biological preserves to use non-invasive plants in landscaping. Encourage the removal of invasive plants within preserves.
- **Policy COS-2.2: Habitat Protection through Site Design.** Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.
- **Policy COS-3.1: Wetland Protection.** Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.
- **Policy COS-3.2: Minimize Impacts of Development.** Require development projects to:
    - Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and
    - Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.
- **Policy COS-4.1: Water Conservation.** Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.
- **Policy COS-4.2: Drought-Efficient Landscaping.** Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.
- **Policy COS-5.1: Impact to Floodways and Floodplains.** Restrict development in floodways and floodplains in accordance with policies in the Flood Hazards section of the Safety Element.
- **Policy COS-5.2: Impervious Surfaces.** Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.
- **Policy COS-5.3: Downslope Protection.** Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.
- **Policy COS-5.5: Impacts of Development to Water Quality.** Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.

- **Policy COS**-6.2: **Protection of Agricultural Operations.** Protect existing agricultural operations from encroachment of incompatible land uses by doing the following:
    - Limiting the ability of new development to take actions to limit existing agricultural uses by informing and educating new projects as to the potential impacts from agricultural operations.
    - Allowing for agricultural uses in agricultural areas and designing development and lots in a manner that facilitates continued agricultural use within the development.
    - Requiring development to minimize potential conflicts with adjacent agricultural operations through the incorporation of adequate buffers, setbacks, and project design measures to protect surrounding agriculture
- **Policy COS-7.1: Archaeological Protection.** Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
- **Policy COS-7.3: Archeological Collections.** Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.
- **Policy COS-7.4: Consultation with Affected Communities.** Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.
- **Policy COS-7.5: Treatment of Human Remains.** Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.
- **Policy COS-9.1: Preservation.** Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.
- **Policy COS-9.2: Impacts of Development.** Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.
- **Policy COS-10.1: Siting of Development.** Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas. Design development or uses to minimize the potential conflict with existing or potential future mining facilities. For purposes of this policy, incompatible land uses are defined by SMARA Section 3675.
- **Policy COS-10.2: Protection of State-Classified or Designated Lands.** Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources

(MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.

- **Policy COS-10.3: Road Access.** Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA section 2764.a.
- **Policy COS-10.4: Compatible Land Uses.** Discourage the development of land uses that are not compatible with the retention of mining or recreational access to non-aggregate mineral deposits. See Policy COS-10.1 for a definition of incompatible land uses.
- **Policy COS-11.1: Protection of Scenic Resources.** Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.
- **Policy COS-11.3: Development Siting and Design.** Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:
    - Creative site planning
    - Integration of natural features into the project
    - Appropriate scale, materials, and design to complement the surrounding natural landscape
    - Minimal disturbance of topography
    - Clustering of development so as to preserve a balance of open space vistas, natural features and community character
    - Creation of contiguous open space networks.
- **Policy COS-11.4: Collaboration with Agencies and Jurisdictions.** Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to protect scenic resources and corridors that extend beyond the County's land use authority, but are important to the welfare of County residents.
- **Policy COS-11.5: Collaboration with Private and Public Agencies.** Coordinate with the California Public Utilities Commission, power companies, and other public agencies to avoid siting energy generation, transmission facilities, and other public improvements in locations that impact visually sensitive areas, whenever feasible. Require the design of public improvements within visually sensitive areas to blend into the landscape.

- **Policy COS-11.7: Underground Utilities.** Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.
- **Policy COS-12.1: Hillside and Ridgeline Development Density.** Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.
- **Policy COS-12.2: Development Location on Ridges.** Require development to preserve the physical features by being located down and away from ridgelines so that structures are not silhouetted against the sky.
- **Policy COS-13.1: Restrict Light and Glare.** Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.
- **Policy COS-14.7: Alternative Energy Sources for Development Projects.** Encourage development projects that use energy recovery, photovoltaic, and wind energy.
- **Policy COS-14.8: Minimize Air Pollution.** Minimize land use conflicts that expose people to significant amounts of air pollutants.
- **Policy COS-14.9: Significant Producers of Air Pollutants.** Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.
- **Policy COS-14.10: Low-Emission Construction Vehicles and Equipment.** Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.
- **Policy COS-14.11: Native Vegetation.** Require development to minimize the vegetation management of native vegetation while ensuring sufficient clearing is provided for fire control.
- **Policy COS-14.13: Incentives for Sustainable and Low GHG Development.** Provide incentives such as expedited project review and entitlement processing for developers that maximize use of sustainable and low GHG land development practices in exceedance of State and local standards.
- **Policy COS-15.6: Design and Construction Methods.** Require development design and construction methods to minimize impacts to air quality.
- **Policy COS-17.2: Construction and Demolition Waste.** Require recycling, reduction and reuse of construction and demolition debris.

- **Policy COS-18.1: Alternate Energy Systems Design**. Work with San Diego Gas and Electric and non-utility developers to facilitate the development of alternative energy systems that are located and designed to maintain the character of their setting.
- **Policy COS-18.3: Alternate Energy Systems Impacts.** Require alternative energy system operators to properly design and maintain these systems to minimize adverse impacts to the environment.
- **Policy COS-19.1: Sustainable Development Practices.** Require land development, building design, landscaping, and operational practices that minimize water consumption.
- **Policy COS-19.2: Recycled Water in New Development.** Require the use of recycled water in development wherever feasible. Restrict the use of recycled water when it increases salt loading in reservoirs.

Safety Element

The purpose of the Safety Element is to provide safety considerations that will help minimize the risk of personal injury, loss of life, property damage, and environmental damage associated with natural and man-made hazards within the County (County of San Diego 2011).

The following policies of the Safety Element are applicable to the Proposed Project:

- **Policy S-3.1: Defensible Development.** Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.
- **Policy S-3.3: Minimize Flammable Vegetation.** Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.
- **Policy S-3.4: Service Availability.** Plan for development where fire and emergency services are available or planned.
- **Policy S-3.5: Access Roads.** Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.
- **Policy S-3.6: Fire Protection Measures.** Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.
- **Policy S-3.7: Fire Resistant Construction.** Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.

- **Policy S-6.1: Water Supply.** Ensure that water supply systems for development are adequate to combat structural and wildland fires.
- **Policy S-6.3: Funding Fire Protection Services.** Require development to contribute its fair share towards funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.
- **Policy S-6.4: Fire Protection Services for Development.** Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards from Closest Fire Station).
- **Policy S-7.1: Development Location.** Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.
- **Policy S-7.2: Engineering Measures to Reduce Risk.** Require all development to include engineering measures to reduce risk in accordance with the California Building Code, Uniform Building Code, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.
- **Policy S-8.1: Landslide Risks.** Direct development away from areas with high landslide, mudslide, or rock fall potential when engineering solutions have been determined by the County to be infeasible.
- **Policy S-8.2: Risk of Slope Instability.** Prohibit development from causing or contributing to slope instability.
- **Policy S-9.2: Development in Floodplains.** Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood proofing standards and siting criteria to prevent flow obstruction.
- **Policy S-10.4: Stormwater Management.** Require development to incorporate low impact design, hydromodification management, and other measures to minimize stormwater impacts on drainage and flood control facilities.
- **Policy S-10.5: Development Site Improvements.** Require development to provide necessary on- and off-site improvements to stormwater runoff and drainage facilities.

- **Policy S-10.6: Stormwater Hydrology.** Ensure development avoids diverting drainages, increasing velocities, and altering flow rates to off-site areas to minimize adverse impacts to the area's existing hydrology.
- **Policy S-11.5: Development Adjacent to Agricultural Operations.** Require development adjacent to existing agricultural operations in Semi-Rural and Rural Lands to adequately buffer agricultural areas and ensure compliance with relevant safety codes where pesticides or other hazardous materials are used.
- **Policy S-15.1: Land Use Compatibility.** Require land uses surrounding airports to be compatible with the operation of each airport.
- **Policy S-15.3: Hazardous Obstructions within Airport Approach and Departure.** Restrict development of potentially hazardous obstructions or other hazards to flight located within airport approach and departure areas or known flight patterns and discourage uses that may impact airport operations or do not meet Federal or State aviation standards.

Noise Element

The Noise Element provides for the control and abatement of environmental noise to protect citizens from excessive exposure through establishing noise / land use compatibility standards (County of San Diego 2011).

The following policies of the Noise Element are applicable to the Proposed Project:

- **Policy N-1.1: Noise Compatibility Guidelines.** Use the Noise Compatibility Guidelines (Table N-1) and the Noise Standards (Table N-2) as a guide in determining the acceptability of exterior and interior noise for proposed land uses.
- **Policy N-1.2: Noise Management Strategies.** Require the following strategies as higher priorities than construction of conventional noise barriers where noise abatement is necessary:
    - Avoid placement of noise sensitive uses within noisy areas
    - Increase setbacks between noise generators and noise sensitive uses
    - Orient buildings such that the noise sensitive portions of a project are shielded from noise sources
    - Use sound-attenuating architectural design and building features
    - Employ technologies when appropriate that reduce noise generation (i.e., alternative pavement materials on roadways).
- **Policy N-2.1: Development Impacts to Noise Sensitive Land Uses.** Require an acoustical study to identify inappropriate noise level where development may directly result in any

existing or future noise sensitive land uses being subject to noise levels equal to or greater than 60 CNEL and require mitigation for sensitive uses in compliance with the noise standards listed in Table N-2.

- **Policy N-3.1: Groundborne Vibration.** Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from trains, construction equipment, and other sources.
- **Policy N-4.9: Airport Compatibility.** Assure the noise compatibility of any development projects that may be affected by noise from public or private airports and helipads during project review by coordinating, as appropriate, with appropriate agencies such as the San Diego County Regional Airport Authority (SDCRAA) and the Federal Aviation Administration (FAA)
- **Policy N-6.2: Recurring Intermittent Noise.** Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2, but can have other adverse effects.
- **Policy N-6.4: Hours of Construction.** Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses.

Community Plans and Subregional Plans

Community and subregional plans, adopted as integral parts of the County General Plan, are policy plans specifically created to address the issues, characteristics, and visions of communities within the County. These communities each have a distinct physical setting with a unique history, culture, character, lifestyle, and identity. Community and subregional plans thus provide a framework for addressing the critical issues and concerns that are unique to a community and are not reflected in the broader policies of the General Plan. Subregional Plans are consistent with all other parts of the County's General Plan or the plan explains the inconsistency.

Mountain Empire Subregional Plan

The Project site lies within the Mountain Empire Subregional Plan Area. The Mountain Empire Subregional Plan (a supplement to the County General Plan) establishes goals and policies to guide development within the areas of Tecate, Potrero, Boulevard, Campo/Lake Morena, Jacumba, and the Mountain Empire Balance (including the community of Tierra del Sol), which together comprise the Mountain Empire Subregion of southeastern San Diego County. The goals and policies of the Subregional Plan are intended to be more specific than those of the County General Plan as they consider the distinct history, character, and identity of Mountain Empire communities.

The Mountain Empire Subregional Plan contains nine elements: community character, land use, housing, mobility, public facilities and services, conservation, recreation, energy conservation, and scenic highways. Each element contains goals and policies intended to responsibly direct the development of the subregion.

The following policies and recommendations of the Mountain Empire Subregional Plan are applicable to the Proposed Project.

- **Agricultural Goal.** Encourage the expansion and continuance of agricultural uses in the subregion.
- **Land Use Goal.** Provide a land use pattern consistent with the subregional population forecast.
    - **Policy and Recommendation 1.** The landforms of the Subregion are an important environmental resource that should be respected in new development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.
    - **Policy and Recommendation 2.** Create a buffer area of one hundred and fifty (150) feet in width along the international boundary line inclusive of the existing sixty-foot (60′) Public Reserve owned by the Federal Government.
    - **Policy and Recommendation 3.** Apply a ninety (90) foot setback within which no new permanent building may be built northerly of the existing sixty (60) foot Public Reserve line. Where such ninety (90) foot setback can be shown to adversely impact a property, owner may apply for a waiver from complying with the setback as provided for Section 7060 of the Zoning Ordinance.
    - **Policy and Recommendation 4.** Ensure that all development be planned in a manner that provides adequate public facilities prior to or concurrent with need.
- **Land Use (Policy and Recommendation 4).** Ensure that all development be planned in a manner that provides adequate public facilities prior to or concurrent with need.
- **Public Facilities and Services Goal.** Provide the facilities and level of service necessary to satisfy the needs of the subregion.
    - **Policy and Recommendation 5.1**. Maintain unobstructed access to and along the path of existing power transmission facilities and lines.
    - **Policy and Recommendation 5.2.** Any proposed grading, improvements, or other encroachments to the substation or transmission right-of-ways must be reviewed by SDG&E.
    - **Policy and Recommendation 5.3.** Any alteration of drainage patterns affecting the substation or transmission line right-of-ways should be reviewed and approved by SDG&E.

- **Policy and Recommendation 5.4.** Uses proposed for the property adjacent to substations or transmission line rights-of-ways should be reviewed for possible impacts to the power facilities and vice versa.

- **Conservation - Environmental Resources Goal.** Ensure that there is careful management of environmental resources in the area in order to prevent wasteful exploitation or degradation of those resources and to maintain them for future needs.
  - **Policy and Recommendation 1.** All development shall demonstrate a diligent effort to retain as many native oak trees as possible.
  - **Policy and Recommendation 3.** Floodways should be maintained in their natural state unless findings can be made that a threat to public safety exists.
  - **Policy and Recommendation 4.** The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.
  - **Policy and Recommendation 5.** Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.
- **Energy Conservation Goal.** Ensure the conservation of non-renewable energy resources is pursued in a way that is not detrimental to the rural lifestyle.
  - **Policy and Recommendation 8.1.** New development should utilize alternative energy technologies, especially active and passive solar energy systems.
- **Scenic Highways Goal.** Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.

In addition, under Specific Plan Areas, the Subregional Plan includes text regarding the Ketchum Ranch Specific Plan area:

> The Ketchum Ranch Specific Plan proposes a multi-use concept, a residential community with recreational and visitor oriented commercial uses on approximately 1,300 acres next to Jacumba.
>
> The Ketchum Ranch Specific Plan proposal shall create a community in harmony with the existing town of Jacumba and provide services to the existing residents of Jacumba. It will also be sensitive in its design to the natural and historical resources of the Jacumba area. Adequate provisions shall be made to prevent periodic flooding originating at the Mexican border.

Jacumba Subregional Group Area Plan

The 1 Project site lies within the Jacumba Subregional Group Area Plan. The Jacumba Subregional Group Area Plan is a portion of the Mountain Empire Subregional Plan that focuses specifically on Jacumba. While the Jacumba Subregional Group Area Plan does not have specific goals and policies, it presents an overall vision statement and background information. The vision statement for Jacumba is included below:

Vision Statement for Jacumba. Jacumba is a diverse community. The ratio of young to older citizens is about even, which makes the vision diverse as well. We want schools for the young, as well as much needed services, like fire protection, police, and medical care, and still not lose the wonderful feeling that is Jacumba. Clean air, beautiful scenery, superb climate, and no congestion or traffic.

- The community supports new development that is compatible with, and preserves the natural and historical environment, including water resources, and protects existing neighborhoods, manages growth to reinforce the rural small town character of the area, which includes agriculture, open space, and trails as important elements of the community.
- The community supports the provision of adequate public services by new development without compromising existing levels of service or burdening existing residents with the costs of growth. We hope someday to become the jewel of the backcountry.

Background Information in the in document also states that "County Planning documents have long incorporated plans for revitalization and growth of the Jacumba area. Adopted County plans envision future development of the Ketchum Ranch and call for Jacumba to once again become a thriving town." The Project site is located within the Ketchum Ranch Specific Planning Area.

County of San Diego Zoning Ordinance

The Zoning Ordinance regulates land uses in the unincorporated portions of the County of San Diego and specifies permitted uses on established land use zones. As discussed above, the majority of the Project site is zoned Specific Plan (S88). The proposed development footprint for the Proposed Project would be located on parcels properties zoned Specific Plan (S88), General Rural (S92), Open Space (S80) and Rural Residential (RR). The S92 zone is intended for residential and agricultural development and is typically applied to environmentally constrained lands (e.g., rugged terrain, watershed, groundwater dependent, susceptible to fire or erosion). Permitted development in the S92 zone includes low-intensity recreational uses, residences on large parcels, and animal grazing. The RR zone is intended to create and enhance residential areas where agricultural use compatible with a dominant, permanent residential use is desired. The S80 zone is intended to provide for appropriate controls for land generally unsuitable for intensive

development. Permitted development in the S80 zone include large residential parcels, agricultural areas, recreation areas or limited uses areas having identified hazards or resources. In the S88 zone, any use set forth in the Specific Plan is permitted by the S88 Specific Planning Area Use Regulations. However, until a Specific Plan applicable to this area is adopted, permitted uses include residential, agricultural and civic uses. Minor and major impact utilities may be allowed with approval of a use permit in all zones.

Major impact services and utilities (e.g., solar generation facilities) and minor impact utilities (e.g., electrical distribution substations) are defined under Sections 1350 and 1355 of the County Zoning Ordinance (County of San Diego 2014b). Upon issuance of either a minor use permit or MUP, minor impact utilities (utilities that are necessary to provide essential services, such as electrical distribution substations) and major impact services and utilities (utilities and public services that have a substantial impact, such as solar facilities) are permitted uses within each of the County-designated zones. Minor impact utilities require a minor use permit, while major impact services and utilities require a MUP. Major impact services and utilities, however, may be conditionally permitted in any zone if it is determined that public interest supersedes the usual limitations placed on land use and transcends the usual restraints of zoning for reasons of necessary location and community-wide interest (County of San Diego 2014b, Section 1350). The Proposed Project is considered a Major Impact Service and Utility type. The Proposed Project is located on a site that is zoned a Specific Planning Area (S88) that has not adopted a Specific Plan. Pursuant to Section 2888.a. of the County Zoning Ordinance, a MUP may be granted for any use pursuant to a bonded agreement in an amount sufficient to ensure the removal of all buildings, structures, and other improvements within a specified amount of time and/or under specified conditions when the decision-making body finds that such agreement will carry pout the intent of this Ordinance and is enforceable by the County.

Section 6954(b)(2) of the County Zoning Ordinance provides direction for the development of PV solar energy systems. According to the Zoning Ordinance, "A photovoltaic solar energy system for off-site use with a project area of 10 acres of more, or a combination of parcels with a combined area of 10 acres or more is a Major Impact Service and Utility in all zones and shall require a Major Use Permit permitted in accordance with the use permit procedure commencing at section 7350. All other types of solar energy systems of solar power plants including concentrating solar power plants, parabolic troughs, concentrating linear Fresnel reflectors, Stirling solar dish, or a solar power tower are a Major Service and Utility in all zones and shall require approval of a Major Use Permit in accordance with section 7350 and the following requirements on any parcel of land:

a. **Setback.** A system or plant shall meet all of the setback requirements of the zone.
b. **Height**. A system or plant of more than 200 feet in height is required to comply with Federal Aviation Administration safety height requirements.

c. **Visual.** The following measures shall be followed in order to minimize the visual impact of the project:
   i. Removal of existing vegetation shall be minimized.
   ii. Internal roads shall be graded for minimal size and disruption.
   iii. Any accessory buildings shall be painted or otherwise visually treated to blend with the surroundings.
   iv. A structure shall be non-reflective in all areas possible to blend with the surroundings.

d. **Security.** The operator shall provide a security in the form and amount determined by the Director to ensure removal of the Solar Energy System. The security shall be provided to the Department of Planning and Development Services (PDS) prior to building permit issuance. Once the Solar Energy System has been removed from the property pursuant to a demolition permit to the satisfaction of the Director, the security may be released to the operator of the Solar Energy System" (County of San Diego 2012 Section 6952 (b))."

Solar Energy System, Off-site Use, is defined by Ordinance No. 10072 (New Series) as "a solar energy conversion system consistent with the requirements of section 6952 for off-site energy use. The energy generated is predominately used off site" (County of San Diego 2010).

Section 4835 of the Zoning Ordinance states that a Photovoltaic Solar Energy system is permitted to encroach in the front yard setback (as long as it is not more than 30 inches above grade), the interior side yard (may not exceed 12 feet in height), the exterior side yard (as long as it is not more than 30 inches above grade, and the rear yard (as long as it does not exceed 12 feet in height nor cover more than 50 percent of the required yard in combination with all detaches accessory structures).

However, Section 4813 of the Zoning Ordinance states that: "When a major use permit for a use or structure is granted, the use permit may authorize an exception to the Setback Regulations and establish other setback and spacing requirements as a condition thereof."

At the closest location (i.e., near the driveway to be constructed off Carrizo Gorge Road to provide access to panels located west of the road), proposed solar panels would be setback approximately 60 feet from the Carrizo Gorge Road right-of-way (ROW). At this location, solar panels would be located beyond a perimeter fence and a 24-foot wide site perimeter access road. East of the road, the nearest solar panels within an isolated T-shaped tract of the Project would be similarly setback approximately 67 feet from the Carrizo Gorge Road ROW. The panels in this area would be screened from motorists by a 15 foot wide row of landscaping (located approximately 9 feet beyond the Carrizo Gorge Road ROW). The east edge of the landscaping would abut the site perimeter fence that would be setback approximately 24 feet from the Carrizo Gorge Road ROW. The 24-foot wide site perimeter access road would be between the fence and solar panels.

The Project site parallels Old Highway 80 to the south and north generally from Carrizo Gorge Road west to the community of Jacumba Hot Springs. Where the Project site parallels the highway, 15-foot wide rows of landscaping would be planted outside of the proposed perimeter fence to the north and south of the highway. As proposed, landscaping would be setback approximately three feet from the Old Highway 80 ROW and the site perimeter fence would be setback approximately 18 feet from the highway ROW. Solar panel setbacks from the highway ROW would vary, ranging from a low of approximately 45 feet from the southerly ROW on the south to a high of approximately 85 feet from the northerly ROW.

The western Project site boundary parallels residential property lines for approximately 0.25 mile, north of Old Highway 80. A 15-foot wide row of landscaping and slatted fencing would be installed along this entire segment of the site perimeter fence. At its closest location, the landscaping would be setback approximately 27 feet from the closest residential property line. At this location, the site perimeter fence would be setback approximately 42 feet from the closest residential property line and the nearest solar panels would be setback approximately 75 feet from the closest residential property line.

Lastly, the western Project boundary parallels Jacumba Community Park property for approximately 0.18 mile, south of Old Highway 80. In addition to the installation of slatted fencing, landscaping would be planted along this segment of the site perimeter. Landscaping would be setback approximately three feet from the park property line and the proposed fence would be setback approximately 18 feet from the park property line. The setback of the solar panels from the park property line would vary, ranging from approximately 48 feet to 65 feet.

County Board of Supervisors Policies

The following County Board of Supervisors policies would be applicable to the Proposed Project:

- **Policy I-18: Right-of-Way Dedication and Public Improvement Requirements in Connection with Major and Minor Use Permits**

  Where application is made pursuant to The Zoning Ordinance for a Major or Minor Use Permit and it is found that road improvements, drainage, sewage, fire protection or other public facilities and improvements (including the land, easements and rights-of-way therefore) are necessary to insure that the establishment or maintenance of the requested use will not be materially detrimental to the public health, safety or welfare or to the property or improvements in the vicinity and zone in which the subject property is located such use permit shall be issued only upon conditions that provision be made for such improvements and facilities including the land, easements and rights-of-way therefore).

- **Policy I-60: Prohibition of Grading Until Annexation or Other Discretionary Actions are Completed**

  1. A grading permit for any project requiring discretionary approvals shall not be issued until all discretionary permits or approvals that can be determined as necessary in light of the project detail shown on the plan or permit application or known or reasonably inferred by the County Official, including those by other governmental agencies, such as Special Districts, or the Coastal Commission have been obtained. Where the Board of Supervisors, the Planning Commission, Director of Planning and Development Services (PDS) or Zoning Administrator approval is conditional on discretionary actions by other governmental agencies, the resolution should note which actions, if any, are prerequisite to the issuance of a grading permit.
  2. PDS will inform the applicant after an initial review of a project application, of all County discretionary permits or approvals which will be necessary for the project and will ensure that the requirement for obtaining such permits or approvals is incorporated in any associated conditional approval. The applicant should be encouraged to seek relating County discretionary approvals by concurrent processing of appropriate applications.

- **Policy I-84: Project Facility Availability and Commitment for Public Sewer, Water, School and Fire Services**

  C. No building permit, nor permit for the grading of a site in preparation for construction, will be issued until evidence of permanent water and sewer facility commitment (where such facilities are required by the project) is submitted to the County.

  The Project Facility Availability forms request standard information on the ability of special districts and other facility providers to potentially provide facilities to serve a project. They also allow facility providers to recommend specific requirements that may be made conditions of project approval.

  D. For Sewer and Water Facility Only

  1. Facility Availability (PFA Form)

  A Project Facility Availability form will be required at project intake. In order to be considered affirmative, a completed Project Facility Availability form shall contain a statement from the facility provider that it is reasonably expected that the facility provider will be able to give a commitment for facilities to serve the project at the time of need.

  E. For Fire Protection and Emergency Services Facilities Only

  For approval for all discretionary applications, sufficient fire protection and emergency service facilities must be available concurrent with need, and response times must be

adequate, as detailed in the Public Facility Element of the General Plan. This information will be requested from the fire protection agency.

- **Policy I-111: Land Use Policy for Discretionary Permits Adjacent to the International Border**

  It is the policy of the Board of Supervisors that for discretionary permits requested for properties located within 150 feet from the International Border, the following shall apply:

  1. Upon the receipt of such above described application, the Department of Planning and Development Services (PDS) shall notify the Department of Homeland Security (DHS) of such pending application and of the provisions of this policy.
  2. Such application shall not be deemed complete until one of the following occurs:
     a. A letter submitted from the DHS indicating they do not plan on entering into negotiations toward purchasing rights to the open space corridor located on the property subject to the application.
     b. Ninety days has elapsed from the date of original submittal, and the DHS has not indicated to the Department that they are interested in opening negotiations regarding an open space corridor.
     c. A letter is submitted from DHS indicating that negotiations have been completed or attempts to purchase have been abandoned.
     d. One hundred eighty days have elapsed from the date upon which the letter from the DHS indicating intent to negotiate was received by the PDS.

Jacumba Airport Land Use Compatibility Plan

The County's Zoning Ordinance includes Airport Land Use Compatibility Plan Area Regulations (Sections 5250 through 5260). The Project site is located within the Airport Influence Area (AIA) of the Jacumba Airport, for which the San Diego County Regional Airport Authority (Authority) has adopted the Jacumba ALUCP, and is therefore subject to Sections 5250 through 5260 of the County Zoning Ordinance. According to the Zoning Ordinance, "New development, redevelopment, expansions, conversions and other uses of land located within the AIA of an adopted ALUCP for which County approval or permit are required shall be reviewed against the established criteria and policies of the ALUCP. Unless the property is already devoted to the proposed incompatible use or the ALUCP is overridden by the County in a manner which renders the use compatible with the ALUCP, the proposal, must comply with the established policies and criteria of the applicable ALUCP. ALUCPs are available at the Department of Planning and Development Services and from the Authority." The Jacumba ALUCP provides for the orderly growth of the Jacumba airport and surrounding area, and safeguards the welfare of the inhabitants

within the vicinity of the airport and the public in general (County ALUC 2011). The Jacumba Airport airstrip is located on Old Highway 80, about 100 yards north of the Mexican border and 1 mile east of the small town of Jacumba. The airport consists of a single asphalt runway 2,508 feet in length and 100 feet wide. The airport is a low-activity facility with an estimated 2,500 total annual aircraft operations as of 2003/2004 (County ALUC 2011). The airport is mainly used as a glider facility by single-engine aircraft and sailplanes. (County ALUC 2011). Although not outlined in the ALUCP adopted in 2011, a resolution has been adopted by the County Board of Supervisors to accept state grant funds for runway rehabilitation project at the airport. (County of San Diego 2015).

The ALUCP includes a compatibility plan that addresses four types of airport land use compatibility concerns: noise, safety, airspace protection, and overflight. Each of these four concerns has its own layer with applicable policies and maps. In accordance with state law, the combination of the four layers determines the boundary of the airport influence area.

To facilitate implementation and reduce unnecessary referrals of projects to the San Diego County Airport Land Use Commission (ALUC), the airport influence area is divided into Review Area 1 and Review Area 2. The composition of each area is determined as follows:

e. Review Area 1 consists of locations where noise and/or safety concerns may necessitate limitations on the types of land uses. Specifically, Review Area 1 contains the 50 decibel community equivalent noise level (dB CNEL) noise contours and all of the safety zones depicted on the associated maps in this chapter. Within Review Area 1, all types of land use actions are to be submitted to the ALUC for review to the extent review is required by law.

- Review Area 2 consists of locations beyond Review Area 1 but within the airspace protection and/or overflight areas depicted on the associated maps in this chapter. Limits on the heights of structures, particularly in areas of high terrain, are the only restrictions on land uses within Review Area 2. The additional function of this area is to define where various mechanisms to alert prospective property owners about the nearby airport are appropriate. Within Review Area 2, only land use actions for which the height of objects is an issue are subject to ALUC review (County ALUC 2011, Chapter 2, Policy 1.6.2(a)(2)).

A portion of the Project site is located within Review Area 1, which consists of locations subject to noise and safety concerns. More specifically, the southern portion of the Project site, located to the west of the Jacumba Airport, is located within noise CNEL zones 50 dBA to 55 dBA and 55 to 60 dBA and mostly within safety zones 2 and 4, although a small portion of the site is within safety zone 5. A portion of the Project site is also located within Review Area 2 and this portion is therefore not located within the noise and safety concerns zones. The remainder of the Project site, which includes the northeastern portion of the site, adjacent to I-8, is outside the review areas.

The following identifies several Jacumba ALUCP policies that are applicable to the Proposed Project:

- **Policy JAC 1.1 Evaluating Acceptable Noise Levels for New Development:** The noise compatibility of proposed land uses within the influence area of Jacumba Airport shall be evaluated in accordance with the policies set forth in this section, including the criteria listed in Table JAC-1 and the noise contours depicted on Map JAC-1.
- **Policy JAC 1.3 Acceptable Noise Levels for Specific Types of Land Use Development:**

  (c) The compatibility of new nonresidential development with noise levels generated by the airport is indicated in Table JAC-1.

  1. Buildings associated with land uses listed as "conditional" must have added sound attenuation as necessary to meet the interior noise levels standards indicated in the table and in Policy JAC.JAC.1.5.
  2. Land uses not specifically listed shall be evaluated using the criteria for similar listed uses.

  (d) Dedication of an avigation easement in accordance with Policy 3.1.5 of Chapter 2 is a requirement for acceptability of any type of development within the 55 dB Community Noise Equivalent Level (CNEL) contour.
- **Policy JAC 1.4 Application of Noise Contours to Individual Project Sites:** Projected noise contours are inherently imprecise because, especially at general aviation airports, flight paths and other factors that influence noise emissions are variable and activity projections are always uncertain. Given this imprecision, noise contours shall be utilized as follows in assessing the proposed use of a specific development site.

  (a) In general, the highest CNEL to which a project site is projected to be exposed shall be used in evaluating the compatibility of development over the entire site and determining sound attenuation requirements, if any.

  (b) Exceptions to this policy are as follows:

  1. On project sites large enough to have a CNEL variation of 3 dB or more, compatibility criteria applicable within each 5 dB range (55 to 60, 60 to 65, etc.) shall be applied to each portion of the site exposed to that range of noise.
  2. Where no part of the buildings proposed on the site fall within the higher CNEL range, the criteria for the CNEL range where the buildings are located shall apply.

- **Policy JAC 2.2 Measures of Safety Compatibility:** To minimize risks to people and property on the ground and to people on board aircraft, the safety compatibility criteria set limits on:

  (b) The intensity of nonresidential development measured in terms of the number of people concentrated in areas most susceptible to aircraft accidents.

  (c) Development or expansion of certain uses that represent special safety concerns regardless of the number of people present.

  (d) The extent to which development covers the ground and thus limits the options of where an aircraft in distress can attempt an emergency landing.

- **Policy JAC 2.5: Nonresidential Development Criteria:** The following criteria apply to most proposed nonresidential development. Additional or different criteria for uses of special concern are described in Policy JAC 2.6.

  (a) For the purposes of this Compatibility Plan, the fundamental measure of risk exposure for people on the ground in the event of an aircraft accident is the number of people concentrate in areas most susceptible to aircraft accidents. This measure is the chief determinant of whether particular types of nonresidential development are designated as incompatible, conditional, or compatible in Table JAC-2.

  1. The maximum acceptable intensity of proposed development within the environs of Jacumba Airport is:

     - Within Safety Zone 1: 10 people per acre.
     - Within Safety Zone 2: 60 people per acre.
     - Within Safety Zone 3: 120 people per acre.
     - Within Safety Zone 4: 150 people per acre.
     - Within Safety Zone 5: 150 people per acre.
     - Within Safety Zone 6: no limit.

  2. Usage intensity calculations shall include all people (e.g., employees, customers/visitors) who may be on the property at any single point in time, whether indoors or outdoors.

  3. Local jurisdictions may make exceptions for rare special events (e.g., as an air show at an airport) for which a facility is not designed and normally not used and for which extra safety precautions can be taken as appropriate.

(b) Evaluation of the compatibility of a proposed nonresidential land use development shall be made using the land use types listed in Table JAC-2.

1. The nonresidential uses are categorized primarily with respect to the typical occupancy load factor of the use measured in terms of square footage per occupant. Occupancy load factor takes into account all occupants of the facility including employees, customers, and others. Also indicated in the table is the California Building Code (CBC) classification under which each facility is presumed to be constructed.

2. Proposed development for which no land use type is listed in Table JAC-2 shall be evaluated with respect to a similar use included on the list. The occupancy load factor of the unlisted use and that of the similar listed use shall be the primary basis for comparison except where the unlisted use is most similar to a land use of special concern. Unlisted uses also may be compared to listed uses having the same construction type as noted in the CBC column in the table.

- **Policy JAC 2.6 Land Uses of Special Concern:** Certain types of land uses represent special safety concerns irrespective of the number of people associated with those uses. Land uses of particular concern, the nature of the concern, and the conditions which the development must meet to be acceptable within a particular safety zone are as listed below.

(c) Critical Community Infrastructure: This category pertains to facilities the damage or destruction of which would cause significant adverse effects to public health and welfare well beyond the immediate vicinity of the facility.

2. Emergency Communications Facilities; Power Plants, and Other Utilities: Facilities such as these are conditionally compatible in the zones indicated for that use in Table JAC-2 only if the local jurisdiction documents that an alternative site outside these zones would not adequately meet the needs the facility is intended to serve and that this consideration outweighs the airport-related safety concerns associated with a site in the impacted area. Susceptibility of the facility to damage by an aircraft accident, the availability of redundant or replacement facilities, the rapidity with which the facility could be repaired, and other such factors should all be considered in the determination of whether a facility of this type should be placed in a risky location.

- **Policy JAC 2.8 Maximum Lot Coverage:** All proposed development in Safety Zones 2, 3, 4, and 5 regardless of whether the land use is listed as "compatible" or "conditional" shall adhere to the maximum lot coverage limitations indicated in Table JAC-2. No structures are permitted in Safety Zone 1 and no limits on lot coverage are set in Safety Zone 6. All structures, including parking structures and support buildings, shall be counted when determining maximum lot coverage.

(a) On project sites of 10.0 acres or more, structures and other large objects shall be arranged so as to meet the open land criterial in Policy JAC 2.9 below at the rate of one open land area per each 10 acres of the site.

- **Policy JAC 2.9 Open Land:** In the event that a light aircraft is forced to land away from an airport, the risks to the people on board can best be minimized by providing as much open land area as possible within the airport vicinity. This concept is based on the fact that the majority of light aircraft accidents and incidents occurring away from an airport runway are controlled emergency landings in which the pilot has reasonable opportunity to select the landing site. For business jets and other large or fast aircraft, including most military aircraft, provision of open land for emergency landing purposed has minimal benefit unless the areas are very large and flat.

  (a) Open land criteria are applicable to all general aviation airport runways in that even the runways frequently used by business jets are mostly used by light aircraft.

  (b) To qualify as open land, an area should:

    a. Be free of most structures and other major obstacles such as walls, large trees or poles (greater than 4 inches in diameter, measured 4 feet above the ground), and overhead wires.

    b. Have minimum dimensions of approximately 75 feet by 300 feet (0.5 acres).

  (c) Open land should be oriented with the typical direction of aircraft flight over the location involved.

- **Policy JAC 2.11 Parcels Lying within Two or More Safety Zones:** For the purposes of evaluating consistency with the compatibility criteria set forth in Table JAC-2, any parcel that is split by compatibility zone boundaries shall be considered as if it were multiple parcels divided at the compatibility zone boundary line. However, the density or intensity of development allowed within the more restricted portion of the parcel can (and is encouraged to) be reallocated to the less restricted portion. This reallocation of density or intensity is permitted even if the resulting density or intensity in the less restricted area would then exceed the limits which would otherwise apply within that safety zone.

- **Policy JAC 2.12 Special Provisions for Safety Zone 1:** In accordance with the Federal Aviation Administration (FAA) guidance, the basic compatibility criteria for Safety Zone 1 (the runway protection zones and within the runway primary surface), as listed in Table JAC-2, preclude most uses, including any new structures and uses having an assemblage of people.

  (a) The presumption is that the airport owner owns or intends to acquire property interests – fee title or easements – sufficient to effect this policy. The ALUC policy

is to encourage airport owner acquisition of these property interests in all of Safety Zone 1 with funding assistance from the FAA.

(b) In instances where the affected property is privately owned and the airport owner does not intend to acquire property interests, the following uses shall be considered acceptable:

1. Within the runway object free area (OFA): No uses except FAA-approved uses related to aeronautical functions.
2. Within the extended runway object free area: Roads
   - Farm crops that do not attract wildlife
3. Outside the runway object free area and extended runway object free area.
   - Uses listed in Paragraph (2)
   - Surface automobile parking
   - Other uses not in structures and not exceeding a usage intensity of 10 people per any single acre
4. The acceptability of uses not listed shall be consistent with FAA guidance and the ALUC determination shall be made in consultation with the FAA and the airport owner.

JAC.3.4 ALUC Airspace Obstruction Criteria: The ALUC criteria for determining the acceptability of a project with respect to height shall be based upon: the standards set forth in FAR Part 77, Subpart C; the United States Standard for Terminal Instrument Procedures (TERPS); and applicable airport design standards published by the Federal Aviation Administration. Additionally, the ALUC shall, where an FAA aeronautical study of a proposed object has been required, take into account the results of that study.

(a) Except as provided in Paragraphs (b) and (c) of this policy, no object, including mobile object such as a vehicle or temporary object such as construction crane, shall have a height that would result in penetration of the airspace protection surface depicted for Jacumba Airport in Map JAC-3, Compatibility Policy Map: Airspace Protection. Any object that penetrates one of these surfaces is, by FAA definition, deemed an obstruction.

(b) Other than within the Primary Surface and beneath the Approach or Transitional Surface, no object shall be limited to a height of less than 35 feet above the ground even if the object would constitute an obstruction.

(c) A proposed object having a height that exceeds the airport's airspace protection surface shall be allowed only if all of the following apply:

1. As the result of an aeronautical study, the FAA determines that the object would not be a hazard to air navigation.

2. FAA or other expert analysis conducted under the auspices of the ALUC or the airport operator concludes that, despite being an airspace obstruction (not necessarily a hazard), the object that would not cause any of the following:
    - An increase in the ceiling or visibility minimums of the airport for an existing or planned instrument procedure (a planned procedure is one that is formally on file with the FAA or that is consistent with the FAA-approved airport layout plan);
    - A diminution of the established operational efficiency and capacity of the airport, such as by causing the usable length of the runway to be reduced; or
    - Conflict with the visual flight rules (VFR) airspace used for the airport traffic pattern or en route navigation to and from the airport.
3. Marking and lighting of the object will be installed as directed by the FAA aeronautical study or the California Division of Aeronautics and in a manner consistent with FAA standards in effect at the time the construction is proposed (Advisory Circular 70/7460-1J, Obstruction Marking and Lighting, or any later guidance).
4. An avigation easement as described in Policy 3.1.5 of Chapter 2 is dedicated to the agency owning the airport.
5. The use complies with all policies of this Compatibility Plan related to noise and safety compatibility.

JAC.3.5 Other Flight Hazards: Land uses that may cause visual, electronic, or wildlife hazards, particularly bird strike hazards, to aircraft in flight or taking off or landing at the airport shall be allowed within the airport influence area only if the uses are consistent with FAA rules and regulations.

a) Specific characteristics to be avoided include:
    1. Sources of glare (such as from mirrored or other highly reflective buildings or building features) or bright lights (including search lights and laser light displays);
    2. Distracting lights that could be mistaken for airport light
    3. Sources of dust, steam, or smoke that may impair pilot visibility;
    4. Sources of electrical interference with aircraft communications or navigation; and
    5. Any proposed use that creates an increased attraction for wildlife and that is inconsistent with FAA rules and regulations including, but not limited to, FAA Order 5200.5A, Waste Disposal Sites on or Near Airports, and Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports. Of particular concern are

landfills and certain recreational or agricultural uses that attract large flocks of birds which pose bird strike hazards to aircraft in flight.

b) To resolve any uncertainties with regard to the significance of the above types of flight hazards, local jurisdictions should consult with FAA officials.

3.1.4.3 Analysis of Project Effects and Determination as to Significance

Land use and planning impacts are evaluated based on specified thresholds identified in the California Environmental Quality Act (CEQA) Guidelines, Appendix G (14 CCR 15000 et seq.).

This section assesses the land use impacts of the Proposed Project relative to potential conflicts with land use plans, policies, or regulations, such as the County General Plan. The County General Plan serves as the blueprint for growth and development in the unincorporated County. It is based on a set of guiding principles and consists of the following elements: Land Use, Mobility, Conservation and Open Space, Housing, Safety, and Noise. Each of these elements contains a set of goals and policies to which all discretionary development projects must adhere. In addition to the policy document, the County General Plan also consists of a land use map and mobility element network map. The land use map identifies the type and intensity of future uses on parcels of land throughout the County, whereas the mobility network delineates the road network that is required to accommodate these proposed uses. Finally, the County General Plan also consists of several community or subregional plans that are intended to provide more precise guidance regarding the character, land uses, and densities within each community planning area. All of these components make up the County General Plan.

The Proposed Project is a solar energy generation and storage facility, which includes a switchyard that would be transferred to San Diego Gas & Electric (SDG&E) after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1.2.2 of this EIR) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

3.1.4.3.1 Physically Divide an Established Community

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not include significance thresholds or guidance for determining significance for impacts to land use and planning. Therefore, for the purpose of this EIR, Appendix G of the CEQA Guidelines applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if the project would:

- Physically divide an established community.

Analysis

The Project site is located directly to the east of the community of Jacumba Hot Springs. The Project proposes to develop a 643-acre solar facility which would be located adjacent to the community of Jacumba Hot Springs. Access to Jacumba Hot Springs community and along Old Highway 80 would not be disturbed or divided by the Proposed Project. The facility is located adjacent to the community and would not transect or divide the main village residential and commercial areas of Jacumba Hot Springs. Since the proposed project would not divide the adjacent established community of Jacumba Hot Springs, the Proposed Project would have a **less than significant impact** with regard to physically dividing an established community.

Switchyard

The switchyard site would be located on vacant land immediately surrounded by undeveloped land within the Project site. The switchyard site is not located adjacent to the community of Jacumba Hot Springs. Therefore, the switchyard would not physically divide Jacumba Hot Springs. As such, impacts relative to the switchyard would be **less than significant**.

3.1.4.3.2 Conflict with an Applicable Land Use Plan, Policy, or Regulation

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not include significance thresholds or guidance for determining significance for impacts to land use and planning. Therefore, for the purpose of this EIR, Appendix G of the CEQA Guidelines applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if the project would:

- 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.

Analysis

Land Use Regulations

Zoning

The Proposed Project development footprint would be located on parcels currently zoned Specific Plan (S88), General Rural (S92), Open Space (S80), and Rural Residential (RR). In order to develop a solar facility on the Project site, discretionary actions from the County would be required, including a Major Use Permit (MUP). The Proposed Project is considered a Major Impact Service and Utility type of use that requires approval of a MUP on the Project site. The application for a MUP would be processed according to Section 7350 of the Zoning Ordinance, including making required findings

pursuant to Section 7358. Major impact services and utilities (e.g., solar generation facilities) and minor impact utilities (e.g., electrical distribution substations) are defined under Sections 1350 and 1355 of the County Zoning Ordinance (County of San Diego 2014). Minor impact utilities require a minor use permit, while major impact services and utilities require a MUP. Major impact services and utilities, however, may be conditionally permitted in any zone if it is determined that public interest supersedes the usual limitations placed on land use and transcends the usual restraints of zoning for reasons of necessary location and community-wide interest (Section 1350 in County of San Diego 2014). Sections 1350 and 1355 read as follows:

- **1350. Major Impact Services and Utilities.** The Major Impact Services and Utilities use type refers to public or private services and utilities which have substantial impact. Such uses may be conditionally permitted in any zone when the public interest supersedes the usual limitations placed on land use and transcends the usual restraints of zoning for reasons of necessary location and community wide interest. Typical places or uses are schools, sanitary landfills, public and private airports, public park/playground/ recreational areas (other than public passive park/recreational areas), hospitals, psychiatric facilities, cemeteries, nursing homes, detention and correction institutions, trade schools (with outdoor training facilities), security or paramilitary type training facilities, or field medical training uses.
- **1355. Minor Impact Utilities.** The Minor Impact Utilities use type refers to public utilities which have a local impact on surrounding properties and are necessary to provide essential services. Typical uses are electrical and gas distribution substations.

Furthermore, Section 2888(a) of the Zoning Ordinance states that a "Major Use Permit may be granted for any use pursuant to a bonded agreement in an amount sufficient to ensure the removal of all buildings, structures, and other improvements within a specified time and/or under specified conditions when the decision-making body finds that such agreement will carry out the intent of this Ordinance and is enforceable by the County."

Land Use Plans and Policies

As demonstrated in Table 3.1.4-2, County Board of Supervisors Consistency Analysis, and Table 3.1.4-3, Land Development Ordinances Consistency Analysis, below, the Proposed Project would be consistent with applicable County Board of Supervisors policies and County ordinances. Table 3.1.4-4, County General Plan Consistency Analysis, below analyzes the Project's consistency and/or inconsistency with applicable policies of the San Diego County General Plan, and Table 3.1.4-5, Mountain Empire Subregional Plan Consistency Analysis, below analyzes the Proposed Project's consistency and/or inconsistency with the Mountain Empire Subregional Plan. Table 3.1.4-6 shows how the Proposed Project is consistent with the Jacumba ALUCP.

It should also be noted that the following County ordinances are not applicable to the Project for reasons as stated below:

- Centerline Ordinance Section 51.312 states the following: "(a) A property owner subject to section 51.303 shall make arrangements with the serving utility companies for all existing utility distribution facilities, including cable television lines, to place the facilities underground along the frontage of the property. This section shall not apply to the installation and maintenance of overhead electric transmission lines in excess of 34,500 volts and long distance and trunk communications facilities."
    - This section of the Centerline Ordinance Section would not apply to the Proposed Project because the gen-tie line would be in excess of 34.5 kV.

Furthermore, as discussed in Section 3.1.4.2 Regulatory Setting, the California-Baja California Border Master Plan is in early conceptual planning stages for a new border crossing at the proposed Jacumba-Jacumé POE. Because a border crossing at this location is still in early planning stages, lacks funding for further development, there is no conflict with the Proposed Project.

Therefore, the Proposed Project would not conflict with an applicable land use plan or policy, and impacts associated with an applicable land use plan or policy would be **less than significant**.

3.1.4.4 Cumulative Impact Analysis

While land use and planning impacts tend to be localized, and specific impacts are tied either directly or indirectly to the specific action, the Proposed Project may have the potential to work in concert with other past, present, or future projects to either cause unintended land use impacts such as reducing available open space or accommodate increased growth that may result in more intensive land uses. Therefore, the geographic extent for cumulative analysis tends toward larger policy areas, such as the San Diego County General Plan and Mountain Empire Subregional Plan policy areas, as opposed to the more focused Project-specific impacts. For the threshold regarding physical division of an established community, the geographic areas for the cumulative analysis is limited to the Mountain Empire Subregional Plan Area, whereas the cumulative analysis of conflicts with an applicable land use plan is considered from a County-wide perspective.

Additionally, for each individual cumulative project that is introduced to the area, the Project would be required to analyze impacts related to land use and community character in accordance with CEQA.

3.1.4.4.1 Physically Divide an Established Community

The Project, in combination with cumulative projects (including decommissioning), would not disrupt or divide the established community of Jacumba Hot Springs, or any other established communities within the Mountain Empire Subregional Plan Area. The Proposed Project

components would be located on a vacant site, with the except of the structures associated with prior dairy and agricultural operations. The Jacumba Solar development is located approximately 1.75 miles east from the Project site's eastern boundary. As such, the proposed placement of the Project components would not physically divide existing residential or other community development. Additionally, there are no occupied residential uses on site, nor are there residential uses immediately north or east of the Project site as the majority of existing residential development is located immediately southwest of the Project site in Jacumba Hot Springs. Although the Project site is located directly to the east of the community of Jacumba Hot Springs and on both sites of Old Highway 80, which functions as the community's main street, access to Jacumba Hot Springs community and along Old Highway 80 would not be disturbed or divided by the Proposed Project. Adequate access to roadways and other rights-of-way would be maintained during all phases of each project. Therefore, the Proposed Project would not contribute to a cumulative impact to physical division of an established community; **cumulative impacts would be less than significant**.

3.1.4.4.2 Conflict with an Applicable Land Use Plan, Policy, or Regulation

The Proposed Project would be consistent with the policies in the Mountain Empire Subregional Plan, applicable County Board of Supervisors policies and County ordinances, consistent with policies of the adopted San Diego County General Plan, and consistent with the current Jacumba ALUCP. The Project would also implement the pertinent goals, policies, guidelines, and recommendations of all these applicable planning documents. Because the Project is consistent with the applicable land use plans, policies, and regulations, it would not conflict with such plans, policies, and regulations when combined with other projects. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** related to environmental impacts due to conflicts with land use plans, designations, and policies.

3.1.4.5 Significance of Impacts Prior to Mitigation

Physically Divide a Community

The Proposed Project is a solar energy generation and storage project. The Project site is located directly to the east of the community of Jacumba Hot Springs. Access to Jacumba Hot Springs community and along Old Highway 80 would not be disturbed or divided by the Proposed Project. Since the proposed project would not divide the adjacent established community of Jacumba Hot Springs, the Proposed Project would have **less than significant impacts** with regard to physically dividing an established community.

Conflict with Land Use Plans, Designations and Policies

The Proposed Project would be consistent with the policies in the Mountain Empire Subregional Plan, applicable County Board of Supervisors policies and County ordinances, consistent with policies of the adopted San Diego County General Plan and consistent with the Jacumba ALUCP. The Project would also implement the pertinent goals, policies, guidelines, and recommendations of all these applicable planning documents. Because the Proposed Project is consistent with the applicable land use plans, policies, and regulations, it would not conflict with such plans, policies, and regulations and would have **less than significant** impacts due to conflicts with land use plans, designations, and policies.

3.1.4.6 Mitigation Measures

No mitigation is necessary.

3.1.4.7 Conclusion

The Proposed Project would not result in the division of an established community. The Proposed Project would also be consistent with applicable County Board of Supervisors policies and County ordinances, the County General Plan policies and the Mountain Empire Subregional Plan as amended and Jacumba ALUCP; therefore, the Project would not result in impacts due to conflicts with land use plans, designations, and policies.

Therefore, the Proposed Project's impacts related to land use and planning would be **less than significant**.

Table 3.1.4-1
Existing Zoning and Permitted Uses

Zone	Permitted Uses
S88	family residential; civic uses, limited to fire protection services; and agricultural uses
S92	family residential; civic uses limited to essential services, fire protection services, and law enforcement services; and agricultural uses
S80	family residential; civic uses, limited to fire protection services; and agricultural uses
RR	family residential, civic uses, limited to fire protection services; and agricultural uses

Source: County of San Diego 2014b

Table 3.1.4-2
County Board of Supervisors Consistency Analysis

County Board of Supervisors Land Development Section I	
Policy	*Project Consistency with Policy*
Policy I-18: Right-of-Way Dedication and Public Improvement Requirements in Connection with Major and Minor Use Permits Where application is made pursuant to The Zoning Ordinance for a Major or Minor Use Permit and it is found that road improvements, drainage, sewage, fire protection or other public facilities and improvements (including the land, easements and rights-of-way therefore) are necessary to insure that the establishment or maintenance of the requested use will not be materially detrimental to the public health, safety or welfare or to the property or improvements in the vicinity and zone in which the subject property is located such use permit shall be issued only upon conditions that provision be made for such improvements and facilities including the land, easements and rights-of-way therefore).	**Consistent:** Public drainage and sewage improvements would not be required for the Proposed Project as the Proposed Project would be an unmanned facility that would be controlled remotely and only have periodic workers for routine repair, maintenance and inspection. Improvements to roadways required to facilitate construction and operation of the Project would be constructed pursuant to County standards for the intended use of the roadways. Additionally, a Fire Protection Plan (FPP) has been prepared for the Proposed Project (Appendix N), and with the implementation of **M-WF-1**, the design and protection measures of the FPP would be implemented to address any fire suppression design measures and emergency access requirements for the Project.
Policy I-60: Prohibition of Grading Until Annexation or Other Discretionary Actions are Completed 1. A grading permit for any project requiring discretionary approvals shall not be issued until all discretionary permits or approvals that can be determined as necessary in light of the project detail shown on the plan or permit application or known or reasonably inferred by the County Official, including those by other governmental agencies, such as Special Districts, or the Coastal Commission have been obtained. Where the Board of Supervisors, the Planning Commission, Director of Planning and Development Services or Zoning Administrator approval is conditional on discretionary actions by other governmental agencies, the resolution	**Consistent:** Grading would be performed; therefore, grading permits from the County would be required. The Applicant would also obtain all necessary and required discretionary permits and approvals before a grading permit is issued.

Table 3.1.4-2
County Board of Supervisors Consistency Analysis

County Board of Supervisors Land Development Section I	
Policy	*Project Consistency with Policy*
should note which actions, if any, are prerequisite to the issuance of a grading permit. 2. PDS will inform the applicant after an initial review of a project application, of all County discretionary permits or approvals which will be necessary for the project and will ensure that the requirement for obtaining such permits or approvals is incorporated in any associated conditional approval. The applicant should be encouraged to seek relating County discretionary approvals by concurrent processing of appropriate applications.	
Policy I-84: Project Facility Availability and Commitment for Public Sewer, Water, School and Fire Services C. No building permit, nor permit for the grading of a site in preparation for construction, will be issued until evidence of permanent water and sewer facility commitment (where such facilities are required by the project) is submitted to the County. The Project Facility Availability forms request standard information on the ability of special districts and other facility providers to potentially provide facilities to serve a project. They also allow facility providers to recommend specific requirements that may be made conditions of project approval. D. For Sewer and Water Facility Only 1. Facility Availability (PFA Form) a. A Project Facility Availability form will be required at project intake. In order to be considered affirmative, a completed Project Facility Availability form shall contain a statement from the facility provider that it is reasonably expected that the facility provider will be able to give a commitment for facilities to serve the project at the time of need. E. For Fire Protection and Emergency Services Facilities Only For approval for all discretionary applications, sufficient fire protection and emergency service facilities must be available concurrent with need, and response times must be adequate, as detailed in the Public Facility Element of the General Plan. This information will be requested from the fire protection agency.	**Consistent:** During construction of the Proposed project, water would be required for clearing, grading, dust control, dust abatement, and other construction needs, such as washing stations for vehicles/equipment. During operation, water would be required for washing solar panels and landscaping. The project would use onsite groundwater wells. The Proposed Project would have not full-time workers, only periodic maintenance. No public sewer service is required. With the implementation of **M-WF-3**, the Proposed Project would participate in a Fire Protection and Mitigation Agreement with San Diego County Fire Authority (SDCFA) to improve SDCFA's capacity to provide fire and emergency protection services. Additionally, an FPP (and its associated Construction Fire Protection Plan (CFPP)) (Appendix N) has been prepared for the Proposed Project and approved by the County Fire Authority. With the implementation of **M-WF-1** (FPP) and **M-WF-2** (CFPP), the fire protection measures of the FPP would be implemented. The San Diego County Fire Authority, in collaboration with CAL FIRE would provide fire protection services to the Proposed Project site as well as to the fire protection district. No additional demand on police would result from the Proposed Project.

Table 3.1.4-2
County Board of Supervisors Consistency Analysis

County Board of Supervisors Land Development Section I	
Policy	*Project Consistency with Policy*
Policy I-111: Land Use Policy for Discretionary Permits Adjacent to the International Border. It is the policy of the Board of Supervisors that for discretionary permits requested for properties located within 150 feet from the International Border, the following shall apply: 1. Upon the receipt of such above described application, the Department of Planning and Development Services (PDS) shall notify the Department of Homeland Security (DHS) of such pending application and of the provisions of this policy. 2. Such application shall not be deemed complete until one of the following occurs: a. A letter submitted from the DHS indicating they do not plan on entering into negotiations toward purchasing rights to the open space corridor located on the property subject to the application. b. Ninety days has elapsed from the date of original submittal and the DHS has not indicated to the Department that they are interested in opening negotiations regarding an open space corridor. c. A letter is submitted from DHS indicating that negotiations have been completed, or attempts to purchase have been abandoned. d. One hundred eighty days have elapsed from the date upon which the letter from the DHS indicating intent to negotiate was received by the Department of Planning and Development Services.	**Consistent.** The Project's parcels that are adjacent to the International Border all have a D-Designator (Special Area Regulation) that prescribe specific actions to be taken relative to development along the International Border. On December 18, 2018, DHS was notified that a portion of the Project would be within the 90-foot of the Public Reserve Area. On January 21, 2019, DHS stated that the Proposed Project would not be a significant impact to Border Patrol operations or access to the area. The 90-feet of open corridor was deemed unnecessary to DHS. Therefore, the Proposed Project complies with Board Policy I-111.

Table 3.1.4-3
Land Development Ordinances Consistency Analysis

Ordinance	Project Consistency with Ordinance
Resource Protection Ordinance The purpose of this ordinance is to protect sensitive lands (wetlands, floodplains, steep slopes, sensitive biological habitats, and prehistoric and historic sites) and prevent their degradation and loss by requiring a Resource Protection Study for certain discretionary projects. It is the intent of this ordinance to increase the preservation and protection of the County's unique topography, natural beauty, diversity, and natural resources and a high quality of life for current and future residents of the County of San Diego.	**Consistent.** As discussed in Section 2.3 Biological Resources, the Proposed Project, with mitigation, would provide for protection and conservation of special-status species and natural communities. The Proposed Project avoid impacts to known cultural resources.

Table 3.1.4-3
Land Development Ordinances Consistency Analysis

Ordinance	Project Consistency with Ordinance
Noise Ordinance The purpose of this ordinance is to regulate noise in the unincorporated area of the County to promote the public health, comfort and convenience of the County's inhabitants and its visitors.	**Consistent.** As discussed in Section 2.9, Noise, with implementation of **M-NOI-1** and **M-NOI-2**, predicted noise impacts associated with operation of on-site equipment received at adjacent properties would be less than significant with respect to County hourly daytime and nighttime noise thresholds. Also, as presented in Section 2.9, with implementation of **M-NOI-3**, predicted noise impacts associated with Proposed Project construction activities, including conventional construction equipment vehicles operating across the site and post-driving processes taking place near the proposed Project boundary, received at adjacent residences would be less than significant.
Zoning Ordinance The purpose of the Zoning Ordinance is to specify the range and combinations of uses necessary to meet requirements for residential and non-residential development within San Diego County as set forth in the policies and principles of the San Diego County General Plan.	**Consistent.** Per the County Zoning Ordinance, solar projects are allowed on lands zoned General Rural (S92), Specific Plan (S88), Open Space (S80), Rural Residential (RR); however, solar projects and other major impact services and utilities are subject to the issuance of a MUP. Upon approval of the MUP, the Proposed Project would be consistent with the Zoning Ordinance. Additionally, the Proposed Project is located within the AIA of the Jacumba Airport, for which the County Regional Airport Authority has adopted the Jacumba ALUCP, and is therefore subject to Sections 5250 through 5260 of the County Zoning Ordinance. The Project would be required to file a Notice of Proposed Construction or Alteration (Form 7460-1) with the Federal Aviation Administration (FAA). Based on the information provided in Form 7460-1, the FAA has determined that the Proposed Project would not present a hazard to airspace or navigation.

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
Policy LU-2.8: Mitigation of Development Impacts Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment, and/or are detrimental to human health and safety.	**Consistent:** The Proposed Project would be consistent with this policy. Implementation of the Proposed Project mitigation measures would reduce Project-generated impacts to the extent feasible. As described in Section 2.2, Air Quality, of this EIR strategies the Proposed Project would comply with SDAPCD Rule 55 and control dust include watering three times per day, using magnesium chloride for dust suppression on unpaved roads, and limiting speed on unpaved roads to 15 miles per hour. Construction of Proposed Project components would result in the emission of diesel fumes and other odors typically associated with construction activities; however, odors

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	are highest near the source and would quickly dissipate. Any odors associated with construction activities would be temporary and would cease upon Proposed Project completion. Section 2.1 Aesthetics, of this EIR, identifies mitigation measures (**M-AE-1 through M-AE-6**) to reduce the impacts of the Project facilities related to views from public roads, scenic vistas and visual character. Even with the implementation of mitigation measures, the Proposed Project's impacts to visual resources remains significant and unavoidable. As discussed in Section 2.6, Hazards and Hazardous Materials of this EIR, the Proposed Project would be in compliance with applicable hazardous substance regulations and would not generate hazardous waste regulated under H&SC Chapter 6.5, and/or store hazardous substances in underground storage tanks regulated under H&SC Chapter 6.7. The Proposed Project would not be located within 0.25 miles of a school or daycare facility. As further discussed in Section 2.9, Noise, of this EIR with implementation of **M-NOI-1, M-NOI-2** and **M-NOI-3**, the construction and operational noise impacts from the Proposed Project n would be less than significant.
Policy LU-4.6: Planning for Adequate Energy Facilities. Participate in the planning of regional energy infrastructure with applicable utility providers to ensure plans are consistent with the County's General Plan and Community Plans and minimize adverse impacts to the unincorporated County.	**Consistent.** The Proposed Project would be consistent with this policy. A main objective of the Proposed Project would be to develop a utility-scale solar energy project that improves local electrical reliability for the San Diego County and other counties by providing a source of local generation as near as possible to existing SDG&E transmission infrastructure. As discussed in Section 3.1.2, Energy, the Proposed Project is expected to produce an estimated 211,159 megawatt hours of renewable electricity per year with a maximum storage capacity of up to 90 MW (180 MWh) per year. The Proposed Project's consistency with the County's General Plan, the Mountain Empire Subregional Plan and the Jacumba Subregional Group Area Plan are discussed in this EIR section.
Policy LU-4.7: Airport Land Use Compatibility Plans (ALUCP). Coordinate with the Airport Land Use Commission (ALUC) and support review of Airport Land Use Compatibility Plans (ALUCP) for development within Airport Influence Areas.	**Consistent.** The Proposed Project would be consistent with this policy. The Project site is located within the AIA of the Jacumba Airport, for which the County Regional Airport Authority has adopted the Jacumba ALUCP, and is therefore subject to Sections 5250 through 5260 of the County Zoning Ordinance. The Project has been designed in accordance with the Jacumba ALUCP and would be required to file a Notice of Proposed Construction or Alteration (Form 7460-1) with the Federal Aviation Administration (FAA).Based on the information provided in Form 7460-1, the FAA has determined that the Project would not present a hazard to airspace or navigation.

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
Policy LU-5.3: Rural Land Preservation Ensure the preservation of existing open space and rural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) when permitting development under the Rural and Semi-Rural Land Use Designations.	**Consistent.** The Proposed Project would be consistent with this policy. The Project site does not include any existing open space easements. The Project site includes a small area (37.88 acres) designated Rural Lands as well as jurisdictional aquatic resources as defined by Section 404 of the Clean Water Act. However, as discussed in Section 3.1.1 Agricultural Resources, the Project site does not have important agricultural resources, as defined by the LARA Model. And the Project only proposes an interim use of the site; the solar facility (except for switchyard) would be decommissioned after 35 years. As a result, the Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. Mitigation would ensure impacts to wetlands and jurisdictional resources are reduced to less than significant levels. During operation of the Project, water demand would not exceed the threshold of 50% reduction in groundwater storage, nor would the Project result in adverse impacts to groundwater dependent habitat or well interference habitat near groundwater wells. Implementation of **PDF-HYD-2 (GMMP)** would ensure the groundwater wells used will be monitored throughout the implementation of the Project. Therefore, impacts to groundwater as a result of the proposed Project would be less than significant, and no mitigation measures would be required. In addition, as discussed in Section 2.7, Hydrology and Water Quality, the Project site would consist of primarily permeable surfaces to allow for groundwater recharge similar to that under current conditions. The Project would take into consideration the existing natural features throughout the site to avoid sensitive environmental resources to the extent practicable. In addition, the agricultural operations in the surrounding area are composed primarily of irrigated row crops and dairy farms, but no such operations occur within 0.25 miles of the Project site. Additionally, since no areas under a Williamson Act Contract are within 0.25 miles of the Project site, the Proposed Project would not involve changes to the existing environment that, due to their location or nature, could indirectly result in the conversion of off-site agricultural resources to non-agricultural use, or could adversely impact the viability of agriculture on land under a Williamson Act Contract. The Proposed Project would not introduce sensitive receptors that could object to ongoing agricultural operations. Additionally, the Proposed Project would not obstruct, interrupt, or detract from potential agricultural operations within the ZOI, or be detrimental to surrounding properties. Accordingly, the Proposed Project would not result in any additional pressure to convert surrounding agricultural lands.

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	Lastly, there are no agricultural preserves and no active agricultural production exists within 0.25 miles of the Project site.
Policy LU-5.5: Projects that Impede Non-Motorized Travel Ensure that development projects and road improvements do not impede bicycle and pedestrian access. Where impacts to existing planned routes would occur, ensure that impacts are mitigated and acceptable alternative routes are implemented.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project does not propose any features or improvements that would impede bicycle and pedestrian access. There are currently no existing bicycle or pedestrian access points to the Project site or on surrounding access roads and Old Highway 80. Primary access to the proposed solar facility and substation/switchyard would be provided via access driveways off of Old Highway 80 and Carrizo Gorge Road.
Policy LU-6.1: Environmental Sustainability Require the protection of intact or sensitive natural resources in support of the long-term sustainability of the natural environment.	**Consistent.** The Proposed Project would be consistent with this policy. A portion of the site was historically disturbed by prior agricultural operations. As discussed in Section 2.3 Biological Resources, of this EIR, the Proposed Project would potentially result in significant direct and indirect impacts to biological resources, including vegetation communities and land covers. All project impacts to sensitive natural resources will be mitigated to below a level of significance. Mitigation for habitat impacts will be located in areas that contribute significant resources to an integrated preserve system. Impacts to biological resources would be mitigated to less than significant.
Policy LU-6.5: Sustainable Stormwater Management Ensure that development minimizes the use of impervious surfaces and incorporates other Low Impact Development techniques as well as a combination of site design, source control, and stormwater best management practices, where applicable and consistent with the County's LID Handbook.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, the Proposed Project would incorporate LID features that conserve natural features, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff. Additional Best Management Practices (BMPs) will be incorporated into the Project to address potential and anticipated water quality impacts. Solar development has been determined to be a non-priority development project (PDP) by the County of San Diego and the local Regional Water Quality Control Board and therefore, the project is not subject to hydromodification requirements. The Project will implement a Standard Stormwater Quality Management Plan (SWQMP) requirements as shown in Appendix K. The use of impermeable surfaces would be minimized to the extent practicable, however, concrete foundations for the substation components would include impervious surfaces, The Proposed Project would add only 1.9 acre of impervious surfaces to the site.
LU-6.6: Integration of Natural Features into Project Design Require incorporation of natural features (including mature oaks, indigenous trees, and rock formations) into proposed development and require avoidance of sensitive environmental resources.	**Consistent.** The Proposed Project would be consistent with this policy. The Project site does not include any mature oaks or indigenous trees that require avoidance or integration into the project design. Existing rock formations on the site would be avoided by project design.. The San Diego County

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	Department of Planning & Development Services landscape architect shall require that all final landscape plans comply with the following: no invasive plant species, as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with these requirements.
Policy LU-6.9: Development Conformance with Topography Require development to conform to the natural topography to limit grading; incorporate and not significantly alter the dominant physical characteristics of a site; and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.	**Consistent.** The Proposed Project would be consistent with this policy. Grading required for the installation of the solar facility would be consistent with the requirements of the County Grading Ordinance. The Project will require a Major L-Grade Grading permit; however, during construction, the implementation of required erosion control measures, stormwater management plans, and BMPs would minimize potential erosion and sedimentation impacts to a less than significant level. Approximately 643 acres within the Project area that comprises the proposed solar facility and related improvements would be graded. As discussed in Section 2.7, Hydrology and Water Quality, **PDF-HYD-1** and **M-HYD-1** would ensure that flood flows would not be redirected or impeded. The required Standard SWQMP, SWPPP, and requirements to obtain permits from the ACOE and RWQCB pursuant to the Clean Water Act, would be implemented. Impacts would be less than significant with implementation of mitigation.
Policy LU-6.10: Protection from Hazards Require that development be located and designed to protect property and residents from the risks of natural and man-induced hazards.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.6, Hazards and Hazardous Materials, of this EIR, the Proposed Project would be in compliance with applicable hazardous substance regulations and would not generate hazardous waste regulated under H&SC Chapter 6.5, and/or store hazardous substances in underground storage tanks regulated under H&SC Chapter 6.7. The Proposed Project would not be located within 0.25 miles of a school or daycare facility. A Phase I Environmental Site Assessment were prepared for the Proposed Project and sampling results indicated that the on-site soils do not have concentrations of heavy metals (including arsenic and lead), dioxins, or furans that would pose a hazard and require remediation. The records search conducted as part of the Phase I did not indicate that off-site sources of hazardous materials exist that would impact the site. Proposed development of the site does not interfere with implementation of emergency responses in the area. The Project site is located adjacent to the Jacumba Airport and is designed to prevent hazards for air traffic in the area. With implementation of **M-WF-1** (FPP), the Proposed Project would be in compliance with applicable fire codes and would reduce potential impacts

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	associated with wildfire hazards. With the implementation of **M-WF-3**, the Proposed Project would participate in a Fire Protection and Mitigation Agreement with SDCFA to improve SDCFA's capacity to provide fire and emergency protection services. As discussed in Section 2.5, Geology, Soils and Seismicity, of this EIR, the Proposed Project would be designed in accordance with the seismic design requirements of the California Building Code (CBC), which contains universal standards for seismically sound site preparation and grading practices, foundations design, and guidelines for the appropriate selection and use of construction materials. Also as required in **M-GEO-1**, a more comprehensive Geology and Soils Report evaluation would be conducted and the design requirements recommended for potential liquefaction and expansive soils impacts would be followed. Therefore, impacts would be less than significant with the implementation of mitigation.
Policy LU-7.1: Agricultural Land Development. Protect agricultural lands with lower-density land use designations that support continued agricultural operations.	**Consistent.** The Proposed Project would be consistent with this policy. The Project does not propose to change any zoning or land use designations on the site, and as such, will not impact any nearby agricultural operations. As discussed in Section 3.1.1, Agricultural Resources, the Project site does not have important agricultural resources, as defined by the LARA Model. As a result, the Proposed Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. The Project site is largely an undeveloped ranch land and does not contain any current major agricultural uses or irrigated croplands. Based on current site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of current agricultural activity occurring on the Project site. As seen in Figure 3.1.1-2, Zone of Influence Important Farmlands, portions of the Project site are designated under the state Farmland Mapping and Monitoring Program as Prime Farmland, Farmland of Local/State Importance, or Unique Farmland.
Policy LU-7.2: Parcel Size Reduction as Incentive for Agriculture. Allow for reductions in lot size for compatible development when tracts of existing historically agricultural land are preserved in conservation easements for continued agricultural use.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 3.1.1, Agricultural Resources, of this EIR, the site also has portions that have been used as historical field or pasture agricultural lands. However, the Project would not conflict with a Williamson Act Contract or agricultural preserve. The Proposed Project would not change the rural characteristics of the area, as there are no active agricultural operations in the Proposed Project's Zone of Influence (ZOI). Consequently, the Proposed Project would not obstruct, interrupt, or detract from existing agricultural operations within the ZOI, or be detrimental to surrounding

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	properties. Since there are no active agricultural lands within 0.25 miles of the Project site, this would not result in any additional pressure to convert surrounding agricultural lands. The Proposed Project does not propose residential uses; therefore, the Proposed Project would not conflict with surrounding agricultural uses as it pertains to introduction of residential uses to the area.
Policy LU-8.1: Density Relationship to Groundwater Sustainability. Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, impacts to groundwater would be less than significant. With the implementation on **PDF-HYD-2** (GMMP) the Proposed Project groundwater pumping will be monitored to ensure nearby groundwater-dependent vegetation is not adversely impacted and the Project would not cause well interference. Recharge will offset groundwater-level decline related to groundwater extraction during periods of above-average annual rainfall (non-drought conditions). Therefore, impacts to groundwater as a result of the Proposed Project would be less than significant.
Policy LU-8.2: Groundwater Resources Require development to identify adequate groundwater resources in groundwater dependent areas, as follows: • In areas dependent on currently identified groundwater overdrafted basins, prohibit new development from exacerbating overdraft conditions. Encourage programs to alleviate overdraft conditions in Borrego Valley. • In areas without current overdraft groundwater conditions, evaluate new groundwater dependent development to assure a sustainable long-term supply of groundwater is available that will not adversely impact existing groundwater users.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would use groundwater from on-site wells. A Groundwater Investigation Report (Appendix J of this EIR) has been prepared for each of the groundwater wells identified for use by the Proposed Project. As discussed in Section 2.7, Hydrology and Water Quality, of this EIR, potential impacts to groundwater resources in the project area as well as off-site sources have been analyzed and the Jacumba Valley Groundwater Basin has not been demonstrated to be in overdraft condition; therefore, significance thresholds related to groundwater overdraft conditions are not applicable to the Proposed Project. The Proposed Project development would not impact the long term supply of groundwater, and the Project's water use is minimal compared to the amount of water stored in the Basin. However, to ensure that County significance thresholds related to groundwater-dependent habitat are not exceeded, the applicant has prepared and will implement **PDF-HYD-2** (GMMP), which will ensure that the use of groundwater from on-site wells will be monitored and will not result in a significant impact to groundwater dependent habitat or well interference.
Policy LU-8-3: Groundwater Dependent Habitat. Discourage development that would significantly draw down the groundwater table to the detriment of groundwater-dependent habitat.	**Consistent.** The Proposed Project is consistent with this policy. Please refer to Policy LU-8.2 consistency analysis, above. The Hydrology and Water Quality (Section 2.7 of this EIR) found that the Proposed Project development would not impact long the long-term supply of groundwater, and the Proposed Project's water use is minimal compared to the amount of water stored in the Basin. However, the Proposed Project will

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	incorporate **PDF-HYD-2** (GMMP) to ensure that the use of groundwater from an on-site well will not result in a significant impact to groundwater-dependent habitat or well interference.
Policy LU-10.2: Development–Environmental Resource Relationship Require development in semi-rural and rural areas to respect and conserve the unique natural features and rural character and avoid sensitive or intact environmental resources and hazard areas.	**Consistent.** The Proposed Project is consistent with this policy. The Proposed Project has been designed in accordance with the Resource Protection Ordinance and would conserve unique natural features and rural character to the extent feasible. Please refer to Policy LU-5.3 consistency analysis above. The Project site does not contain any unique natural features or hazard areas that require avoidance. As discussed in Section 3.1.1, Agricultural Resources, the Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. As discussed in Section 2.3, Biological Resources, of this EIR, prior to mitigation, development of the Proposed Project would result in potentially significant short-term and long-term direct and/or indirect impacts to special-status plants, special-status wildlife species, and wildlife habitat, as well as short-term direct impacts to wildlife movement. Biological mitigation measures includes biological monitoring, temporary construction fencing, habitat preservation through open space easements and replanting in suitable mitigation lands, a resources management plan, nesting bird surveys, bat surveys and roost avoidance or exclusion, biological monitoring of a SWPPP, prevention of chemical pollutants, prevention of invasive plant species, O&M signage, and noise reduction measures**.** In addition, dust control measures and implementation of the FPP would reduce potential impacts. All significant impacts would be reduced to less than significant with implementation of mitigation measures.
Policy LU-12.1: Concurrency of Infrastructure and Services with Development Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing.	**Consistent.** The Proposed Project is consistent with this policy. As discussed in Section 3.1.6, Public Services, of this EIR, Police protection in the project area is served by the San Diego County Sheriff's Department, California Highway Patrol, and U.S. Customs and Border Protection. Although the number of workers on the Project site would temporarily increase by up to a maximum of approximately 500 workers on any given day at peak construction, and up to a maximum of approximately 250 workers on any given day during decommissioning activities, this increase is not expected to substantially increase the number of police protection service calls that would require new or expanded police facilities. The Proposed Project does not anticipate any full-time personnel on site but may include up to five people on site during operations, inspections, maintenance, and repair activities. Therefore, impacts to police protection services would be less than significant.

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	Implementation of **M-WF-1** (FPP) and **M-WF-2** (CFPP) provide fire protection measure which would reduce fire hazards. Further, the Proposed Project would participate in a Fire Services Agreement with SDCFA (**M-WF-3**) to contribute funding for SDCFA equipment and personnel to mitigate risks of fires and to enhance fire suppression services in the Project area. Any increase in equipment or personnel required to service the Proposed Project will fit within the current capacity of fire service facilities in the Project area. The Proposed Project would not result in demand that would require new or expanded fire facilities during either the Proposed Project construction, operation or decommissioning. Accordingly, the Proposed Project's construction, operation, and decommissioning would have no impact related to the provision of new or physically altered governmental facilities. The Proposed Project would not significantly alter the demand for schools, parks, or police facilities.
Policy LU-12.2: Maintenance of Adequate Services Require development to mitigate significant impacts to existing service levels of public facilities or services for existing residents and businesses. Provide improvements for Mobility Element roads in accordance with the Mobility Element Network Appendix matrices, which may result in ultimate build-out conditions that achieve an improved Level of Service (LOS) but do not achieve a LOS of D or better.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would include a total of six access driveways. Four of the driveways would be 24-feet wide, would be all-weather and would support a 50,000 pound load bearing capacity as required by County Fire. The switchyard would have an improved access from an existing access road on Carrizo Gorge Road that would be improved to 30-feet-wide. Each site entrance would feature a manual swing gate, and a sign with a lighted directory map and contact information. All entrance gates would feature a 'Knox Box' for emergency access. Interior access roads would be provided to serve as fire access and service roads. As discussed in Section 3.1.7, Traffic and Transportation, according to the Mountain Empire Mobility Element Network Map, Old Highway 80 and Carrizo Gorge Road are classified as a Mobility Element Road. Safe and adequate sight distance would be required at all new driveways to the satisfaction of the County Director of the Department of Public Works, and all improvements would be constructed according to County private road standards. All intersections would operate at acceptable levels during both the AM and PM peak periods with the addition of the proposed construction traffic from the larger Proposed Project that could include up to 500 construction workers; therefore, the impacts would be less than significant. Additionally, with the implementation of **PDF-TR-1**, a Traffic Control Plan would be implemented and followed. The Traffic Control Plan would include construction notification procedures in accordance with County and Caltrans' requirements. With implementation of **M-WF-2** (CFPP) Project construction would be subject to the design measures prepared for the Project, which would ensure access for emergency responders during the construction phase. Additionally, through the implementation of **M-WF-3**, the

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	Proposed Project would contribute funds to fire and emergency medical services to improve response capabilities in the area through a Fire Protection and Mitigation Agreement (see Section 2.12, Wildfire).
Policy LU-13.2: Commitment of Water Supply Require new development to identify adequate water resources, in accordance with state law, to support the development prior to approval.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would use water from two onsite groundwater wells. As discussed in Section 3.1.8 Utilities and Service Systems, the Project site is located in a groundwater-dependent area of San Diego County. The Proposed Project would not be served by the Jacumba Community Services District (JCSD), which provides groundwater to the village area adjacent to the Project site. Therefore, the Project proposes to use groundwater from two existing onsite wells to supply water demand. The Proposed Project is estimated to extract a very low amount of groundwater as compared to the most recently calculated groundwater in storage. The Jacumba Valley alluvial aquifer would have sufficient water supply to serve the Proposed Project and on-site groundwater wells have sufficient capacity to meet Project water demand. Thus, because the applicant has identified viable sources of water to supply both construction and operation needs, the Proposed Project's impact on water supplies and systems would be less than significant.
Policy Mobility (M)-2.1: Level of Service Criteria. Require development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County pursuant to the criteria outlined in the General Plan (Criteria for accepting a road classification with Level of Service E/F). When development is proposed on roads where a failing level of service has been accepted, require feasible mitigation in the form of road improvements or a fair share contribution to a road improvement program, consistent with the Mobility Element road network.	**Consistent.** It should be noted that Level of Service (LOS) can no longer be used within CEQA to determine a physical impact on the environment (Section 15064.3 of the CEQA Guidelines). The consistency analysis that follows is provided to demonstrate compliance with the County's General Plan policies, which include LOS criteria. The Propose Project is consistent with this policy. The Proposed Project's Local Mobility Analysis (LMA) prepared by Kimley Horn & Associates, provides level of service analysis of four study area intersections and five project access driveways noted below. The LMA is included as Appendix Q in the EIR. Study Area Intersections: I-8 Access Road & I-8 Westbound On/Off Ramp I-8 Access Road & I-8 Eastbound On/Off Ramp I-8 Access Road & Carrizo Gorge Road Old Highway 80 & Carrizo Gorge Road Project Access Driveways: Carrizo Gorge Road & Access 1 Carrizo Gorge Road & Access 2 Carrizo Gorge Road & Access 3 Carrizo Gorge Road & Access 4 Old Highway 80 & Access 5 (north and south driveways)

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	As shown in the LMA, all the above-mentioned study area intersections would operate at LOS D or better during both the AM and PM peak periods with the addition of the proposed construction traffic and with the addition permanent operations traffic. The project access driveways would operate at LOS A during both the AM and PM peak periods with the addition of the proposed construction traffic and with the addition permanent operations traffic. Although, the decommissioning phase was not analyzed in the LMA, it would generate a similar number of workers and trucks as Project construction. As discussed in the LMA, the traffic in the study area shows a nominal increase between the years 2020 and 2035. Since the traffic in the study area would not increase significantly, the study area intersections and Proposed Project access driveways would continue to operate at acceptable conditions. Therefore, the construction, operation and decommissioning of the Proposed Project would not cause any intersection to operate below LOS D; therefore, per the County's level of service criteria, the Proposed Project would be consistent with the County's General Plan LOS standard.
Policy M-2.2: Access to Mobility Element Designated Roads. Minimize direct access points to Mobility Element roads from driveways and other non-through roads to maintain the capacity and improve traffic operations.	**Consistent.** The Proposed Project is consistent with this policy. Direct access points from Carrizo Gorge Road and Old Highway 80 have been proposed by the Project. All the access points (5 access points) would be unsignalized and due to low traffic volumes in the vicinity of the Project, the impact to capacity and traffic operations would be less than significant. Therefore, the Proposed Project would be consistent with policy related to access to Mobility Element Designated Roads.
Policy M-2.3: Environmentally Sensitive Road Design. Locate and design public and private roads to minimize impacts to significant biological and other environmental and visual resources. Avoid road alignments through floodplains to minimize impacts on floodplain habitats and limit the need for constructing flood control measures. Design new roads to maintain wildlife movement and retrofit existing roads for that purpose. Utilize fencing to reduce road kill and to direct animals to under crossings.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project, with mitigation, will provide for protection and conservation of special-status species and natural communities. In addition, the project design is consistent with the recommendations for by the Las California Binational Conservation Initiative 2015, which recommends design road networks that minimize fragmentation, designate off-site conservation of land as mitigation for direct and indirect impacts of development, and establish conservation easements on the lands where facilities are sited. As discussed in Section 2.3, Biological Resources, the Proposed Project would maintain movement along well-vegetated areas (i.e., the mesquite-dominated floodplain) as well as creeks and drainages that serve as natural movement areas for wildlife. Although the Proposed Project fencing would limit the ability of particularly large wildlife to access and traverse the solar facility, the undeveloped SDG&E easement between the fence lines, which is approximately 700 to 1,100 feet wide and more than 4,000 feet long, would allow uninterrupted wildlife movement from Boundary Creek to currently undeveloped land to the east. The

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	location of the Proposed Project has the potential to create a "dead-end" for wildlife traveling west to east along the northern portion of the Project site. This could funnel wildlife toward I-8 and result in increased mortality of wildlife forced to cross at grade. However, to ensure that wildlife traversing that area are directed toward the SDG&E easement, the Proposed Project has been designed to provide a 50- to 100-foot opening in the fence north of the easement. This opening will allow for wildlife that may be moving along the northern portion of the Project site to enter into the easement corridor and move through the site to habitat located on either side of the Project site. Therefore, the Proposed Project does not create unnatural movement corridors and impacts would less than significant. As discussed in Section 2.7, Hydrology and Water Quality, with the implementation of the project SWPPP, SWQMP, **PDF-HYD-1**, and **M-HYD-1**, the Proposed Project would not result in changes to the rate, volume, and location of stormwater runoff and flood flows. The Proposed Project would also avoid the Carrizo Wash and Boundary Creek watercourses that run through the site, avoiding construction in their channels. With implementation of the required Standard SWQMP, SWPPP, and requirements to obtain permits from the ACOE and RWQCB pursuant to the Clean Water Act, impacts would be less than significant.
Policy M-2.5: Minimize Excess Water Runoff. Require road improvements to be designed and constructed to accommodate stormwater in a manner that minimizes demands upon engineered stormwater systems and to maximize the use of natural detention and infiltration techniques to mitigate environmental impacts.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.7 Hydrology and Water Quality, the Drainage Report (Appendix I) determined that the Proposed Project would produce approximately 1.9 acres of impervious area. The impervious area would include the proposed photovoltaic tracker pile areas, inverter skid platforms, the battery energy storage areas and the additional substation and switchyard pads. The proposed all weather access and internal driveways would remain pervious. The Drainage Report determined that the additional impervious area represents 0.0027% of the watershed that is contributing to the stream passing through the Project site. This increase in impervious area constitutes a small enough area that would not change the overall drainage pattern. The water run off would flow overland across the Project site in a similar manner as it does in the pre-developed state. Thus, the additional impervious area would have minimal to no impact on existing watershed hydrologically (Appendix I) In addition, with the SWQMP, infiltration trenches may be installed within certain sub-basins within the Project site to accommodate small, localized increases in peak flow under a 100-year storm event.
Policy M-3.3: Multiple Ingress and Egress	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would include six access driveways at five locations. Five of the driveways would be 24-

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Policy	Project Consistency with Policy
Require development to provide multiple ingress/egress routes in conformance with State law, and local regulations.	feet wide, would be all-weather and would support a 50,000 pound load bearing capacity as required by County Fire. In addition, the switchyard would have an improved access from an existing access road on Carrizo Gorge Road that would be improved to 30-feet-wide. Access driveways would be designed in compliance with applicable County standards and designed to allow safe passage of construction vehicles, including oversized trucks. Each site entrance would feature a manual swing gate, and a sign with a lighted directory map and contact information. All entrance gates would feature a 'Knox Box' for emergency access. Additional the onsite interior access roads would be provided to serve as fire access and service roads. The proposed access driveway off of Old Highway 80 that would allow for two-way fire and rescue apparatus access as well as enable operations and maintenance access to the internal project road network. In addition, fire access and service driveways would be included within the site and would permit access between rows of single-axis trackers. Driveways would be designed to support the imposed loads of fire apparatus. **PDF-TR-1** requires the applicant will be required to prepare a Traffic Control Plan (TCP) and follow construction notification procedures in accordance with County and Caltrans' requirements. The County-required TCP would address the increased traffic anticipated on local area roadways during Proposed Project construction. Access driveways would be designed in compliance with applicable County standards and designed to allow safe passage of construction vehicles, including oversized trucks. Furthermore, the Proposed Project would comply with fire protection measures defined in the Consolidated Fire Code.
Policy M-4.4: Accommodate Emergency Vehicles Design and construct public and private roads to allow for necessary access for appropriately sized fire apparatus and emergency vehicles while accommodating outgoing vehicles from evacuating residents.	**Consistent.** The Proposed Project would be consistent with this policy. Please refer to Policy M-3.3 consistency analysis.
Policy M-4.5: Context Sensitive Road Design. Design and construct roads that are compatible with the local terrain and the uses, scale and pattern of the surrounding development. Provide wildlife crossings in road design and construction where it would minimize impacts in wildlife corridors.	**Consistent.** The Proposed Project would be consistent with this policy. The Project does not propose new Mobility Element roadways. Further, the design of proposed access driveways and on-site roadways would be compatible with the local terrain and per applicable County standards and access requirements, and designed to allow safe passage of construction vehicles, including oversized trucks.
Policy COS-1.1 Coordinated Preserve System. Identify and develop a coordinated biological preserve system that includes Pre-Approved Mitigation Areas, Biological Resource Core Areas, wildlife corridors, and linkages to allow wildlife to travel throughout their habitat ranges.	**Consistent.** The Proposed Project would be consistent with this policy. As further discussed in Section 2.3, Biological Resources, of this EIR, the Project site is located within the East County Multiple Species Conservation Program (MSCP) planning area. With regard to wildlife corridors, the current design and proposed mitigation areas, wildlife can move through the existing natural movement areas which provide

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Policy	Project Consistency with Policy
	natural movement areas. Although the fencing would limit the ability of particularly large wildlife to access and traverse the solar facility, there is an opening in the fence north of the transmission easement to allow for wildlife movement. Additionally, an undeveloped SDG&E easement between the fence line is approximately 700 to 1,100 feet wide and more than 4,000 feet long and would allow uninterrupted movement from Boundary Creek to currently undeveloped land to the east Therefore, the Proposed Project does not result in a significant impact to corridor widths and linkages.
Policy COS-2.2: Habitat Protection through Site Design Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.	**Consistent.** The Proposed Project would be consistent with this policy. Historical agricultural activities and disturbances associated with energy infrastructure development have previously occurred on the Project site. As further discussed in Section 2.3, Biological Resources, detailed biological surveys have been conducted on the Project site, and with implementation of Project mitigation measures, impacts to habitat as identified on the site and biological resources, would be reduced to less than significant.
Policy COS-3.1: Wetland Protection Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.	**Consistent.** The Project would be consistent with this policy. While the Project site does contain wetland habitats, the Project has been designed so as to minimize impacts to biological resources. The existing wetlands are primarily situated within the existing transmission easements which traverse the site from east to west, and would be avoided by the Proposed Project. As discussed in Section 2.3, Biological Resources, of this EIR, potentially significant impacts to jurisdictional wetlands and riparian habitat caused by the Proposed Project would be reduced to less than significant levels through mitigation.
Policy COS-3.2: Minimize Impacts of Development Require development projects to: • Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and • Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.	**Consistent.** The Proposed Project would be consistent with this policy. As further discussed in Section 2.3, Biological Resources, of this EIR, the Proposed Project would have impacts to jurisdictional wetlands and riparian habitat. However, through mitigation, potentially significant impacts to wetlands would be reduced to less than significant levels. All Project impacts to existing biological resources would be mitigated to a less than significant level.
Policy COS-4.1: Water Conservation Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 3.1.9, Utilities and Service Systems, construction and operation of the Project would require the use of water; however, water usage will be limited to the extent practicable. The Proposed Project would use approximately 140 acre-feet of water during construction, approximately 11 acre-feet of water per year for ongoing operation, and approximately 50 acre-feet for decommissioning from groundwater resources. The Project would use water from two onsite groundwater wells. Ongoing water use for the Project would be minimized to use the least amount necessary

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Policy	Project Consistency with Policy
	to wash the solar panels, reapply soil stabilizers, landscaping irrigation, and nominal amounts for other maintenance activities. The Proposed Project is estimated to extract a very low amount of groundwater as compared to the most recently calculated groundwater in storage. The Jacumba Valley alluvial aquifer would have sufficient water supply to serve the Proposed Project and on-site groundwater wells have sufficient capacity to meet Project water demand. Thus, because the applicant has identified viable sources of water to supply both construction and operation needs, the Proposed Project's impact on water supplies and systems would be less than significant.
Policy COS-4.2: Drought-Efficient Landscaping Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.	**Consistent.** The Proposed Project would be consistent with this policy. The landscaping screening, required as mitigation for impact to visual resources, buffers would include native and/or drought tolerant trees, shrubs, and ground covers. All planting required for screening would be established with vegetation typical of the particular habitat(s) in each area based on coordination with the Project biologist. All landscaping would be regularly irrigated with an automatic drip irrigation system supplied by an existing domestic water meter. All landscape would be maintained during the life of the permit, and is estimated to extract a very low amount of groundwater for irrigation of the landscape buffers (approximately 8.4 acre-feet per year) compared to the most recently calculated groundwater in storage. The San Diego County Department of Planning & Development Services landscape architect shall review all final landscape plans.
Policy COS-5.1: Impact to Floodways and Floodplains. Restrict development in floodways and floodplains in accordance with policies in the Flood Hazards section of the Safety Element.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, implementation of **PDF HYD-1** and **M-HYD-1** would ensure that all project components located within the 100-year floodplain would not impede or redirect flood flows. Iimpacts would be less than significant with mitigation.
Policy COS-5.2: Impervious Surfaces Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.	**Consistent**. The Proposed Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, of this EIR, the Project would add only 1.9 acres of impervious surface, an amount not large enough to significantly affect runoff. Per the Construction General Permit, a SWPPP must be implemented during the construction phase, implementing physically and planning BMPs, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff.
Policy COS-5.3: Downslope Protection Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion,	**Consistent.** The Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, of this EIR, per the Construction General Permit, a SWPPP must be implemented during the construction phase, implementing

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Policy	Project Consistency with Policy
capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.	physically and planning BMPs to minimize erosion. The exact location and type of temporary BMPs to be installed during construction would depend on site-specific conditions, construction schedule, and proposed activities, all of which would be outlined in the SWPPP. With the implementation of **PDF-HYD-1** and **M-HYD-1**, the Proposed Project would not impede or redirect flood lows. Grading required for development of the Project would be consistent with the County Grading Ordinance, which would be enforced via the required grading permit. Also, prior to construction, the applicant would be required to implement a SWPPP that will include BMPs to minimize potential impacts regarding stormwater runoff. See Sections 2.7, Hydrology and Water Quality, and 3.1.8, Utilities and Service Systems, of this EIR.
Policy COS-5.5: Impacts of Development to Water Quality Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.	**Consistent.** The Proposed Project would be consistent with this policy. Please refer to Policy COS 5.3 consistency analysis above. Potential impacts to groundwater resources and local water resources would be minimized through implementation of BMPs in compliance with the Project's SWQMP and SWPPP. Also, please refer to Section 2.7 of this EIR.
GOAL COS-6 Sustainable Agricultural Industry. A viable and long-term agricultural industry and sustainable agricultural land uses in the County of San Diego that serve as a beneficial resource and contributor to the County's rural character and open space network.	**Consistent.** The Proposed Project would be consistent with this policy. As further discussed in Section 3.1.1, Agricultural Resources, the Project site is largely undeveloped and does not contain any existing major agricultural uses or irrigated croplands. Agricultural operations were historically located on site, but based on current site visits and environmental field surveys conducted for the Proposed Project, there is no evidence of current agriculture occurring on the Project site. As seen in Figure 3.1.1-2, Zone of Influence Important Farmlands, portions of the Project site are designated under the state Farmland Mapping and Monitoring Program as Prime Farmland, Farmland of State/Local Importance, and Unique Farmland, but these areas make up approximately 29% of the Project site and 6% of the Zone of Influence (ZOI).
Policy COS-6.2: Protection of Agricultural Operations. Protect existing agricultural operations from encroachment of incompatible land uses by doing the following: • Limiting the ability of new development to take actions to limit existing agricultural uses by informing and educating new projects as to the potential impacts from agricultural operations. • Allowing for agricultural uses in agricultural areas and designing development and lots in a manner that facilitates continued agricultural use within the development.	**Consistent.** The Proposed Project would be consistent with this policy. As further discussed in Section 3.1.1, Agricultural Resources, the closest active agricultural operations are located approximately 25 miles east of the Project site in Dixieland, California. The agricultural operations in the surrounding area are composed primarily of irrigated row crops and dairy farms. However, land use conflicts between these agricultural operations and the Proposed Project would not be likely. The Proposed Project would not impact these operations because the Project site is 25 miles west of active agricultural operations.

Table 3.1.4-4
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Policy	Project Consistency with Policy
• Requiring development to minimize potential conflicts with adjacent agricultural operations through the incorporation of adequate buffers, setbacks, and project design measures to protect surrounding agriculture • Supporting local and state right-to-farm regulations • Retain or facilitate large and contiguous agricultural operations by consolidations of development during the subdivision process. Discourage development that is potentially incompatible with intensive agricultural uses includes schools and civic buildings where the public gather, daycare facilities under private institutional use, private institutional uses (e.g., private hospitals or rest homes), residential densities higher than two dwelling units per acre, and office and retail commercial	The Proposed Project does not propose a school, church, daycare, or other use that would involve a heavy concentration of people at certain times of the day, nor does the Proposed Project propose residential uses.
COS-6.3 Compatibility with Recreation and Open Space. Encourage siting recreational and open space uses and multi-use trails that are compatible with agriculture adjacent to the agricultural lands when planning for development adjacent to agricultural land uses. Recreational and open space uses can serve as an effective buffer between agriculture and development that is potential incompatible with agriculture uses.	**Consistent**. The Proposed Project would be consistent with this policy. As further discussed in Section 3.1.1, Agricultural Resources, the Proposed Project would not propose development adjacent to agricultural land uses
Policy COS-7.1: Archaeological Protection Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.	**Consistent.** The Proposed Project is consistent with this policy. As discussed in Section 2.4, Cultural Resources, of this EIR, there were 20 isolates identified within the Area of Disturbed Impact (ADI) which required no evaluation or avoidance measures as isolates are by definition not significant. The seven additional isolates located within the Project Area but outside of the ADI would be avoided through established work boundaries. In addition to the archaeological isolates, Project implementation would directly impact 28 archaeological site; however all 28 sites (or portions of sites) identified within the Project ADI during the current investigation are either no longer extant or have been evaluated and are recommended as not significant under CEQA, not eligible for listing in the California Register of Historic Resources (CRHR) or the local register, and as not significant under the County Resources Protection Ordinance. However, under County guidelines, all archaeological sites are considered important. Although it has been determined that the Project would not impact archaeological deposits that convey the significance of the Jacumba Valley Archeological District, Project construction activities have the potential to affect undiscovered cultural resources on-site, known cultural resources within 50 feet of the Project ADI, or known cultural resources within resource-specific predetermined buffers, that may qualify as significant

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Policy	Project Consistency with Policy
	under the County Guidelines. Additionally, the Proposed Project has the potential to affect cultural resources that, although not recommended as eligible for listing in the CRHR or the local register, are important under the County CEQA Guidelines. Therefore, impacts to archaeological resources as a result of Project construction are determined to be potentially significant and require mitigation. With the implementation of mitigation measures, these impacts would be less than significant. Once in operation, the Project would not involve additional ground-disturbing activities that could impact potential archaeological resources within the Project Area of Potential Effect. Therefore, impacts during operation would be less than significant.
Policy COS-7.3: Archaeological Collections Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.	**Consistent.** The Proposed Project is consistent with this policy. The Proposed Project facilities would be consistent with this policy. See Section 2.4.6, Cultural Resources, of this EIR. Mitigation measures for the facilities include provisions that would ensure that archaeological resources encountered during construction are treated and preserved in a culturally appropriate manner.
Policy COS-7.4: Consultation with Affected Communities Require consultation with affected communities, Including local tribes to determine the appropriate treatment of cultural resources.	**Consistent.** The Proposed Project is consistent with this policy. The Proposed Project facilities would be compliant with Assembly Bill 52. The County, as Lead Agency, is responsible for conducting Assembly Bill 52 outreach
Policy COS-7.5: Treatment of Human Remains Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.	**Consistent.** The Proposed Project is consistent with this policy. As discussed in Section 2.4, Cultural Resources, of this EIR, implementation of mitigation measures for the Proposed Project would reduce potential impacts to unknown human remains to less than significant.
Policy COS-9.1: Preservation Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.10, Paleontological Resources, of this EIR, a review of the County's Paleontological Resources Map indicates that the Proposed Project development footprint is located within an area of high or moderate paleontological resources. Potential impacts to paleontological resources are reduced to less than significant with mitigation.
Policy COS-9.2: Impacts of Development Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.	**Consistent.** The Proposed Project would be consistent with this policy. The proposed development is primarily within relatively level fallow agricultural lands. Hillside grading would be minimized and designed to conform to the existing contours to the extent feasible. All large rock outcroppings that are

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Policy	Project Consistency with Policy
	located within the Project site have been avoided.
Policy COS-10.1: Siting of Development. Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas. Design development or uses to minimize the potential conflict with existing or potential future mining facilities. For purposes of this policy, incompatible land uses are defined by SMARA Section 3675.	**Consistent**: The Proposed Project is consistent with this policy. As described in Section 2.8, Mineral Resources, the Proposed Project, except for the switchyard, is an interim use and would not result in the permanent loss of mineral resources. Development of the switchyard portion (3.2. acres) of the Proposed Project would not result in a significant impact to mineral resources by itself. However, a portion of the biological open space easements (188 acres) required as mitigation for impacts to biological resources, would result in a permanent loss of the availability of mineral resources within the Project site. These biological opens space easements would result in a potentially significant impact with respect to the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000. The open space easements are intended to preserve the biological integrity of the area in perpetuity as mitigation for the Project's biological impacts within the MUP area, as discussed further in Chapter 2.3, Biological Resources of this EIR. The 188-acre portion of the easement contains high biological value with sensitive vegetation types and provides for wildlife habitat and movement. Extracting the resources underlying the open space easements prior to Project approval would negate the primary purpose of the biological open space easements. The impact to mineral resources would remain significant and unavoidable.
Policy COS-10.2: Protection of State-Classified or Designated Lands. Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.	**Consistent:** The Proposed Project is consistent with this policy. Based on the analysis in the Mineral Resources Report (Appendix L), the Project site, including surrounding areas, does not have any mapped Mineral Resource Zones, and thus is not zoned as MRZ-2 or MRZ-3.
Policy COS-10.3: Road Access. Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA section 2764.a.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would not restrict road access to existing mining facilities classified MRZ-2 or MRZ-3. Based on the analysis in the Mineral Resources Report (Appendix L), the Project site, including surrounding areas, does not have any mapped Mineral Resource Zones, and thus is not zoned as MRZ-2 or MRZ-3. In addition, the Proposed Project is located east and outside of the County mapped P-C Boundary which is an uncategorized zone.

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
Policy COS-11.1: Protection of Scenic Resources Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.1, Aesthetics, of this EIR, I-8 from State Route 79 east to the Imperial County Line and Old Highway 80, from the Central Mountain Subregion to Interstate 8 are designated scenic corridors. The solar facility would be visible from portions of I-8 and Old Highway 80.The Proposed Project would substantially alter the existing quality of views available to highway motorists and passengers because racks of solar panels would be visible from I-8 for brief periods and would be aligned along Old Highway 80. The solar panel's wide distribution across relatively flat and open desert terrain would reduce existing visual quality, However, neither the Project site nor the surrounding area has been designated by local, state or federal agencies or organizations as containing or being of "significant" scenic value. Since the Project area has not been designated or described by agencies as containing "significant" scenic value, the Project would not conflict with this policy. Further, the Project has been designed to minimize impacts to the scenic value of the area to the extent practicable. The solar panels would be setback at least 75 feet from the paved extents of the highway, and with implementation of **M-AE-5** (landscaping) and **M-AE-6** (slatted fencing), solar panels and other equipment would be screened from public view of motorists on Old Highway 80, users of Jacumba Community Park, and residents in Jacumba Hot Springs to the extent practicable. Even with the implementation of mitigation measures, impacts to the scenic value of the area are still significant and unavoidable. Despite their inclusion in the County's scenic highway system, there are no current local regulations governing development of lands along I-8 or Old Highway 80. For example, the existing energy infrastructure including the East County Substation, Jacumba Solar Project, transmission lines, and the East County Substation 138 kV line is currently visible from I-8 and Old Highway 80. Implementation and operation of the Proposed Project would not prevent the County from continuing to establish and designate scenic highways and would not inhibit the County from establishing regulations and/or development standards geared towards the protection and enhancement of scenic highways. Due to the inclusion of existing energy infrastructure in the I-8 and Old Highway 80 viewsheds, the brief duration of views to the Project site from I-8, screening of solar panels from view of Old Highway 80 motorists and because the Project does not inhibit the County from establishing regulations and/or

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	development standards geared towards the protection and enhancement of scenic highways, the Proposed Project would not be inconsistent with this policy.
Policy COS-11.3: Development Siting and Design Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following: • Creative site planning • Integration of natural features into the project • Appropriate scale, materials, and design to complement the surrounding natural landscape • Minimal disturbance of topography • Clustering of development so as to preserve a balance of open space vistas, natural features, and community character. • Creation of contiguous open space networks	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would introduce new visual features into the existing visual environment. However, neither the Project site nor the surrounding area has been designated by local, state or federal agencies or organizations as containing or being of "significant" scenic value. Since the Project area has not been designated or described by agencies as containing "significant" scenic value, the Project would not conflict with this policy Further, while the Proposed Project would introduce new visual features into the existing visual environment, the Project has been designed to minimize impacts to the scenic value of the area to the extent practicable. The solar panels would be setback at least 75 feet from the paved extents of the highway, and with implementation of **M-AE-5** (landscaping) and **M-AE-6** (slatted fencing), solar panels and other equipment would be screened from public view. Measures also include: visual screening of staging material and equipment storage areas, including storage sites for excavated materials visible from nearby roads, residences, and recreational areas using temporary screening fencing; materials, coatings, or paints having little or no reflectivity shall be used whenever possible. The Proposed Project would not require significant alteration of land forms. The Proposed Project's MUP boundary has been designed to only disturb a portion pf the Project site (643 acres), and portions of the remaining site would contain biological open space easements for habitat preservation; therefore, the Project would not conflict with this policy.
Policy COS-11.7: Underground Utilities Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.	**Consistent.** The Proposed Project would be consistent with this policy. The Project Project's switchyard would be connected into the existing 138 kV SDG&E Boulevard – East County transmission line via an overhead transmission line tie-in would require approximately 1,860 feet of wire, and up to five steel transmission poles ranging from 70 to 115 feet above ground. All other utility lines, such as internal collector lines, would be underground. Therefore, the Project is consistent with this policy. Further, facilities exceeding 34.5kV are exempt from the intended undergrounding requirements. It should be noted that multiple existing overhead high-voltage transmission lines are located in the viewshed of the aboveground gen-tie associated with the Proposed Project.
Policy COS-13.1: Restrict Light and Glare Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural	**Consistent.** The Proposed Project would be consistent with this policy. Lighting installed at the Project site would be fully compliant with the County's Light Pollution Code, zoning ordinance performance standards, and Mountain Empire Subregional Plan policies regarding the shielding of most

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
communities to retain the quality of night skies by minimizing light pollution.	outdoor lighting fixtures and minimization of unwanted light trespass onto adjacent properties. Nighttime lighting during operations would include motion censored lights would be installed at all site access driveway entrances and would only be used if motion is detected. All lighting for the solar facility would have bulbs that do not exceed 100 watts, and all lights would be shielded, directed downward, and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 51.201 et seq. Lighting would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards Section 6320, 6322, and 6324, which guide performance standards for glare, and controls excessive or unnecessary outdoor light emissions. No other lighting is proposed within the solar facility. As discussed in Sections 2.1, Aesthetics and Section 2.6, Hazards and Hazardous Materials, a glare study was prepared for the project and found the Proposed Project would not impact airport operations at the Jacumba Airport or cause distraction to nearby residences or motorists.
Policy COS-13.3: Collaboration to Retain Night Skies. Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to retain the quality of night skies by minimizing light pollution.	**Consistent.** The Proposed Project would comply with the County's Light Pollution Code during construction and operations. More specifically, during construction, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code and would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. Nighttime lighting during operations would include motion censored lights would be installed at all site access driveway entrances and would only be used if motion is detected. No other lighting is proposed. All operational lighting for the solar facility would be shielded, directed downward, and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 59.101 et seq. Lastly, the project would comply with the San Diego County Zoning Ordinance, Performance Standards Section 6320, 6322, and 6324, which guide performance standards for glare, and control excessive, or unnecessary outdoor light emissions.
Policy COS-14.7: Alternative Energy Sources for Development Projects Encourage development projects that use energy recovery, photovoltaic, and wind energy.	**Consistent.** The Proposed Project would be consistent with this policy in that it would produce solar power eligible for the state's Renewable Portfolio Standard that would be used by existing or future development. The Proposed Project consists of a concentrated photovoltaic energy collection system.
Policy COS-14.8: Minimize Air Pollution Minimize land use conflicts that expose people to significant amounts of air pollutants.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.2, Air Quality, of this EIR, potential air quality impacts associated with ground-disturbing activities during construction would be short term. Impacts

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	related to exposure to Toxic Air Contaminants would be above the County's thresholds for cancer risk during construction activities; therefore, impacts would be potentially significant and would require mitigation. With implementation of **M-AQ-1**, impacts related to cancer risk would be below the County's thresholds during construction activities; therefore, impacts would be less than significant. Also, construction and decommissioning of the proposed Project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the daily construction emissions would exceed the County's daily significance thresholds for NOx, PM_{10}, and $PM_{2.5}$. Air quality impacts resulting from construction, therefore, would be potentially significant. Decommissioning of the project would exceed the County's daily significance thresholds for PM10 emissions. Following implementation of **M-AQ-1** and **M-AQ-2**, cumulative construction and decommissioning emissions would be less than significant. The Proposed Project would result in negligible operational emissions and the Project includes constructing a renewable energy resource that would result in an overall net reduction in air emissions when compared to energy generated from a non-renewable energy source.
Policy COS-14.9: Significant Producers of Air Pollutants Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.	**Consistent.** The Proposed Project would be consistent with this policy. Potential air quality impacts associated with ground-disturbing activities during construction would be short term and would be mitigated to less than significant with the implementation of mitigation measures (see analysis in Policy COS-14.8 above). The Proposed Project is a renewable energy project and therefore by its nature would comply with this policy.
Policy COS-14.10: Low-Emission Construction Vehicles and Equipment Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.	**Consistent.** The Proposed Project would be consistent with this policy. The Project would be constructed by private developers who would be encouraged by the County to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.
Policy COS-14.11: Native Vegetation Require development to minimize the vegetation management of native vegetation while ensuring sufficient clearing is provided for fire control.	**Consistent.** The Proposed Project would be consistent with this policy. To comply with the fire code, clearing and grubbing of the Project site would occur prior to construction. Weeds and annual grasses will be maintained at a height not to exceed 6 inches. In addition, the Project's perimeter Fuel Modification Zone (FMZ) buffer will include at least 30 feet of modified fuels. Ongoing maintenance activities would include weed whipping and general maintenance of areas under solar facilities. The Proposed Project would also be subject to state, county and federal laws, ordinances, rules and regulations pertaining to the

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County General Plan Consistency Analysis

Policy	Project Consistency with Policy
	prevention and suppression of fires, including County of San Diego Consolidated Fire Code, State Fire Regulations, International Fire Code and the California Fire Code. Fuel modification zones will be maintained on at least an annual basis of more often, as needed.
Policy COS-15.6: Design and Construction Methods Require development design and construction methods to minimize impacts to air quality.	**Consistent.** The Proposed Project would be consistent with this policy. Construction of the Proposed Project would result in a temporary addition of pollutants to the local air basin caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment and off-site trucks hauling construction materials, including water, to the site. However, the Proposed Project would not result in any significant impacts related to air quality with the implementation of mitigation measures **M-AQ-1** and **M-AQ-2**. In addition, the Proposed Project would minimize air quality impacts during construction and ensure that impacts remain at a level less than significant, including the application of water three times per day or as necessary depending on weather conditions to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction and/or apply a nontoxic soil binding agent to help with soil stabilization during construction, sweepers and water trucks will be used to control dust and debris at public street access points, internal construction roadways will be stabilized by paving, chip sealing or nontoxic soil binders after rough grading, exposed stockpiles will be covered and/or watered or stabilized with nontoxic soil binders, tarps, fencing or other suppression methods as needed to control emissions, traffic speeds on unpaved roads will be limited to 15 miles per hour (mph), all haul and dump trucks entering or leaving the site with soil or fill material will maintain at least 2 feet of freeboard, or cover loads of all haul and dump trucks securely, and disturbed areas will be reseeded with either a native plant hydroseed mix as soon as possible after disturbance, or covered with a nontoxic soil binding agent. The Proposed Project would adhere to County Code Section 87.428, Dust Control Measures and SDAPCD Rule 55 for fugitive dust emissions during construction and operation of the Proposed Project. See Section 1.2 of this EIR under the heading Site Preparation and Grading.
Policy COS-17.2: Construction and Demolition Waste Require recycling, reduction and reuse of construction and demolition debris.	**Consistent.** The Proposed Project would be consistent with this policy. Recycling, reduction, and reuse of construction and demolition debris will be required during construction. In compliance with County Construction Demolition and Debris Management Plan requirements and in accordance with County Ordinance 68.508-68.518, recycling would be conducted during construction activities.

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Policy	Project Consistency with Policy
Policy COS-18.1: Alternate Energy Systems Design Work with San Diego Gas and Electric and non-utility developers to facilitate the development of alternative energy systems that are located and designed to maintain the character of their setting.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 3.1.2, Energy, the Proposed Project is expected to produce an estimated 211,159 megawatt hours of electricity per year. The Proposed Project would introduce new visual features into the existing visual environment which would result in significant and unavoidable impacts to visual quality and scenic vistas; however, the solar panels would be setback at least 75 feet from the paved extents of Old Highway 80, and with implementation of **M-AE-1 – M-AE-4** impacts to visual quality would be reduced to the extent feasible. Also, with the implementation of **M-AE-5** (landscaping) and **M-AE-6** (slatted fencing), solar panels and other equipment would be partially screened from public view. Measures also include: visual screening of staging material and equipment storage areas, including storage sites for excavated materials visible from nearby roads, residences, and recreational areas using temporary screening fencing; materials, coatings, or paints having little or no reflectivity shall be used whenever possible.
Policy COS-18.3: Alternate Energy Systems Impacts Require alternative energy system operators to properly design and maintain these systems to minimize adverse impacts to the environment.	**Consistent**. The Proposed Project would be consistent with this policy. All impacts to the environment, with the exception to impacts to visual quality/scenic vistas and mineral resources, would be less than significant with implementation of mitigation measures. Mitigation would be implemented to minimize potential significant impacts to visual quality and scenic vistas to the extent possible; however, the impacts would remain significant and unavoidable. In addition, impacts to mineral resources on the Project site are caused by a portion of the Proposed Project's open space easements, which are mitigation for biological resources, would remain significant and unavoidable. The open space easements are intended to preserve the biological integrity of the area in perpetuity as mitigation for the Project's biological impacts within the MUP area, as discussed further in Chapter 2.3, Biological Resources of this EIR. The 188-acre portion of the easement contains high biological value with sensitive vegetation types and provides for wildlife habitat and movement. Extracting the resources underlying the open space easements would negate the primary purpose of the biological open space easements.
Policy COS-19.1: Sustainable Development Practices. Require land development, building design, landscaping, and operational practices that minimize water consumption.	**Consistent.** The Proposed Project would be consistent with this policy. Construction and operation of the Project would require the use of water; however, water usage would be limited to the extent practicable. During construction, the Proposed Project would use approximately 140 acre-feet of water, approximately 11 acre-feet of water per year for ongoing operation, and approximately 50 acre-feet for decommissioning from groundwater sources. The Proposed Project would use water from two onsite groundwater wells. Ongoing water use

Table 3.1.4-4
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Policy	Project Consistency with Policy
	for the Project would be minimized to use the least amount necessary to wash the solar panels, reapply soil stabilizers, landscaping irrigation, and nominal amounts for other maintenance activities.
Policy COS-19.2: Recycled Water in New Development. Require the use of recycled water in development wherever feasible. Restrict the use of recycled water when it increases salt loading in reservoirs.	**Consistent.** The Proposed Project is consistent with this policy. Use of recycled water is not feasible. The solar facility would use water from onsite groundwater wells.
Policy S-3.1: Defensible Development Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.	**Consistent.** The Proposed Project would be consistent with this policy. Clearing and grubbing of the Project site would occur prior to construction. Fuel Modification Zones would be incorporated into the layout of the Proposed Project in accordance with the Fire Protection plan. Ongoing maintenance activities would include weed whipping and general maintenance of areas under single-axis trackers so as to minimize fire probability and risk. Fuel modification zones will be maintained on at least an annual basis of more often, as needed, by JVR Energy Park LLC. As discussed in Section 2.12, Wildfire, of this EIR, with implementation of **M-WF-1** and **M-WF-2**, the fire protection measures of the FPP (Appendix N) (and its appended CFPP) will be implemented.
Policy S-3.3: Minimize Flammable Vegetation Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.	**Consistent.** The Proposed Project would be consistent with this policy. See Section 2.12, Wildfire, of this EIR and Policy S-3.1 Defensible Development above. The likelihood of wildfire would be minimized by clearing and grubbing the Project site and by incorporating Fuel Modification Zones into the layout of the Proposed Project in accordance with the FPP. The Project's FPP and CFPP fire protection measures would be implemented during operations and construction (**M-WF-1** and **M-WF-2**).
Policy S-3.4: Service Availability Plan for development where fire and emergency services are available or planned.	**Consistent.** The Proposed Project would be consistent with this policy. Emergency response for the Proposed Project would be provided, initially, by the San Diego County Fire Authority from its Station 43 in Jacumba. The Jacumba Fire Station is located at 255 Jacumba Street and is staffed with reserve firefighters. The Jacumba Station is approximately 0.03 miles from the Project site. The Proposed Project is compliant with the General Plan response time and distance requirements for rural land use zoning (10 minutes). See Section 3.1.6, Public Services, of this EIR.
Policy S-3.5: Access Roads Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would include six access driveways. Five of the driveways would be 24-feet wide, would be all-weather and would support a 50,000 pound load bearing capacity as required by County Fire. In addition, the switchyard would have an improved access from an existing access road on Carrizo Gorge Road that would be improved to 30-feet-wide. Each site entrance would feature a manual swing gate, and a sign with a lighted directory map and contact information. All

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Policy	Project Consistency with Policy
	entrance gates would feature a 'Knox Box' for emergency access. Interior site roads would be constructed as suitable for fire access roads and would be constructed to a minimum width of approximately 20 feet improved width.
Policy S-3.6: Fire Protection Measures Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.	**Consistent.** The Proposed Project would be consistent with this policy. With the implementation of **M-WF-1**, the design and fire protection measures of the Project's FPP would be implemented. The FPP has been prepared for the Proposed Project and includes fire prevention measures to reduce the risk of structural and human loss due to wildfire. These measures include, but are not limited to incorporation of fuel modification; preparation of a technical report indicating special precautions for firefighting response; inclusion of motion sensor illuminated (and/or reflective) signage at main entrance with inverter and electrical grid disconnect and isolation information and identification; de-energizing notification; and a training program for local fire agencies customized for this facility; constructing all onsite facilities of non-combustible or ignition-resistant materials in accordance with County Building Code; six water storage tanks with fire department connections available within the site; identifying roads and structures to comply with County Consolidated Fire Code, Section 505; 24-hour surveillance at the facility and having a minimum 50-foot fuel treatment perimeter area and perimeter fire apparatus access road. Native vegetation may remain in the area between 50 to 100 feet from a structure provided that combustible vegetation is modified so as not to occupy more than 50% of the square footage of this area. Weeds and annual grasses shall be maintained at a height not to exceed 6 inches.
Policy S-3.7: Fire Resistant Construction Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.	**Consistent.** The Proposed Project would be consistent with this policy. Fire protection measures in the FPP would be implemented (**M-WF-1)** as described in S-3.6 above. The Proposed Project would also be required to construct all on-site facilities of non-combustible or ignition-resistant materials in accordance with County Building Code.
Policy S-6.1: Water Supply Ensure that water supply systems for development are adequate to combat structural and wildland fires.	**Consistent.** The Proposed Project would be consistent with this policy. As detailed in the FPP prepared for the Project, the Project site would use water from two on-site groundwater wells and six 10,000 gallon water storage tanks. This water supply system will provide enough water for estimated operational water demand as well as firefighting needs.
Policy S-7.1 Development Location. Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible	**Consistent.** The Proposed Project would be consistent with the policy. Following construction, the Proposed Project would be monitored via a SCADA system to provide critical operating information. The SCADA system would be monitored remotely and no on-site operations and maintenance facilities or personnel would be necessary. Further, the Project site is located more than 9 miles from the nearest active fault (the Davies Valley Fault and the Ocotillo fault zone).

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engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.	
Policy S-6.3: Funding Fire Protection Services Require development to contribute its fair share towards funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.12, Wildfire, with the implementation of **M-WF-3** (Fire Protection and Mitigation Agreement), potential impacts to operational wildfire risk would be less than significant. As such, the Proposed Project will participate in a Fire Protection and Mitigation Agreement with the SDCFA for this portion of San Diego County. This agreement ensures funding for firefighting and emergency resources to comply with General Plan Safety Element Policy S-6.3 for new development, which requires development projects to contribute fair-share funding toward fire services. Funding provided by projects result in capital that can be used toward firefighting and emergency response improvements so that the County's firefighting agencies are able to perform their mission into the future at levels consistent with the General Plan.
Policy S-6.4: Fire Protection Services for Development. Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards from Closest Fire Station).	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section, 3.1.6, Public Services, emergency response for the Project would be provided, initially, by the San Diego County Fire Authority from its Station 43 in Jacumba. The Jacumba Fire Station is located at 1255 Jacumba Street and is staffed with two CAL FIRE firefighters. The Jacumba Station is approximately 0.3 miles from the Project site and travel time to the Project site from this station is calculated at 6.8 minutes (see Appendix N, FPP). This is compliant with the required General Plan response time and distance requirements for rural land use zoning (10 minutes). In addition, with the implementation of **M-WF-3**, The Proposed Project would participate in a Fire Protection and Mitigation Services Agreement with San Diego County Fire Authority (SDCFA) to improve SDCFA's capacity to provide fire and emergency protection services.
Policy S-7.1: Development Location Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.	**Consistent.** The Proposed Project would be consistent with the policy. The Project site is not located in a fault rupture hazard zone as identified by the Alquist-Priolo Earthquake Fault Zoning Act. Following construction, the Project would be monitored via a SCADA system to provide critical operating information. The SCADA system would be monitored remotely and no on-site operations and maintenance facilities or personnel would be necessary.
Policy S-7.2: Engineering Measures to Reduce Risk. Require all development to include engineering measures to reduce risk in accordance with the California Building Code, Uniform Building Code, and other seismic and	**Consistent.** The Proposed Project would be consistent with this policy. To ensure the structural integrity of all enclosures structures, the Project would conform to the seismic design requirements as outlined within the California Building Code

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Policy	Project Consistency with Policy
geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.	(CBC), which contains universal standards for proper site preparation and grading practices, adequate design of foundation, and guidelines for the appropriate selection and use of construction materials. The local agency that enforces the CBC is the County Department of Planning and Development Services, which reviews applications for building permits for compliance with the CBC, local amendments to the CBC, and County zoning ordinances. Also as required in **M-GEO-1**, a more comprehensive Geology and Soils Report evaluation would be conducted and the design requirements recommended followed. Therefore, potential impacts from liquefaction and expansive soils would be less than significant with the implementation of mitigation.
Policy S-9.2: Development in Floodplains Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood proofing standards and siting criteria to prevent flow obstruction.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.7, Hydrology and Water Quality, with implementation of **M-HYD-1** and **PDF-HYD-1**, potential flood impacts would be less than significant.
Policy S-10.4: Stormwater Management Require development to incorporate low impact design, hydromodification management, and other measures to minimize stormwater impacts on drainage and flood control facilities.	**Consistent.** The Proposed Project would be consistent with this policy. Grading required at the Project site would proceed in accordance with the County Grading Ordinance, which would be enforced through the grading permit. The Proposed Project would comply with the County Watershed Protection Ordinance. Prior to construction, the Project applicant would be required to develop and implement a SWPPP that would include BMPs to protect stormwater runoff during ground-disturbing activities. The Project's roadway design is also pervious. Also, see the response for Policy LU-6.5.
Policy S-10.5: Development Site Improvements Require development to provide necessary on- and off-site improvements to stormwater runoff and drainage facilities.	**Consistent.** The Proposed Project would be consistent with this policy. Improvements would conform with site improvement standards including stormwater flows are evaluated in Section 2.7.3 of this EIR.
Policy S-10.6: Stormwater Hydrology. Ensure development avoids diverting drainages, increasing velocities, and altering flow rates to off-site areas to minimize adverse impacts to the area's existing hydrology.	**Consistent.** The Proposed Project would be consistent with this policy. BMPs to be implemented in accordance with the SWPPP and the Standard SWQMP would address alteration of drainage patterns, velocity and peak flow rates, and erosion control. Also see Section 2.7.3 of this EIR.
Policy S-11.5: Development Adjacent to Agricultural Operations. Require development adjacent to existing agricultural operations in Semi-Rural and Rural Lands to adequately buffer agricultural areas and ensure compliance with relevant safety codes where pesticides or other hazardous materials are used.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 3.1.1, Agricultural Resources, of this EIR, the Project site has a buffer of approximately 25 miles from the closest agricultural operation. Further, the location, size, design, and operating characteristics of the Proposed Project would be compatible with adjacent agricultural uses, and impacts would be less than significant. While agricultural operations are located in the Jacumba area, most operations consist of miscellaneous grazing. The

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Policy	Project Consistency with Policy
	transport, use, and storage of hazardous materials on the Project site during construction and operations would be subject to local, state and federal laws regulations and compliance with relevant laws and regulations would minimize the potential for upset conditions/impacts.
Policy S-15.3: Hazardous Obstructions within Airport Approach and Departure. Restrict development of potentially hazardous obstructions or other hazards to flight located within airport approach and departure areas or known flight patterns and discourage uses that may impact airport operations or do not meet Federal or State aviation standards.	**Consistent.** The Proposed Project would be consistent with this policy. The Project site is located within the AIA of the Jacumba Airport, for which the County Regional Airport Authority has adopted the Jacumba ALUCP, and is therefore subject to Sections 5250 through 5260 of the County Zoning Ordinance. The Project filed a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA. Based on the information provided in Form 7460-1, the FAA determined that the Project would not be an airspace obstruction or hazard.
Policy N-1.1: Noise Compatibility Guidelines Use the Noise Compatibility Guidelines (Table N-1) and the Noise Standards (Table N-2) as a guide in determining the acceptability of exterior and interior noise for proposed land uses.	**Consistent.** The Proposed Project would be consistent with this policy. With the implementation of **M-NOI-1, M-NOI-2** and **M-NOI-3**, the Proposed Project would not generate construction, operational, traffic noise or other noise that would exceed the Noise Compatibility Guidelines or Noise Standards at Noise Sensitive Land Uses. See Section 2.9, Noise, of this EIR.
Policy N-1.2: Noise Management Strategies Require the following strategies as higher priorities than construction of conventional noise barriers where noise abatement is necessary: • Avoid placement of noise sensitive uses within noisy areas • Increase setbacks between noise generators and noise sensitive uses • Orient buildings such that the noise sensitive portions of a project are shielded from noise sources • Use sound-attenuating architectural design and building features • Employ technologies when appropriate that reduce noise generation (i.e., alternative pavement materials on roadways)	**Consistent.** The Proposed Project would be consistent with this policy. With the implementation of **M-NOI-1, M-NOI-2** and **M-NOI-3**, the Proposed Project would not generate construction, operational, traffic noise or other noise that would exceed the Noise Compatibility Guidelines or Noise Standards at Noise Sensitive Land Uses. See Section 2.9, Noise, of this EIR.
Policy N-2.1: Development Impacts to Noise Sensitive Land Uses Require an acoustical study to identify inappropriate noise level where development may directly result in any existing or future noise sensitive land uses being subject to noise levels equal to or greater than 60 CNEL and require mitigation for sensitive uses in compliance with the noise standards listed in Table N-2.	**Consistent.** The Proposed Project would be consistent with this policy. With the implementation of **M-NOI-1, M-NOI-2** and **M-NOI-3**, the Proposed Project would not generate construction, operational, traffic noise or other noise that would exceed the Noise Compatibility Guidelines or Noise Standards at Noise Sensitive Land Uses. See Section 2.9, Noise, of this EIR.

Table 3.1.4-4
County General Plan Consistency Analysis

Policy	Project Consistency with Policy
Policy N-3.1: Groundborne Vibration Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from trains, construction equipment, and other sources.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project would limit the extent of exposure that sensitive uses may have to groundborne vibration from construction equipment, and other sources. See Section 2.9, Noise, of this EIR.
Policy N-6.2: Recurring Intermittent Noise Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2.	**Consistent.** The Proposed Project would be consistent with this policy. To ensure that recurring intermittent noise (such as noise generated during maintenance activities including panel washing) complies with the County Noise Ordinance, **M-NOI-2** would be implemented. See Section 2.9, Noise, of this EIR.
Policy N-6.4: Hours of Construction Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance.	**Consistent.** The Proposed Project would be consistent with this policy. Construction and maintenance of the Proposed Project would conform to the hours of operation for such activities as specified by the County Noise Ordinance. If work is required outside of regularly permitted hours, then the Project applicant would go through the appropriate County process to ensure County approval of activities.

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
Agricultural Goal. Encourage the expansion and continuance of agricultural uses in the subregion.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 3.1.1, Agricultural Resources, of this EIR, the site also has portions that have been used as historical field or pasture agricultural lands. However, the Proposed Project would not conflict with a Williamson Act Contract or agricultural preserve. The Proposed Project would not change the rural characteristic of the area, as there are no active agricultural operations in the Proposed Project's Zone of Influence (ZOI). Consequently, the Proposed Project would not obstruct, interrupt, or detract from existing agricultural operations within the ZOI, or be detrimental to surrounding properties. Since there are no active agricultural lands within 0.25 miles of the Project site, this would not result in any additional pressure to convert surrounding agricultural lands. In addition, the solar facility (except for switchyard) would be decommissioned after 35 years. As a result, the Proposed Project would not substantially impair the ongoing viability of the site for agricultural use, and impacts would be less than significant. Further, no residential or dense urban development is proposed that may conflict with existing agricultural uses. The surrounding area is composed predominantly of rural land with a small

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
	portion of commercial land to the northeast and residential land associated with the community of Jacumba Hot Springs to the west. The Proposed Project would not involve changes to the existing environment that, due to their location or nature, could indirectly result in the conversion of off-site agricultural resources to non-agricultural use, or could adversely impact the viability of agriculture on surrounding land.
Land Use Element General Goal. Provide a land use pattern consistent with the Subregional population forecast.	**Consistent.** The Proposed Project would be consistent with this policy. The Mountain Empire Subregional Plan estimated population growth in the area from approximately 5,815 at the time of writing to approximately 8,844 persons by the year 2030. The Proposed Project would not affect population density in the Mountain Empire Subregion and sufficient land area would remain to accommodate the projected growth. The proposed project is an interim use and will be decommissioned at the expiration of the Use Permit. During construction and decommissioning, the Proposed Project would employ a total of approximately 500 workers, with a daily maximum of 500 workers at the peak of construction and approximately 250 workers during decommissioning. It is anticipated that workers from the San Diego region to the west or Imperial Valley to the east would construct and decommission the Proposed Project. Because of the presence of locally available workers in San Diego County, and because of the relatively short duration of construction (approximately 13 months) and decommissioning (approximately 10 months), workers are not expected to relocate to the area with their families. During the operational phase, the Proposed Project would be an unmanned facility that would be monitored remotely and would not have any full-time personnel on site. Up to five people may periodically be on site during operations for inspections, maintenance, and repair activities. The operational workers are likely to come from the San Diego region to the west, and are also not anticipated to relocate to Jacumba Hot Springs or the Mountain Empire Subregion given their limited time at the site annually. Accordingly, the limited scale of the solar facility construction, operation and decommissioning would not affect the population base within the area. The Proposed Project would not induce substantial unplanned population growth in the community of Jacumba Hot Springs or the Mountain Empire Subregion. The Proposed Project does not include a residential component that would cause permanent or temporary population increases, nor would it extend roads or infrastructure (e.g., water, sewer, etc.) into previously unserved areas. Additionally, the Proposed Project would not include any physical or regulatory changes that would remove a restriction to, or encourage population growth in the area, including, but not limited to, the following: large-scale residential development; accelerated conversion of homes to commercial or multifamily

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
	use; regulatory changes including General Plan Amendments encouraging population growth, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. Therefore, the Proposed Project would not result in a direct or indirect impacts to population. The electricity generated by the Proposed Project would be fed directly into the regional electricity grid and would not serve or facilitate any growth of the local population directly. The Project is intended to support the state's transition to 100% renewable energy generation and to improve electrical reliability in San Diego County and other counties. Accordingly, the Project would supplement the region's energy supply and would not encourage housing growth or result in growth-inducing impacts in the Mountain Empire Subregion.
Land Use (Policy and Recommendation 1) The landforms of the Subregion are an important environmental resource that should be respected in new development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.	**Consistent.** The Proposed Project would be consistent with this policy. The solar facility (i.e., all components of the JVR Energy Park Project) would be consistent with this policy. The general topography within the development footprint consists of flat land and gently rolling hills. Grading will be necessary for the construction of access and service roads and the installation of solar arrays; trenching for the underground electrical DC and AC collection system, including the telecommunication lines; and construction of the Proposed Project substation. Major Grading Permits would be required and would be obtained once grading quantities are finalized. Grading is expected to be balanced on site, with approximately 75,000 cubic yards of cut redistributed across the site. Hillside grading would be minimized and designed to conform to the existing contours to the extent feasible.
Land Use (Policy and Recommendation 2) Create a buffer area of one hundred and fifty (150) feet in width along the international boundary line inclusive of the existing sixty-foot (60') Public Reserve owned by the Federal Government.	**Consistent.** The Proposed Project would be consistent with this policy. The Project's parcels that are adjacent to the International Border all have a D-Designator (Special Area Regulation) that prescribe specific actions to be taken relative to development along the International Border. On December 18, 2018, Department of Homeland Security (DHS) was notified that a portion of the Project will be within the 90-foot of the Public Reserve Area. On January 21, 2019, DHS stated that the project would not be a significant impact to Border Patrol operations or access to the area. The 90-feet of open corridor was deemed unnecessary to DHS.
Land Use (Policy and Recommendation 3) Apply a ninety (90') foot setback within which no new permanent building may be built northerly of the existing sixty (60') foot Public Reserve line. Where such ninety (90') foot setback can be shown to adversely impact a property, owner may apply for a waiver from complying with the setback as provided for Section 7060 of The Zoning Ordinance.	**Consistent.** The Proposed Project is consistent with this policy. In accordance with Section 7060 of the Zoning Ordinance the Proposed Project would comply with both the county 90-foot setback requirement and the 60-foot Public Reserve line. See the Project Plot Plan for additional detail.

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
Land Use (Policy and Recommendation 4) Ensure that all development be planned in a manner that provides adequate public facilities prior to or concurrent with need.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project has been designed to provide a source of generation as near as possible to existing SDG&E transmission infrastructure. The Proposed Project would provide an additional, renewable energy source, helping meet regional and statewide energy demand while assisting the state in directly achieving or exceeding the state's mandate to obtain 100 percent of total retail sales of electricity from eligible renewable energy resources and zero-carbon resources by December 31, 2045 (SB 100). Public drainage and sewage improvements would not be required for the Proposed Project as the Proposed Project would be an unmanned facility that would be controlled remotely and only have periodic workers for routine repair, maintenance and inspection. During the operational phase, the Proposed Project would be monitored remotely and would not have any full-time personnel on site. Up to five people may periodically be on site during operations for inspections, maintenance, and repair activities. The operational workers are likely to come from the San Diego region to the west, and are also not anticipated to relocate to Jacumba Hot Springs or the Mountain Empire Subregion given their limited time at the site annually. The Proposed Project does not include a residential component that would cause permanent or temporary population increases, nor would it extend roads or infrastructure (e.g., water, sewer, etc.) into previously unserved areas. Additionally, the Proposed Project would not include any physical or regulatory changes that would remove a restriction to, or encourage population growth in the area, including, but not limited to, the following: large-scale residential development; accelerated conversion of homes to commercial or multifamily use; regulatory changes including General Plan Amendments encouraging population growth, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. Therefore, the Proposed Project would not result in the need for additional public facilities.
Energy Conservation Goal. Ensure that the conservation of non-renewal energy resources is pursued in a way that is not detrimental to the rural lifestyle.	**Consistent.** The Proposed Project would be consistent with this goal. The Proposed Project is a solar facility and by its nature contributes to the conservation of non-renewable energy resources. Solar energy is a renewable, free source of energy that is sustainable and inexhaustible, unlike fossil fuels, which are finite. It is also a non-polluting source of energy and does not emit any greenhouse gases when producing electricity. Therefore, the Project will conserve energy resources and will not be detrimental to the rural lifestyle.
Energy Conservation (Policy and Recommendation 1) New development should utilize alternative energy technologies, especially active and passive solar energy systems.	**Consistent.** The Proposed Project would be consistent with this policy in that it is a solar facility that would produce solar power eligible for the state's Renewable Portfolio Standard that would be used by existing or future development.

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
Public Facilities and Services Goal. Provide the facilities and level of service necessary to satisfy the needs of the subregion.	**Consistent.** The Proposed Project would be consistent with this goal. The Proposed Project has been designed to provide a source of generation as near as possible to existing SDG&E transmission infrastructure. The Proposed Project would provide an additional, renewable energy source, helping meet regional and statewide energy demand while assisting the state in directly achieving or exceeding the state's mandate to obtain 100 percent of total retail sales of electricity from eligible renewable energy resources and zero-carbon resources by December 31, 2045 (SB 100).
Public Facilities and Services (Policy and Recommendation 4) Uses proposed for the property adjacent to substations or transmission line rights-of-ways should be reviewed for possible impacts to the power facilities and vice versa.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project has been sited to provide a source of local generation as near as possible to the SDG&E transmission infrastructure and other recent regional renewable energy facilities and electrical transmission lines, including the Jacumba Solar Project, Eco Substation, Sunrise Powerlink, and Southwest Powerlink. The Proposed Project would be compatible with existing substation or transmission lines nearby.
Conservation – Environmental Resources Goal. Ensure that there is careful management of environmental resources in the area in order to prevent wasteful exploitation or degradation of those resources and to maintain them for future needs.	**Consistent.** The Proposed Project would be consistent with this goal. As discussed in this EIR, all Proposed Project impacts to environmental resources have been analyzed and mitigated as necessary. The Proposed Project has been designed to avoid degradation to natural resources to the maximum extent practicable. The Proposed Project will include mitigation measures to bring anticipated impacts to a less than significant level.
Environmental Resources (Policy and Recommendation 1) All development shall demonstrate a diligent effort to retain as many native oak trees as possible.	**Consistent.** The Proposed Project would be consistent with this policy. No oak woodlands exist on the Project site. Therefore, development of the Proposed Project would not require the removal of existing oak trees.
Environmental Resources (Policy and Recommendation 3) Floodways should be maintained in their natural state unless findings can be made that a threat to public safety exists.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project avoids development within Boundary Creek and minimizes developed within Carrizo Wash. As discussed in Section 2.7 Hydrology and Water Quality, implementation of **M-HYD-1** and **PDF-HYD-1** would ensure flood flows would not be impeded or redirected.
Environmental Resources (Policy and Recommendation 4) The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.	**Consistent.** The Proposed Project would be consistent with this policy. The solar facility would be consistent with this policy and. would comply with the County's Light Pollution Code during construction and operations. More specifically, during construction, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code and would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. During operations, all lighting for the solar facility would be shielded, directed

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
	downward, and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 59.101 et seq. Lastly, the Proposed Project would comply with the San Diego County Zoning Ordinance, Performance Standards Sections 6320, 6322, and 6324, which guide performance standards for glare, and control excessive, or unnecessary outdoor light emissions.
Environmental Resources (Policy and Recommendation 5) Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.	**Consistent.** The Proposed Project would be consistent with this policy. As discussed in Section 2.3, Biological Resources, of the EIR, the Proposed Project would result in impacts to sensitive plant and wildlife species. However, through mitigation, potentially significant impacts would be reduced to less than significant. Although implementation of the Proposed Project was determined to result in significant and unmitigable impacts to focal or panoramic vistas from several locations including Interstate (I) 8 and Old Highway 80, the Proposed Project would not conflict with this policy. Neither the Project site nor the surrounding area has been designated by local, state or federal agencies or organizations as containing or being of "significant" scenic value. Still, the areas identified for solar development encompass flatter terrain and unique or particularly vivid terrain including ridgelines and slopes would not be disturbed by Proposed Project development. Within implementation of landscaping and slatted fencing, solar panels, and other equipment would be screened from public view of motorists on Old Highway 80, users of Jacumba Community Park, and residents in Jacumba Hot Springs to the extent practicable. From elevated vantage points, taller Proposed Project components associated with the collector substation, switchyard, and gen-tie line would be visible but would be added to a viewshed that currently includes tall steel lattice towers and tubular steel poles of the Southwest Powerlink and Sunrise Powerlink. Lastly, the Proposed Project is proposed in the Jacumba area landscape that has been previously altered by the existing transmission lines Since the Project site has not been designated or described by agencies as containing "significant" scenic value, and in consideration of the factors described above, the Proposed Project would not conflict with this policy.
Scenic Highways Goal. Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.	**Consistent.** The Proposed Project would be consistent with this policy. Within the Mountain Empire Subregional Plan Area, Interstate 8 from State Route 79 east to the Imperial County Line and Old Highway 80, from the Central Mountain Subregion to Interstate 8 are designated scenic corridors. The solar facility would be visible from portions of I-8 and Old Highway 80.

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
	Despite their inclusion in the County's scenic highway system, there are no current local regulations governing development of lands along I-8 or Old Highway 80. For example, existing energy infrastructure including the East County Substation, Jacumba Solar Project, transmission lines, and the East County Substation 138 kV line is currently visible from I-8 and Old Highway 80. Near the project site, both I-8 and Old Highway 80 were identified as providing opportunities for long and/or broad scenic views. Further, even with implementation of PDFs including PDF_AE-4 and PDF-AE-5, impacts to focal or panoramic vistas from I-8 and Old Highway were determined to be significant and unavoidable. However, the duration of available views from I-8 to the Project site is brief (30 seconds or less) and the viewshed currently encompasses gas station development and electrical infrastructure in addition to natural terrain and native desert vegetation. Further, from Old Highway 80, the installation of landscaping and slatted fencing (i.e., **M-AES-5** and **M-AES-6**) would partially screen solar panels and interior Project components from view of passing motorists. These mitigation measures would substantially reduce the visibility of solar panels and ancillary facilities from Old Highway 80. Lastly, implementation and operation of the Proposed Project would not prevent the County from continuing to establish and designate scenic highways and would not inhibit the County from establishing regulations and/or development standards geared towards the protection and enhancement of scenic highways. Due to the inclusion of existing energy infrastructure in the I-8 and Old Highway 80 viewsheds, the brief duration of views to the Project site from I-8, screening of solar panels from view of Old Highway 80 motorists and because the Project does not inhibit the County from establishing regulations and/or development standards geared towards the protection and enhancement of scenic highways, the Proposed Project would not be inconsistent with the Scenic Highways Goal of the Mountain Empire Subregional Plan.
Vision Statement for Jacumba. Jacumba is a diverse community. The ratio of young to older citizens is about even, which makes the vision diverse as well. We want schools for the young, as well as much needed services, like fire protection, police, and medical care, and still not lose the wonderful feeling that is Jacumba. Clean air, beautiful scenery, superb climate, and no congestion or traffic.	**Consistent.** The Proposed Project would be consistent with this vision statement. The Proposed Project would not increase population in the area, and therefore would not increase demand for public services such as schools and police protection. As discussed in Section 2.12, Wildfire, of this EIR, the fire protection measures in the FPP (**M-WF-1**), that has be prepared and submitted to the County Fire Marshal for approval, would be implemented. Please refer to response to Policy S-6.3 above. With implementation of **M-WF-3**, the Proposed Project would participate in a Fire Protection and Mitigation Agreement with San Diego County Fire Authority (SDCFA) to improve SDCFA's

Table 3.1.4-5
Mountain Empire Subregional Plan Consistency Analysis

Policy and Recommendation	Project Consistency with Policy
	capacity to provide fire and emergency protection services. The project has been designed to be compatible with and preserve the natural and historic environment. By its very nature, the Proposed Project would increase the accessibility of renewable energy throughout California. Please refer to response to Policy LU 8.2 above. The Proposed Project would use groundwater from on-site wells. As discussed in Section 2.7, Hydrology and Water Quality of this EIR, a Groundwater Investigation has been prepared and a Groundwater Monitoring and Mitigation Plan (**PDF-HYD-2**) would be implemented for the Proposed Project. While there would be a short-term increase in vehicle trips due to construction, long term traffic impacts would be negligible as it is an unstaffed facility.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
Policy JAC 1.1 Evaluating Acceptable Noise Levels for New Development: The noise compatibility of proposed land uses within the influence area of Jacumba Airport shall be evaluated in accordance with the policies set forth in this section, including the criteria listed in Table JAC-1 and the noise contours depicted on Map JAC-1.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project is an unstaffed facility. Therefore, it will not exceed the maximum nonresidential intensity (people/acre) shown in Table JAC-1. The southern portion of the project site will be located within the 50-55 decibel (dB) noise contour as shown on Map JAC-1. The project use will be consistent with the criteria listed in Table JAC-1 and the noise contours depicted on Map JAC-1.
Policy JAC 1.3 Acceptable Noise Levels for Specific Types of Land Use Development: (c) The compatibility of new nonresidential development with noise levels generated by the airport is indicated in Table JAC-1. 1. Buildings associated with land uses listed as "conditional" must have added sound attenuation as necessary to meet the interior noise levels standards indicated in the table and in Policy JAC.JAC.1.5. 2. Land uses not specifically listed shall be evaluated using the criteria for similar listed uses. (d) Dedication of an avigation easement in accordance with Policy 3.1.5 of Chapter 2 is a requirement for acceptability of any type of development within the 55 dB Community Noise Equivalent Level (CNEL) contour.	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project is not associated with a "conditional" land use and therefore will not require added sound attenuation as necessary to meet the interior noise levels standards. Prior to development, the project will obtain an avigation easement in accordance with Policy 3.1.5 of Chapter 2.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
Policy JAC 1.4 Application of Noise Contours to Individual Project Sites: Projected noise contours are inherently imprecise because, especially at general aviation airports, flight paths and other factors that influence noise emissions are variable and activity projections are always uncertain. Given this imprecision, noise contours shall be utilized as follows in assessing the proposed use of a specific development site. (a) In general, the highest CNEL to which a project site is projected to be exposed shall be used in evaluating the compatibility of development over the entire site and determining sound attenuation requirements, if any. (b) Exceptions to this policy are as follows: 1. On project sites large enough to have a CNEL variation of 3 dB or more, compatibility criteria applicable within each 5 dB range (55 to 60, 60 to 65, etc.) shall be applied to each portion of the site exposed to that range of noise. 2. Where no part of the buildings proposed on the site fall within the higher CNEL range, the criteria for the CNEL range where the buildings are located shall apply.	**Consistent.** The Proposed Project would be consistent with this policy. The Project site is large enough to have a CNEL variation of more than 3 dB. The southern portion of the site would be within the 50 to 55 dB noise contour, while the rest of the site will be lower. The SDG&E Switchyard and substation proposed on site will be located outside of the airport noise contours.
Policy JAC 2.2 Measures of Safety Compatibility: To minimize risks to people and property on the ground and to people on board aircraft, the safety compatibility criteria set limits on: (b) The intensity of nonresidential development measured in terms of the number of people concentrated in areas most susceptible to aircraft accidents. (c) Development or expansion of certain uses that represent special safety concerns regardless of the number of people present. (d) The extent to which development covers the ground and thus limits the options of where an aircraft in distress can attempt an emergency landing.	**Consistent.** The Proposed Project would be consistent with this policy. The project proposes a solar energy facility and associated transmission facilities and does not represent a sensitive land use with regard to public safety. The Project will be unmanned, and therefore will not increase the number of people concentrated in areas susceptible to aircraft accidents. The Project will not result in special safety concerns, as it will be designed in accordance with the Jacumba ALUCP Safety Compatibility Policies.
Policy JAC 2.5: Nonresidential Development Criteria: The following criteria apply to most proposed nonresidential development. Additional or different criteria for uses of special concern are described in Policy JAC 2.6. (a) For the purposes of this Compatibility Plan, the fundamental measure of risk exposure for people on the ground in the event of an aircraft accident is the number of people concentrate in areas most susceptible to aircraft accidents. This measure is the	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project is an unstaffed facility and would have a very low measure of risk exposure for people on the ground. Following construction, the site will be monitored and operated off site through a supervisory control and data acquisition (SCADA) system. Additionally, only the Southern portion of the project site is located within an Airport Safety Zone. The maximum acceptable intensity will not be exceeded during construction nor operation. The applicant has coordinated with the San Diego County Department of Public Works

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
chief determinant of whether particular types of nonresidential development are designated as incompatible, conditional, or compatible in Table JAC-2. 1. The maximum acceptable intensity of proposed development within the environs of Jacumba Airport is: • Within Safety Zone 1: 10 people per acre. • Within Safety Zone 2: 60 people per acre. • Within Safety Zone 3: 120 people per acre. • Within Safety Zone 4: 150 people per acre. • Within Safety Zone 5: 150 people per acre. • Within Safety Zone 6: no limit. 2. Usage intensity calculations shall include all people (e.g., employees, customers/visitors) who may be on the property at any single point in time, whether indoors or outdoors. 3. Local jurisdictions may make exceptions for rare special events (e.g., as an air show at an airport) for which a facility is not designed and normally not used and for which extra safety precautions can be taken as appropriate. (b)Evaluation of the compatibility of a proposed nonresidential land use development shall be made using the land use types listed in Table JAC-2. 1. The nonresidential uses are categorized primarily with respect to the typical occupancy load factor of the use measured in terms of square footage per occupant. Occupancy load factor takes into account all occupants of the facility including employees, customers, and others. Also indicated in the table is the California Building Code (CBC) classification under which each facility is presumed to be constructed. Proposed development for which no land use type is listed in Table JAC-2 shall be evaluated with respect to a similar use included on the list. The occupancy load factor of the unlisted use and that of the similar listed use shall be the primary basis for comparison except where the unlisted use is most similar to a land use of special concern. Unlisted uses also may be compared to listed uses having the same construction type as noted in the CBC column in the table.	(Airports) to discuss the design of the project and its potential effects on existing operations at the Jacumba Airport. The project has received an approved FAA Form 7460-1 (Notice of Proposed Construction or Alteration) with a determination of "No Hazard to Air Navigation" and has received a determination of consistency with the Jacumba ALUCP.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
Policy JAC 2.6 Land Uses of Special Concern: Certain types of land uses represent special safety concerns irrespective of the number of people associated with those uses. Land uses of particular concern, the nature of the concern, and the conditions which the development must meet to be acceptable within a particular safety zone are as listed below. (a) Critical Community Infrastructure: This category pertains to facilities the damage or destruction of which would cause significant adverse effects to public health and welfare well beyond the immediate vicinity of the facility. **2.** Emergency Communications Facilities; Power Plants, and Other Utilities: Facilities such as these are conditionally compatible in the zones indicated for that use in Table JAC-2 only if the local jurisdiction documents that an alternative site outside these zones would not adequately meet the needs the facility is intended to serve and that this consideration outweighs the airport-related safety concerns associated with a site in the impacted area. Susceptibility of the facility to damage by an aircraft accident, the availability of redundant or replacement facilities, the rapidity with which the facility could be repaired, and other such factors should all be considered in the determination of whether a facility of this type should be placed in a risky location.	**Consistent.** The Proposed Project would be consistent with this policy. The Project proposes a solar energy facility and associated transmission facilities and does not represent a sensitive land use with regard to public safety. In addition, as the facilities would be self operating, the daily onsite presence of substantial numbers of employees is not required, and therefore, project-associated employees would not be subject to long-term exposure to potential airport operational hazards. Facilities where hazardous materials are stored primarily for use at an otherwise compatible land use are conditionally compatible in Safety Zones 2, 3, 4, &5. Assessment of whether storage and use of a particular substance is acceptable near the airport is delegated to the permitting agencies that are responsible for ensuring safe storage and use of the substances irrespective of the facility's location near the airport. These agencies are requested to evaluate whether extra precautions would be warranted to protect against release of the hazardous substances in the event that the facility where the substances are stored and used should be involved in an aircraft accident. The battery energy storage system containers would be made of steel, which would have a low risk of catching fire. Each enclosure would include the following monitoring and safety components: modular battery racks designed for ease of maintenance; Integrated heat and fire detection and suppression system; Explosive gas monitoring; Exhaust/ventilation systems; Integrated air conditioning system; and an Integrated battery management system. The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior containers sprinkler system with several sprinkler heads for coverage and an external dry standpipe for fire fighters to connect and pump water.an air conditioning unit for cooling purposes and a self-extinguishing fire system. Loss of the energy production provided by the Project will not significantly impact SDG&E's ability to provide power to the region. Additionally, given the rural nature of the surrounding area, risk will not be expected to extend beyond the project site.
Policy JAC 2.8 Maximum Lot Coverage: All proposed development in Safety Zones 2, 3, 4, and 5 regardless of whether the land use is listed as "compatible" or "conditional" shall adhere to the maximum lot coverage limitations indicated in Table JAC-2. No structures are permitted in Safety Zone 1 and no limits on lot coverage are set in Safety Zone 6. All structures, including parking structures and support buildings, shall be counted when determining maximum lot coverage.	**Consistency**. The Proposed Project would be consistent with this policy. All development in Safety Zones 2 and 4 must adhere to maximum lot coverage requirements in Table JAC-2, with all structures counted toward coverage. JAC.2.8. Table JAC-2 compares the land use to the Safety Zone to determine if the use is incompatible, conditional, or compatible with the airport use. If a use is conditional or compatible, it is allowed with a maximum 50% lot coverage in Zone 2 and 70% lot coverage in Zone 4. Solar panel energy production is not specifically addressed on Table JAC-2, but it is most similar to the utility use "cell phone tower,

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
(a) On project sites of 10.0 acres or more, structures and other large objects shall be arranged so as to meet the open land criterial in Policy JAC 2.9 below at the rate of one open land area per each 10 acres of the site.	wind turbines," which is marked compatible in Table JAC-2 and allowed with 50% and 70% lot coverage in Zones 2 and 4, respectively. Lot coverage is not defined in the ALUCP or in the California Airport Land Use Planning Handbook. The County's Zoning Ordinance defines lot coverage as "the percentage of net site area covered by the vertical projection of any structure excluding any structure not extending above grade." Under this definition, the area between each solar panel is not included as lot coverage because the ground is openly exposed to the sky and there is no vertical projection above grade. The Project site is 1240 acres, with 33.81 acres in Zone 2 and 87.95 acres in Zone 4. Of the 33.81 acres in Zone 2, the County believes 8.45 to 15.21 acres are covered, which is 25% to 45%. The County determined lot coverage by measuring the actual coverage from each individual solar panel at its widest part and excluding the uncovered area between them from the coverage total. The lot coverage is between 8.45 to 15.21 acres, or 25% to 45% Of the 87.95 acres in Zone 4, approximately 22 acres to 39.58 are covered, which is 25% to 45%. The County determined lot coverage by measuring the actual coverage from each individual solar panel and excluding the uncovered area between them from the coverage total. The lot coverage is approximately 22 to 39.58 acres, or 25% to 45%. Because the lot coverage in Zone 2 is between 25% to 45%, and because the lot coverage in Zone 4 is 25% to 45%, the Project's lot coverage is consistent with the ALUCP.
Policy JAC 2.9 Open Land: In the event that a light aircraft is forced to land away from an airport, the risks to the people on board can best be minimized by providing as much open land area as possible within the airport vicinity. This concept is based on the fact that the majority of light aircraft accidents and incidents occurring away from an airport runway are controlled emergency landings in which the pilot has reasonable opportunity to select the landing site. For business jets and other large or fast aircraft, including most military aircraft, provision of open land for emergency landing purposed has minimal benefit unless the areas are very large and flat. (a) Open land criteria are applicable to all general aviation airport runways in that even the runways frequently used by business jets are mostly used by light aircraft. (b) To qualify as open land, an area should: a. Be free of most structures and other major obstacles such as walls, large trees or poles (greater than 4 inches in diameter, measured 4 feet above the ground), and overhead wires.	**Consistent.** The Proposed Project would be consistent with this policy. The Project sites 10 acres or greater must provide at least one area of open land (0.5 acres) per 10 acres. JAC.2.8. Open land is intended to allow light aircraft to have controlled emergency landings, and an area qualifies as "open land" if it meets the following requirements: free of most structures and obstacles such as walls, large trees or poles, and overhead wires; minimum dimensions of 75 x 300 feet; oriented in the typical direction of flights. JAC.2.9(b)-(c). Roads are acceptable as open land if they meet the above criteria. JAC.2.9(d). As noted above, the Project site impacts 121.95 acres within Safety Zone 2 and 4, and it requires 6.1acres to satisfy the open land criteria. That total provided is 8.8 acres, which satisfies the requirement for 0.5 acre of open land per 10 acres of project site.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

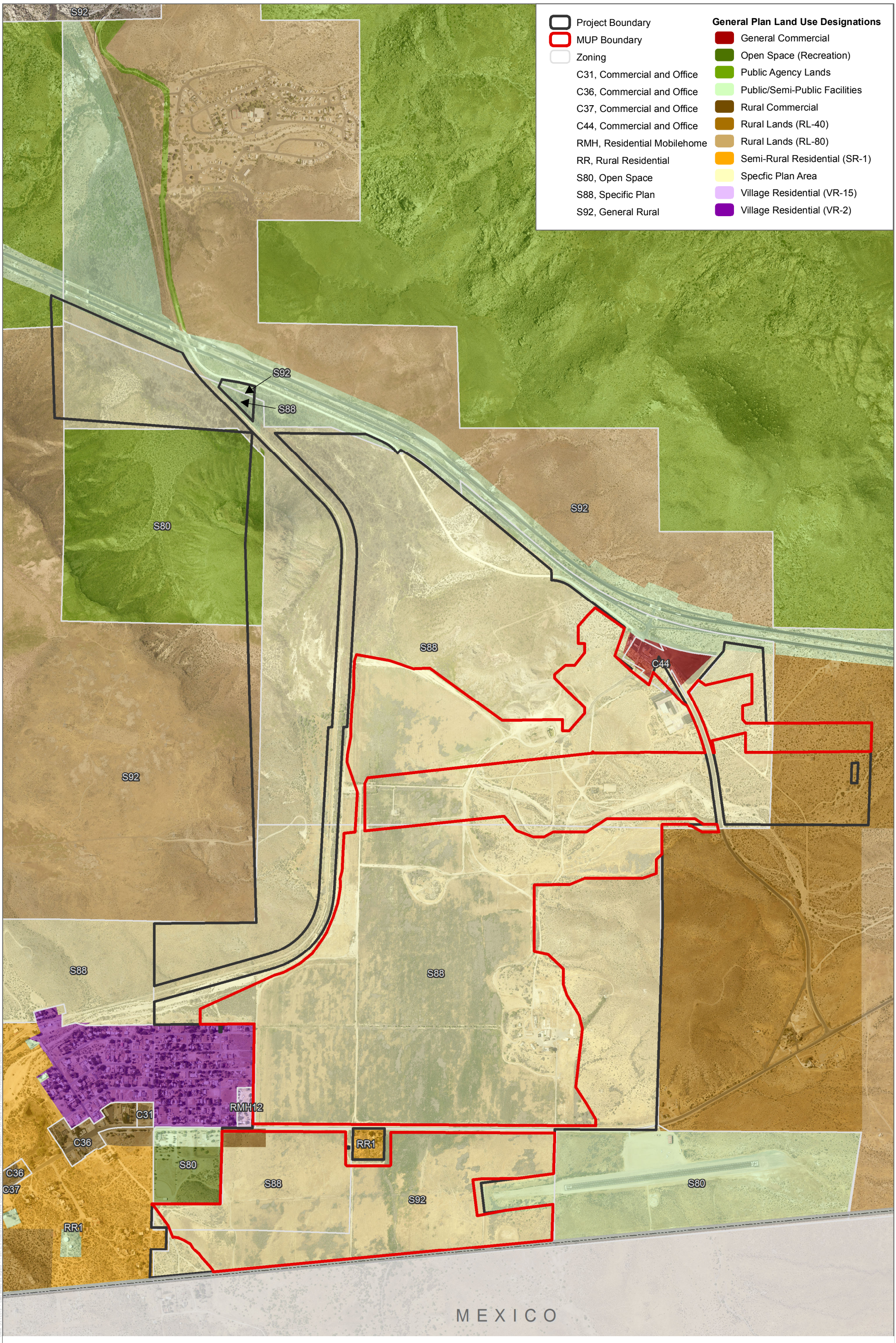
Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
b. Have minimum dimensions of approximately 75 feet by 300 feet (0.5 acres). (c) Open land should be oriented with the typical direction of aircraft flight over the location involved.	
Policy JAC 2.11 Parcels Lying within Two or More Safety Zones: For the purposes of evaluating consistency with the compatibility criteria set forth in Table JAC-2, any parcel that is split by compatibility zone boundaries shall be considered as if it were multiple parcels divided at the compatibility zone boundary line. However, the density or intensity of development allowed within the more restricted portion of the parcel can (and is encouraged to) be reallocated to the less restricted portion. This reallocation of density or intensity is permitted even if the resulting density or intensity in the less restricted area would then exceed the limits which would otherwise apply within that safety zone.	**Consistent.** The Proposed Project would be consistent with this policy. The Project would be located within Zone 1 – Zone 6 of the Jacumba ALUCP. A small portion of the site would be located in Zone 1, however no structures will be placed within Zone 1. Larger areas of development will be located within Zones 2 through 6. Development intensity will be consistent across the various safety zones, with an approximate maximum lot coverage in Zone 2 between 25% to 45%, and because the lot coverage in Zone 4 is 25% to 45%, the Project's lot coverage is consistent with the ALUCP, and the Proposed Project would not exceed the maximum lot coverage ratio of any safety zone.
Policy JAC 2.12 Special Provisions for Safety Zone 1: In accordance with the Federal Aviation Administration (FAA) guidance, the basic compatibility criteria for Safety Zone 1 (the runway protection zones and within the runway primary surface), as listed in Table JAC-2, preclude most uses, including any new structures and uses having an assemblage of people. (a) The presumption is that the airport owner owns or intends to acquire property interests – fee title or easements – sufficient to effect this policy. The ALUC policy is to encourage airport owner acquisition of these property interests in all of Safety Zone 1 with funding assistance from the FAA. (b) In instances where the affected property is privately owned and the airport owner does not intend to acquire property interests, the following uses shall be considered acceptable: 1. Within the runway object free area (OFA): No uses except FAA-approved uses related to aeronautical functions. 2. Within the extended runway object free area: • Roads • Farm crops that do not attract wildlife 3. Outside the runway object free area and extended runway object free area. • Uses listed in Paragraph (2) • Surface automobile parking • Other uses not in structures and not exceeding a usage intensity of 10 people per any single acre	**Consistent.** The Proposed Project would be consistent with this policy. The Proposed Project will not place any objects within Safety Zone 1 nor within the OFA. Development outside of the OFA will not exceed a usage intensity of 10 people per any single area. The Proposed Project has been reviewed by the SDCRAA, and a FAA Form 7460- Aeronautical Study Determination of No Hazard has been obtained.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
4. The acceptability of uses not listed shall be consistent with FAA guidance and the ALUC determination shall be made in consultation with the FAA and the airport owner.	
Policy JAC 3.4 ALUC Airspace Obstruction Criteria*:* The ALUC criteria for determining the acceptability of a project with respect to height shall be based upon: the standards set forth in FAR Part 77, Subpart C; the United States Standard for Terminal Instrument Procedures (TERPS); and applicable airport design standards published by the FAA. Additionally, the ALUC shall, where an FAA aeronautical study of a proposed object has been required, take into account the results of that study. (a) Except as provided in Paragraphs (b) and (c) of this policy, no object, including mobile object such as a vehicle or temporary object such as construction crane, shall have a height that would result in penetration of the airspace protection surface depicted for Jacumba Airport in Map JAC-3, Compatibility Policy Map: Airspace Protection. Any object that penetrates one of these surfaces is, by FAA definition, deemed an *obstruction*. (b) Other than within the Primary Surface and beneath the Approach or Transitional Surface, no object shall be limited to a height of less than 35 feet above the ground even if the object would constitute an obstruction. (c) A proposed object having a height that exceeds the airport's airspace protection surface shall be allowed only if *all* of the following apply: (1) As the result of an aeronautical study, the FAA determines that the object would not be a *hazard* to air navigation. (2) FAA or other expert analysis conducted under the auspices of the ALUC or the airport operator concludes that, despite being an airspace *obstruction* (not necessarily a *hazard*), the object that would not cause any of the following: • An increase in the ceiling or visibility minimums of the airport for an existing or planned instrument procedure (a planned procedure is one that is formally on file with the FAA or that is consistent with the FAA-approved airport layout plan); • A diminution of the established operational efficiency and capacity of the airport, such as by causing the usable length of the runway to be reduced; or	**Consistent.** The Proposed Project would be consistent with this policy. The Project has been designed in accordance with FAR Part 77, Subpart C. The Proposed Project's switchyard would be the tallest project component at approximately 66 feet. The switchyard would be connected into the existing 138 kV SDG&E Boulevard – East County transmission line via an overhead transmission line tie-in would require approximately 1,860 feet of wire, and up to five steel transmission poles ranging from 70 to 115 feet above ground. The switchyard and the transmission poles would be located partially within Safety Zone 6 and entirely within Part 77 horizontal surface. The Switchyard would be located immediately adjacent to existing transmission lines which are approximately 150 feet high, so no project component would exceed the height of existing infrastructure adjacent to Safety Zone 6. In accordance with paragraph (c), above, the following would apply: based on the aeronautical study, the FAA determined that the project would not be a hazard to air navigation and would not cause an increase in the ceiling or visibility minimums of the airport, a diminution of the established operational efficiency and capacity of the airport, nor conflict with the VFR airspace used for the airport traffic pattern or en route navigation to and from the airport. Marking and lighting of the project will be installed as directed by the FAA aeronautical study of the California Division of Aeronautics and in a manner consistent with FAA standards in effect at the time the construction is proposed. The Proposed Project would dedicate an avigation easement over the Project site. Due to the use of cranes during construction, the Proposed Project would be required to file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA prior to construction. Therefore, the use will comply with all policies of this Compatibility Plan related to noise and safety compatibility.

Table 3.1.4-6
Jacumba Airport Land Use Compatibility Plan Consistency Analysis

Jacumba ALUCP Section	
Policy	*Project Consistency with Policy*
• Conflict with the visual flight rules (VFR) airspace used for the airport traffic pattern or en route navigation to and from the airport. (3) Marking and lighting of the object will be installed as directed by the FAA aeronautical study of the California Division of Aeronautics and in a manner consistent with FAA standards in effect at the time the construction is proposed (Advisory Circular 70/7460-1J, Obstruction Marking and Lighting, or any later guidance). (4) An avigation easement as described in Policy 3.1.5 of Chapter 2 is dedicated to the agency owning the airport. (5) The use complies with all policies of this Compatibility Plan related to noise and safety compatibility.	
ALUC Policy JAC 3.5: ***Other Flight Hazards:*** Land uses that may cause visual, electronic, or wildlife hazards, particularly bird strike hazards, to aircraft in flight or taking off or landing at the airport shall be allowed within the airport influence area only if the uses are consistent with FAA rules and regulations. (a) Specific characteristics to be avoided include: (1) Sources of glare (such as from mirrored or other highly reflective buildings or building features) or bright lights (including search lights and laser light displays); (2) Distracting lights that could be mistaken for airport lights; (3) Sources of dust, steam, or smoke that may impair pilot visibility; (4) Sources of electrical interference with aircraft communications or navigation; and (5) Any proposed use that creates an increased attraction for wildlife and that is inconsistent with FAA rules and regulations including, but not limited to, FAA Order 5200.5A, Waste Disposal Sites on or Near Airports and Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports. Of particular concern are landfills and certain recreational or agricultural uses that attract large flocks of birds which pose bird strike hazards to aircraft in flight. (b) To resolve any uncertainties with regard to the significance of the above types of flight hazards, local jurisdictions should consult with FAA officials.	**Consistent.** The Proposed Project would be consistent with this policy. A glare study was prepared for the Proposed Project (Appendix A of the Visual Resources Report (Appendix B)) and found that the Proposed Project would not impact airport operations at the Jacumba Airport or cause distraction to nearby residences or motorists (POWER Engineers, Inc. [POWER] 2018). The study utilized the Solar Glare Hazard Analysis Tool licensed by Glare Gauge and in accordance with the FAA requirements for analyzing glare for airport operations. Proposed solar operations were analyzed from pilot, residential, and motorist viewpoints. After review of the analysis, POWER determined potential glare is limited to the Jacumba Airport Runway 7 approach during the afternoon hours of the winter months lasting for less than one hour per day. Potential glare reported has a hazard level of "green" (low potential for temporary after-image) and is acceptable by the FAA. No other occurrences of glare were reported due to the rotational limits and wake/stow procedures of solar operations (POWER 2018).



SOURCE: SANGIS 2017

DUDEK

0 500 1,000 Feet

FIGURE 3.1.4-1

Existing Land Use and Zoning

JVR Solar Energy Park

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3.1.5 Parks and Recreation

This section describes the existing parks and recreation facilities within the Project site and vicinity. This section also analyzes the proposed JVR Energy Park Project's (Proposed Project) potential significant impacts on those resources, and whether the Proposed Project would require construction of new parks and recreation facilities.

Comments received in response to the Notice of Preparation (NOP) included concerns regarding potential impacts to recreational amenities and adjacent park land, including Anza Borrego Desert State Park (SP), Anza Borrego Foundation lands, and federal lands managed by the Bureau of Land Management (BLM). These concerns are addressed and summarized in this section. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Environmental Impact Report (EIR).

3.1.5.1 Existing Conditions

The 1,356-acre Project site is currently private property and contains no designated parks or recreational facilities. Existing local, state, and federal parks and recreation facilities are located in the area surrounding the Project site. These parks and recreational facilities are described below. Parks and recreational facilities within the vicinity of the Project site are also shown in Figure 3.1.5-1, Existing Park and Recreational Areas in Vicinity.

Community Parks

The 20-acre Jacumba Community Park is located immediately adjacent to the southwestern portion of the Project site. The Jacumba Community Park is owned and maintained by the Jacumba Community Services District. Amenities within the park include a basketball court with bleachers and a baseball/softball diamond.

County of San Diego Parks and Recreational Facilities

Within unincorporated San Diego County, there are more than 48,000 acres of recreational facilities, including day-use parks, sports parks, camping parks, open space preserves, historic sites, community and teen centers, and gardens. In addition, the San Diego region includes a system of regional and community trails that enhance and augment public recreational opportunities.

There are County of San Diego (County) parks within the vicinity of Jacumba Hot Springs and the Project site. The closest day-use County park is Lake Morena County Park, located approximately 20 miles west of the Project site. The closest regional park is Sweetwater Regional Park, located approximately 49 miles west of the Project site.

There are no County open space preserves within the vicinity of Jacumba Hot Springs or the Project site. The closest preserve is Otay Open Space Preserve, located approximately 40 miles west of the Project site, which does not have public access.

The County Trail Program is addressed in detail in the Community Trails Master Plan, which includes designated and proposed regional and community trails. There are no existing or proposed regional or community trails within the vicinity of Jacumba Hot Springs or the Project site (County of San Diego 2009). The closest designated community trails are located north of Boulevard approximately 8 miles northwest of the Project site. There are also no segments of trails in the Jacumba area within the Boulevard Community Trails and Pathways Plan (County of San Diego. 2005).

State-Owned Lands

State-owned lands in the vicinity of the Project site include Anza-Borrego Desert SP, which covers more than 600,000 acres in Southern California. Anza-Borrego Desert SP is the largest state park in California and includes 500 miles of dirt roads, 12 wilderness areas, washes, canyons, a variety of plants and wildlife, and numerous hiking trails (California Department of Parks and Recreation 2020). Anza-Borrego Desert SP lands (including the Carrizo Canyon Wilderness) are generally located north of Interstate (I) 8, but also include non-connected tracts south of I-8. The State Parks lands south of I-8 do not include wilderness.

Portions of Anza-Borrego Desert SP, as shown in Figure 3.1.5-1, are located in the vicinity of and adjacent to the Project site. These state lands include the mesa to the immediate west of the Project site (i.e., north of Old Highway 80 and the Jacumba Hot Springs community). These lands were recently transferred from the Anza Borrego Foundation to the California Department of Parks and Recreation. For the purposes of this analysis, this portion of the Anza-Borrego Desert SP is considered to be lands that support passive recreation. In addition to undeveloped mountain terrain and access roads, the area is crossed by the same transmission infrastructure crossing the Project site. Gates to the area currently exist on nearby roads, including Railroad Street and Desert Rose Ranch Road.

Federally Owned Lands

Federal public lands managed by BLM are located in the area surrounding the Project site. These BLM-managed lands include a portion of Round Mountain, Table Mesa Recreational Management Zone (RMZ), Airport Mesa RMZ, Carrizo Gorge Wilderness, and Jacumba Wilderness, all of which are described below.

A J-shape tract of BLM-managed land encompasses the western slope of Round Mountain and noncontiguous lands along the Carrizo Gorge (located north of I-8 and between tracts of State Parks lands) (see Figure 3.1.5-1). The eastern portion of Round Mountain is located within the Project site boundary.

Table Mountain RMZ features prominent mountain terrain north of the Project site and I-8, which includes Gray Mountain and Table Mountain. Table Mountain RMZ is managed for its "historical, cultural and natural qualities," and also provides a variety of "primitive, natural, and unconfined recreational opportunities" (BLM 2008).

Airport Mesa RMZ is located east of the Project Site. This RMZ is managed by BLM for its rural recreational qualities and provides opportunities for hiking (BLM 2008). The RMZ abuts the United States/Mexico international border on the south, and a portion of the landform boundary with the border is unfenced.

The Carrizo Gorge Wilderness is located north of I-8 and approximately 1.7 miles northeast of the northernmost boundary of the Project site. Located west of Carrizo Gorge and the Carrizo Canyon Wilderness, which encompasses State Park lands, the Carrizo Gorge Wilderness is managed by BLM and includes moderate and steep terrain of the In-Ko-Pah Mountains. The wilderness provides opportunities for solitude and non-motorized recreation, including camping, hiking, wildlife viewing, and photography (BLM 2020). Certain uses, including motorized vehicles and other forms of mechanical transport, are prohibited within the federally designated wilderness (BLM 2020).

Jacumba Wilderness is located approximately 3 miles of the Project site. This wilderness area includes rugged ridgelines and narrow valleys. The Jacumba Wilderness provides opportunities for hiking and camping (BLM 2019).

3.1.5.2 Regulatory Setting

State

California Government Code Section 66477 (The Quimby Act)

Section 66477 of the California Government Code provides cities and counties with the authority to require, by ordinance, land dedications and/or fee payments for recreation facilities as a condition to the approval of tentative and parcel maps. The Quimby Act outlines a number of items that must be contained in the local ordinance, including standards from which calculations can be made for the amount of land or fee that must be given for recreation purposes. In addition, the dedications and fees can only be used for creating or rehabilitating recreational facilities, and the city/county must develop a timeline for construction of the facilities.

The Quimby Act sets forth a standard ratio of dedicated park area within a city to the number of residents. Based on the average number of people per household and an approved or tentatively approved map, the Quimby Act requires a dedication of at least 3 acres of park land and/or cash in-lieu fees for every 1,000 residents generated by a proposed residential project. The Proposed Project would supplement the region's energy supply and would not encourage population or housing growth; therefore, compliance with the Quimby Act would not apply.

Local

County of San Diego General Plan

The County of San Diego General Plan Conservation and Open Space Element provides for future growth and development in the County with respect to the conservation, management, and use of natural and cultural resources; the protection and preservation of open space; and the provision of park and recreation resources (County of San Diego 2011).

Mountain Empire Subregional Plan

The Mountain Empire Subregional Plan establishes goals and policies to guide development within the areas of Jacumba, Tecate, Potrero, Boulevard, Campo/Lake Morena, and the Mountain Empire Balance (including the community of Tierra del Sol), which together comprise the Mountain Empire Subregion of southeastern San Diego County (County of San Diego 2016a). The goals and policies of the Mountain Empire Subregional Plan are intended to be more specific than those of the County General Plan, as they consider the distinct history, character, and identity of Mountain Empire communities. The Mountain Empire Subregional Plan contains nine elements: community character, land use, housing, mobility, public facilities and services, conservation, recreation, energy conservation, and scenic highways. Each element contains goals and policies intended to responsibly direct the development of the subregion. The Project site lies within the Jacumba Subregional Group Area Plan, which is a portion of the Mountain Empire Subregional Plan that focuses specifically on Jacumba.

The following recreation policies and recommendations of the Mountain Empire Subregional Plan are applicable to the Proposed Project (County of San Diego 2016a):

- ***Goal 1.*** Support recreational opportunities to meet community needs and enrich the lives of all residents by establishing a balanced system of recreation facilities and services.
    - ***Policy and Recommendation 1.*** Through the cooperation of the San Diego County Parks and Recreation Department and local sponsor groups, the coordination and maximum use of existing recreational facilities shall be undertaken.
    - ***Policy and Recommendation 6.*** Future Development – Local Facilities: The Mountain Empire Subregion meets the County General Plan goal for local park land provided per 1,000 in population. Consequently, County Parks Department and local Sponsor Group's review of park and recreation needs has concentrated on facility development rather than acquisition. Review of possible future acquisition needs should occur along with large-scale development proposals. Facility development is

recognized and prioritized as follows and is to occur as staffing, funding, and maintenance and operation capabilities become available.

- Jacumba – Develop local park facilities at the 20-acre Jacumba Community Park site in accordance with Jacumba Community Services District maintenance capabilities and the needs of the citizens of Jacumba.

- ***Policy and Recommendation 7.*** Local Park Acreage Goals. The County General Plan Conservation and Open Space Element, Parks, Open Space, and Recreation section establishes a goal of ten acres of local park land for every 1,000 persons. Aggregate totals for the Mountain Empire Subregion show that it currently has 15.3 acres of local park land for every 1,000 population, which by the year 2030 this will shrink to 10.0 acres per 1,000 population.
- ***Policy and Recommendation 8.*** The Jacumba Sponsor Group recommends that Park Land Dedication fees collected from the Ketchum Ranch Specific Plan area be spent for park and recreation facilities within the Jacumba Planning Area.

Park Lands Dedication Ordinance

Last updated in July 2018, the Park Lands Dedication Ordinance (PLDO) (County Ordinance No. 10554) identifies policies and standards for the provision of park lands in compliance with the state's Quimby Act. The ordinance establishes park dedication and in-lieu fee requirements and is intended to provide land for local active parks only.

The PLDO allows project applicants the option of dedicating park lands, paying in-lieu fees (which the County would use to acquire and/or improve park lands), or some combination thereof for residential development projects. Dedicated park land must be PLDO Eligible Recreation, including adventure play areas, amphitheaters, bicycle parks, dog parks, community event spaces, equestrian facilities, exercise stations, Frisbee/disc golf parks, skate parks, trails, and other uses as approved by the Director. Dedicated park land also must be level or gently sloping land (maximum slope of 10%) (County Ordinance No. 10554).

The Proposed Project is a solar energy facility that would not encourage population or housing growth in the Jacumba area, and does not propose any residential development; therefore, no new park land would be required per the PLDO. Compliance with the Quimby Act and the PLDO would not apply to the Proposed Project.

County Trails Program – Community Trails Master Plan

The County Trails Program and the Community Trails Master Plan were adopted in 2005 by the County Board of Supervisors. The Community Trails Master Plan sets forth criteria and guidelines for acquisition, dedication, development, operation, and maintenance of non-motorized trails and

pathways. These trails and pathways are intended to address an established public need for recreation and transportation, as well as health and quality of life benefits associated with use of these facilities (hiking and bike riding). The goal of the County Trails Program is to establish a system of interconnected and continuous regional and community trails to meet the needs of County residents. The County Trails Program involves trail development and management on public, semi-public, and private lands. The Community Trails Master Plan is the implementing document for the trails program and contains adopted individual community trails and pathway plans. There are no existing or proposed community trails identified in the Jacumba area in the Community Trails Master Plan (County of San Diego 2009).

The Regional Trails Plan, as part of the Community Trails Master Plan, identifies County-approved general alignment corridors of regional trails in the County. Regional trails have characteristics and conditions that serve a regional function by covering long linear distances, transcending community and/or municipal borders, having state or national significance, or providing important connections to existing parks and preserves (County of San Diego 2009). The Regional Trails Plan includes nine trails that provide significant north/south and east/west trail corridors that cross through the County. There are no regional trails identified in the Jacumba area.

County of San Diego Parks Master Plan

The County of San Diego Parks Master Plan serves as a guiding document for the acquisition and development of future parks and recreation facilities in the unincorporated areas of San Diego County. The purpose of the Parks Master Plan is to document the current conditions and analyze park shortages and distribution inequities in a way that is consistent with County and Department of Parks and Recreation approved plans and policies. The Parks Master Plan is intended to assist in the development of initiatives that will be supported by the community and lead to improvements within the County's Park and Recreation system (County of San Diego 2016b).

As of 2016, the Mountain Empire Community Plan area (which includes the Project site) is experiencing a 5.46-acre deficiency in local park facilities to meet the standard. However, the Mountain Empire Community Plan area exceeds the regional park standards by 2,666.87 acres. Regional parks do not typically provide the same level and concentration of amenities as local parks, however; therefore, the Mountain Empire's deficiency of local parks should be addressed in future developer park requirements (County of San Diego 2016b).

3.1.5.3 Analysis of Proposed Project Effects and Determination as to Significance

The Proposed Project is a 643-acre solar energy facility, which would include a switchyard that would be transferred to San Diego Gas & Electric (SDG&E). It is anticipated that the applicant will construct the switchyard and will transfer the switchyard to SDG&E for operation after construction. For the purposes of this analysis, the switchyard (as described in Chapter 1, Project

Description) is a component of the Proposed Project and has been analyzed as part of the whole of the action. However, this EIR highlights the specific analysis of the construction and operation of the switchyard under each threshold of significance in the event that responsible agencies have California Environmental Quality Act (CEQA) obligations related to the switchyard.

3.1.5.3.1 Deterioration of Parks and Recreational Facilities

Guidelines for Determining Significance

The County's Guidelines for Determining Significance does not include a section on parks and recreation. Therefore, this EIR will apply the significance criteria set forth in Appendix G of the CEQA Guidelines to determine the Proposed Project's direct, indirect, and cumulative impacts.

A significant impact would result if the Proposed Project would:

- 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.

Analysis

The Project site has no existing parks or recreational facilities. Implementation of the Proposed Project would involve construction and operation of an un-staffed solar energy facility. The Proposed Project would not include any residential use, such as a residential subdivision, mobile home park, or construction for a single-family residence that would cause a direct increase in population. The Proposed Project would not include any new or physically altered facilities (parks) or any recreational component, such as a hotel, resort, campground, or other facility that would attract or accommodate an increase in visitors to the area that would indirectly increase the use or demand for recreational and park facilities and services. Since construction workers (up to 500 workers during peak construction) would be working in the area temporarily and are not expected to relocate to the area with their families, they would not be expected to generate a substantial demand for local park services. No increase in the use of existing parks or other recreational facilities would result from the Proposed Project.

During operations, the Proposed Project would be an un-staffed facility that would be monitored remotely. No increase in the use of existing parks or other recreational facilities would result from the Proposed Project during operations.

Therefore, the Proposed Project would not increase the population in the area, and thus would not contribute to an increase in demand for parks and recreational services resulting in the substantial physical deterioration of regional recreational facilities or accelerating the deterioration of regional parkland. For this reason, the Proposed Project would have **less than significant impacts** on parks and recreational facilities.

Switchyard

The switchyard site is currently undeveloped with no existing parks or recreational facilities. Implementation of the switchyard would involve construction and operation of an un-staffed energy facility. The switchyard would not include any residential use, such as a residential subdivision, mobile home park, or construction for a single-family residence that would cause a direct increase in population. The switchyard would not include any new or physically altered facilities (parks) or any recreational component, such as a hotel, resort, campground, or other facility that would attract or accommodate an increase in visitors to the area that would indirectly increase the use or demand for recreational and park facilities and services. Since construction workers (40 construction workers during peak construction) would be working in the area temporarily and are not expected to relocate to the area with their families, they are not expected to generate a substantial demand for local park services. Temporary construction of the switchyard is not anticipated to increase the use of existing parks or other recreational facilities. The switchyard would not directly, through physical alteration, or indirectly, through increased use, result in the necessity to construct or expand recreational facilities or the need for new or physically altered parks and recreation facilities.

During operations, the switchyard would be an un-staffed facility that would be monitored remotely. Therefore, the Proposed Project would not increase the population in the area, and thus would not contribute to an increase in demand for parks and recreational services resulting in the substantial physical deterioration of regional recreational facilities or accelerating the deterioration of regional parkland. For this reason, the switchyard would have **no impacts** on parks and recreational facilities.

3.1.5.3.2 Construction of New Recreational Facilities

Guidelines for Determining Significance

The County's Guidelines for Determining Significance does not include a section on parks and recreation. Therefore, this EIR will apply the significance criteria set forth in Appendix G of the CEQA Guidelines to determine the Proposed Project's direct, indirect, and cumulative impacts.

A significant impact would result if the Proposed Project would:

Include recreational facilities or require the construction or expansion of recreational facilities which would have an adverse effect on the environment.

Analysis

The Project site has no existing parks or recreational facilities. As discussed above, implementation of the Proposed Project would not increase the population or generate demand for additional park or recreational facilities. Further, the Proposed Project would not include or require the construction or expansion of any recreational facilities. Thus, **no impact** would occur.

Switchyard

The switchyard site is currently undeveloped with no existing parks or recreational facilities. As discussed above, implementation of the switchyard would not increase the population or generate demand for additional park or recreational facilities. Further, the switchyard would not include or require the construction or expansion of any recreational facilities. Thus, **no impact** would occur.

3.1.5.4 Cumulative Impact Analysis

As previously discussed, the Proposed Project would involve construction and operation of an un-staffed solar energy facility and would not result in the substantial physical deterioration of regional recreational facilities or accelerate the deterioration of regional parkland. Further, the Proposed Project would neither directly or indirectly result in the necessity to construct or expand recreational facilities or the need for new or physically altered park or recreational facilities. Because the Proposed Project would result in no impacts to park and recreational facilities, there would also be **no cumulative impact**.

3.1.5.5 Significance of Impacts Prior to Mitigation

The Proposed Project would not include or require the construction or expansion of any recreational facilities, and **less than significant impacts** would occur related to the increase in the use of existing neighborhood and regional parks or other recreational facilities.

3.1.5.6 Mitigation Measures

No mitigation is necessary.

3.1.5.7 Conclusion

The Proposed Project would result in **less than significant impacts** to park and recreational facilities and, therefore, no mitigation would be required.

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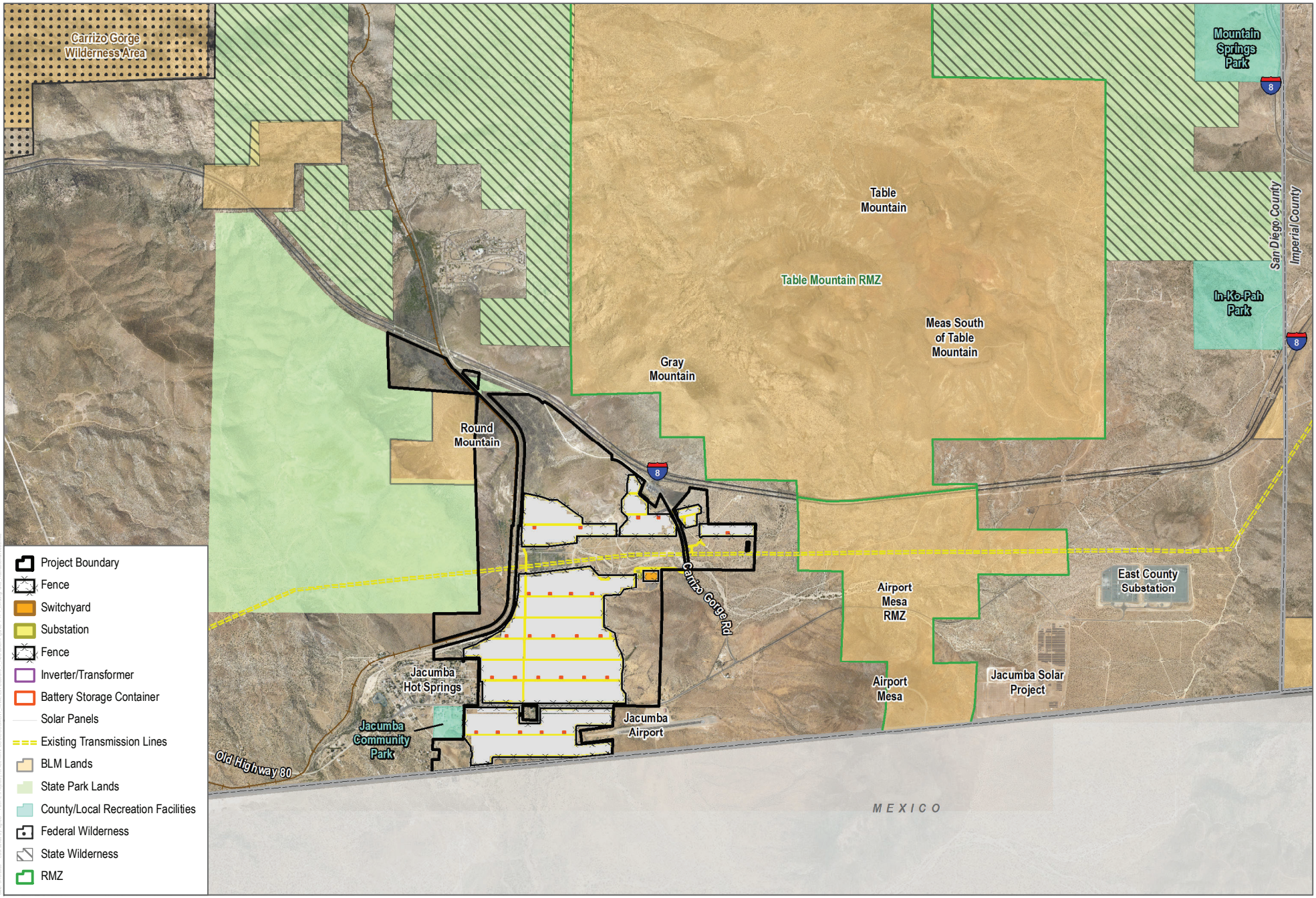

SOURCE: BLM 2020; SANGIS 2017, 2020

DUDEK

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FIGURE 3.1.5-1

Existing Park and Recreational Areas in Vicinity

JVR Energy Park Project EIR

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3.1.6 Public Services

This section discusses potential impacts to public services, including fire protection, police protection, schools, parks, and other public facilities, resulting from implementation of the JVR Energy Park Project (Proposed Project). The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines.

Comments received in response to the Notice of Preparation (NOP) included concerns regarding availability of fire services and support for increased fire services. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

3.1.6.1 Existing Conditions

The 1,356-acre Project site is located within the Mountain Empire Subregion of southeastern San Diego County. A portion of the Project site was historically used for dairy and agricultural operations. The unincorporated community of Jacumba Hot Springs is located adjacent to the southwestern boundary of the Project site. The Jacumba Airport is located adjacent to the southeastern portion of the Project site. The Sunrise Powerlink and Southwest Powerlink, each of which consists of a 500-kilovolt electric transmission line supported by 150-foot-tall steel lattice structures, transect the Project site. The Project site includes right-of-way easements for Old Highway 80, San Diego Gas & Electric (SDG&E) easements, and an easement for the San Diego and Arizona Eastern Railway. Primary access to the Project site is currently provided via an access road from Old Highway 80, with additional access off of Carrizo Gorge Road.

Baseline public services information was obtained through direct communication with local service providers, as well as several websites, as cited below.

Regional Overview

Fire Protection

Within the unincorporated region's emergency services system, fire and emergency medical services are provided by fire protection districts, County service areas and CAL FIRE. Collectively, there are 2,800 firefighters responsible for protecting the San Diego region from fire. Generally, each agency is responsible for structural fire protection and wildland fire protection within its area of responsibility. However, mutual and automatic aid agreements enable non-lead fire agencies to respond to fire and emergency service incidents outside their district boundaries. Interdependencies that exist among the region's fire protection agencies are primarily voluntary, since no local governmental agency can exert authority over another. The unincorporated area of San Diego County has a Cooperative Fire Protection Agreement with CAL FIRE for the provision of fire and emergency services in East San Diego County.

Primary emergency response for the Project site would initially be provided by the San Diego County Fire Authority (SDCFA) and/or CAL FIRE from the County's Fire Station 43 in Jacumba Hot Springs. The fire station is located at 1255 Jacumba Street and is staffed with two CAL FIRE firefighters (one firefighter and one company officer) on a Type 1 fire engine under a Cooperative Fire Protection Agreement with CAL FIRE. Fire Station 43 is approximately 3.6 miles from the most remote areas of the Project site with a calculated travel time of approximately 6.8 minutes.[1] In addition to this responding fire station, the County and/or CAL FIRE co-located Station 47 would respond with additional resources if needed. Station 47 is staffed with three CAL FIRE firefighters (two firefighters and one company officer) on a Type 2 fire engine that is designed to deal with wildland fire suppression. Station 47 also has one Mercy Ambulance manned by one or two paramedics. Station 47 is located at 40080 Ribbonwood Road in the unincorporated community of Boulevard, which is approximately 7.8 miles from the Project site. The Boulevard Station is approximately 10.6 miles to the most remote portion of the JVR Energy Park site, with a calculated travel time of approximately 18.7 minutes (White, pers. comm. 2019).

Law Enforcement

The San Diego County Sheriff's Department provides Law enforcement services for the Project site. Other law enforcement services include California Highway Patrol (CHP) and U.S. Customs and Border Protection (CBP).

The San Diego County Sheriff's Department provides general patrol and investigative services to several incorporated cities and all unincorporated areas in the County, including the communities of Jacumba and Boulevard. The Sheriff's Department includes approximately 4,000 sworn and professional employees and is responsible for patrolling a service area of approximately 4,200 square miles (San Diego County Sheriff's Department 2019a). The nearest sheriff's office to the Project site is located at 39919 Highway 94 in Boulevard, approximately 8 miles from the Project site. This office, which is a satellite office to the Pine Valley Substation, serves an area over 200 square miles, and a population of over 2,000 people (San Diego County Sheriff's Office 2019b). Five sheriff's deputies work out of the Boulevard Sheriff's Office, each having their own patrol car. However, there is currently one deputy vacancy. On any given day, two deputies will be on at any given time and they patrol for 12-hour daily shifts. Once the fifth vacant deputy spot is filled, there will be two to three deputies on at a given time. Deputies are required to live in the area, and when their shift is over, they remain on call until the next day's shift begins (Perrapato, pers.

[1] Travel distances were derived from Google Earth road data and driving on the access roads to fire stations from Project site, while travel times were calculated applying the nationally recognized Insurance Services Office Public Protection Classification Program's Response Time Standard formula (T = 0.65 + 1.7 D, where T = time and D = distance). The ISO response travel time formula discounts speed for intersections, vehicle deceleration and acceleration, and does not include turnout time.

comm. 2019). The Sheriff's Department is currently meeting response time goals for rural areas at the Boulevard Sheriff's Office (Uelen, pers. comm. 2019). The next closest sheriff's office substation to the Project site is the Campo Substation located at 378 Sheridan Road in Campo, approximately 18 miles from the Project site (San Diego County Sheriff's Office 2019b).

CHP separates the state into eight patrol divisions or areas, and its jurisdiction is over state highways, the closest of which are I-8 and Old Highway 80 adjacent to the Project site. CHP can also act as state police. The Project site is located within the CHP's Border Division, which is headquartered in the Kearney Mesa community of San Diego and maintains 12 area offices. The closest CHP offices to the Project site are located in the cities of El Cajon and El Centro (CHP 2019), approximately 50 and 37 miles away, respectively.

CBP also maintains a strong presence in southeastern San Diego County. The Boulevard CBP Station, formerly a substation of the Campo CBP Station, is located at 2463 Ribbonwood Road in the unincorporated community of Boulevard (CBP 2014a) approximately 8.4 miles away from the Project site. The Campo CBP Station is located at 32355 Old Highway 80 in the unincorporated community of Pine Valley. The Boulevard station is responsible for a patrol area of 417.8 square miles and two traffic checkpoints (CBP 2014b). CBP officers at the Boulevard CBP Station patrol east of Jewel Valley Road to the County border with Imperial County. CBP officers at the Campo station patrol from Jewel Valley Road west to Pine Valley Road (Cismeos, pers. comm. 2019). Therefore, the Project site is located in the patrol area of the Boulevard CBP Station.

Schools

Public schools and educational facilities are mandated by the California Department of Education and administered by the San Diego County Board of Education and the San Diego County Office of Education. The Mountain Empire Unified School District serves the Project area. The Mountain Empire Unified School District includes four elementary schools, two middle schools, one senior high school, and one alternative education school. Elementary schools include Campo Elementary, Clover Flat Elementary, Descanso Elementary, and Potrero Elementary. Middle schools include Camp Lockett Middle and Pine Valley Middle. Mountain Empire High School and Alternative Education are also within the Mountain Empire School District (Mountain Empire Unified School District 2019).

Other Public Services

Several branch libraries of the San Diego County Library System are located in the Mountain Empire Subregion. The Jacumba Branch is located in the community of Jacumba at 44605 Old Highway 80 approximately 0.25 miles from the Project site. Nearby branches of the San Diego County Library system include the Campo–Morena Village branch (located at 31466 Highway 94

in Campo, approximately 17 miles west of the Project site) and the Potrero branch (located at 24883 Potrero Valley Road in Potrero, approximately 25 miles west of the Project site) (County of San Diego 2007).

3.1.6.2 Regulatory Setting

Federal Regulations

There are no federal regulations, plans, or standards related to public services that are relevant to the Proposed Project.

State Regulations

There are no state regulations, plans, or standards related to public services that are relevant to the Proposed Project.

Local Regulations

San Diego County General Plan

Updated (and adopted) in August 2011, the San Diego County General Plan guides future growth in the unincorporated areas of the County and considers projected growth anticipated to occur within various communities. The County General Plan, in particular the Land Use and Safety Elements, outlines policies that address public services in the County. Policies relevant to public services are listed below (County of San Diego 2011a, 2011b). For additional information on County General Plan consistency, see Section 3.1.4, Land Use and Planning.

Land Use Element

- **Policy LU-12.1 Concurrency of Infrastructure and Services with Development.** Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing.
- **Policy LU-12.3 Infrastructure and Services Compatibility**. Provide public facilities and services that are sensitive to the environment with characteristics of the unincorporated communities. Encourage the co-location of infrastructure facilities, where appropriate.

Safety Element

- **Policy S-3.4 Service Availability.** Plan for development where fire and emergency services are available or planned.

- **Policy S-6.3 Funding Fire Protection Services.** Require development to contribute its fair share towards funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.
- **Policy S-6.4 Fire Protection Services for Development.** Require that development demonstrate that fire services can be provided that meet the minimum travel times identified in Table S-1 (Travel Time Standards) (10 minutes in the rural village boundaries).
- **Policy S-6.5 Concurrency of Fire Protection Services**. Ensure that fire protection staffing, facilities and equipment required to serve development are operating prior to, or in conjunction with, the development. Allow incremental growth to occur until a new facility can be supported by development.
- **Policy S-12.1 New Law Enforcement Facilities**. Coordinate new law enforcement facilities and services with new development in ways that sustain the provision of comprehensive services at levels consistent with substantially similar areas of the County.
- **Policy S-13.1 Sheriff Facility Locations**. Locate Sheriff facilities to best serve existing and planned development and the corresponding demand for services.
- **Policy S-14.1 Vehicular Access to Development**. Require development to provide vehicular connections that reduce response times and facilitate access for law enforcement personnel, whenever feasible.

Mountain Empire Subregional Plan

The Mountain Empire Subregional Plan (a component of the County General Plan) establishes goals and policies to guide development within the areas of Jacumba, Tecate, Potrero, Boulevard, and Campo/Lake Morena, which together comprise the Mountain Empire Subregion of southeastern San Diego County. The goals and policies of the Subregional Plan are intended to be more specific than those of the County General Plan as they consider the distinct history, character, and identity of Mountain Empire communities.

The following goal in the Mountain Empire Subregional Plan relates specifically to public services and the Proposed Project (County of San Diego 2016):

- **Public Facilities and Services – Policy 4.** Uses proposed for property adjacent to substations or transmission line rights-of-way should be reviewed for possible impacts to the power facilities and vice versa.

3.1.6.3 Analysis of Proposed Project Effects and Determination as to Significance

The Proposed Project is a solar energy facility, which includes a switchyard that would be transferred to SDG&E after construction. For the purposes of this analysis, the switchyard (as described in Section 1.2.1 in Chapter 1, Project Description) is a component of the Proposed Project and has been analyzed as a part of the whole of the action. However, this EIR highlights the specific analysis of the switchyard operation under each threshold of significance in the event responsible agencies have California Environmental Quality Act (CEQA) obligations related to the switchyard.

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not include guidance on public services. Therefore, for the purpose of this EIR, Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if:

- The project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
    - Fire Protection
    - Police Protection
    - Schools
    - Other Public Facilities

3.1.6.3.1 Fire Protection

Analysis

Travel Time from the Closest Fire Station

The County General Plan requires that new development demonstrate that fire protection services can be provided that meet the minimum travel times in Table S-1 in the Safety Element of the General Plan (County of San Diego 2011b). The travel time standards are based on the General Plan Regional Category and/or Land Use Designation. The Regional Category for the Project site is Rural Village. Per the County General Plan Table S-1, the travel time standard for the closest fire station to development within a Rural Village boundary is 10 minutes.

The proposed development would only be in areas that are subject to the 10-minute travel time standard. This travel time provides for a moderate level of service in areas of lower-density development and longer access routes. The travel time from the County Fire Station 43 in Jacumba from the furthest location in the development footprint is calculated at 6.8 minutes; therefore, the Proposed Project would comply with the General Plan for travel time from the closest fire station. In addition, the Proposed Project would also have additional emergency response from the Boulevard Fire Station with a travel time of approximately 18.7 minutes to the proposed development. Therefore, the Proposed Project would meet the minimum travel times in Table S-1 in the Safety Element of the County General Plan.

Fire Protection Services during Construction and Decommissioning of the Proposed Project

The number of workers on-site would be substantially higher during the construction and decommissioning phases of the Proposed Project as compared to operations. During construction activities, the Proposed Project would employ a total of 500 workers, with a daily maximum of 500 workers at the peak of construction. These workers could temporarily increase the number of fire and medical calls to facilities; however, the workers employed for construction are not anticipated to relocate permanently to the area with their families and are not expected to induce substantial population growth in the Mountain Empire and Jacumba area. It is anticipated that workers from San Diego to the west or Imperial Valley to the east would construct the Proposed Project, and that those workers would return to these communities after construction activities have concluded. Any increase in fire and emergency medical calls during construction would be temporary.

During decommissioning, the Proposed Project would also increase the on-site population by approximately 250 workers per day. Similar to construction activities, the decommissioning workers would be temporary, as they are not anticipated to relocate permanently to the Mountain Empire and Jacumba area.

Direct increase in demand for fire protection and emergency services could occur at the Project site during construction and decommissioning when there is increased activity on site, ignition sources on site associated with construction, and humans and human activities.

The Proposed Project's anticipated increase in demand for fire protection services is not expected to require the provision of new or physically altered governmental facilities. Any increase in equipment or personnel required to service the Proposed Project could be accommodated within the current capacity of fire service facilities in the Project area. Accordingly, during construction and decommissioning, the Proposed Project would have **no impacts** related to 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 fire protection and emergency services.

Fire Protection Services During Operation of the Proposed Project

During operation and maintenance, the solar energy generation and energy storage facility would not be staffed on site. However, as a conservative comparison, it is anticipated that up to five workers may be on site on occasion during daylight hours for operation and maintenance purposes as needed. Therefore, the 24-hour equivalency would be half that number since staff would not be on site after dark/overnight except for solar panel cleaning, which may occur up to four times per year. Using San Diego County fire agencies' estimate of 82 annual calls per 1,000 population, the Proposed Project's estimated 2.5 on-site personnel would generate up to 0.2 calls per year (1 call every 5 years).

The Proposed Project would result in a potential increase in demand for fire protection services during operations due to the introduction of new electrical equipment on the Project site. The developer would be required to participate in a Fire Service and Mitigation Agreement with SDCFA to increase funding for SDCFA equipment and personnel.

The increase in demand for fire protection services as a result of the Proposed Project is not expected to require the provision of new or physically altered governmental facilities. Any increase in equipment or personnel required to service the Proposed Project could be accommodated within the current capacity of fire service facilities in the Project area. Accordingly, during operation, the Proposed Project would have **no impact** related to 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 fire protection and emergency services.

In sum, the Proposed Project's construction, operation, and decommissioning would have **no impact** because the Proposed Project would not require 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 fire protection and emergency services.

Switchyard

The number of workers on the switchyard site would be substantially higher during the construction phase than during its operation. During construction activities, the switchyard would employ approximately 41 workers (out of the 500 total workers) on the construction site. A direct increase in demand for fire protection services could occur at the switchyard site during construction when there is increased activity on site, and a greater number of ignition sources. However, any such increase in demand for fire protection and emergency services as a result of the switchyard's construction would be minimal.

Once operational, the switchyard would be an unstaffed facility, except in cases of periodic maintenance and repair activities. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Assuming a maximum of up to four people would be on site during daylight hours on occasion for operation and maintenance purposes, the 24-hour equivalency would be half that number since staff would not be on site after dark/overnight. Using San Diego County fire agencies' estimate of 82 annual calls per 1,000 population, the proposed switchyard is estimated to have two daylight-only on-site personnel would generate up less than 0.2 calls per year (1 call every 5 years).

The presence of minimal employee activity and additional electrical equipment on the switchyard site could result in the need for additional fire protection services. However, any such increase in demand for fire protection and emergency services as a result of the operation of the switchyard would be minimal. In sum, the switchyard would have **no impact** because the switchyard would not require 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 fire protection and emergency services.

3.1.6.3.2 Police Protection

Analysis

Law enforcement services at the Project site would primarily be provided by the San Diego County Sheriff's Department office located approximately 6.7 miles northwest, at 39919 Highway 94 in Boulevard. This office, which is a satellite office to the Pine Valley Substation, serves an area over 200 square miles and a population of more than 2,000 (San Diego County Sheriff's Department 2019b). The Sheriff's Department is currently meeting response time goals (Uelen, pers. comm. 2019).

As discussed in Chapter 1, during construction and decommissioning of the Proposed Project, all staging and laydown areas would be fenced. Once the facility is operational, the entire solar facility would be fenced and secured per National Electrical Safety Code standards. Signage in Spanish and English for electrical safety would be placed along the perimeter of the site, warning the public of the high voltage and the need to keep out. Signage would also be placed within the solar facility site where appropriate. With these security measures in place, the Proposed Project is not anticipated to pose a substantial threat of danger to the local population and is not expected to generate a significant number of police response calls.

During construction of the Proposed Project, a maximum of approximately 500 workers would be on the Project site on any given day at peak construction activities. The decommissioning phase of the Proposed Project would also temporarily increase the number of workers on site a maximum of approximately 250 workers on any given day at peak decommissioning activities. Construction and decommissioning workers for the Proposed Project are not anticipated to relocate to the area and permanently increase the local population; therefore, the Proposed Project construction and decommissioning would not result in the need for additional law enforcement services or facilities and would not cause impacts as a result of the need for expanded government facilities.

During the operational phase, the Proposed Project does not anticipate any full-time personnel on site, but may include up to five people on site during operations inspections, maintenance, and repair activities. This transitory increase of workers in the area is not expected to substantially increase the number of law enforcement service calls such that new or expanded police facilities or staff would be required to maintain acceptable service ratios and response times. The solar facility would be fenced along the entire facility boundary (see Figure 1-2, Project Components, in Chapter 1, Project Description) for security. The fencing would meet National Electrical Safety Code requirements for protective arrangements in electric supply stations. Fencing would be 7 feet in height total, with a 6-foot-high chain-link perimeter fence and 1 foot of three strands of barbed wire along the top. The fence would be constructed with anti-climbing material(s), such as small-ring chain-link fencing, and some sections would contain slats that would meet electrical safety code requirements. Signage in Spanish and English for electrical safety would be placed along the perimeter of the solar facility, warning the public of the high voltage and the need to keep out. The site would be secured 24 hours per day by remote security services with motion detection cameras. The SCADA system would monitor these cameras remotely, and perimeter and safety lighting would be used only on an as-needed basis for emergencies and protection against security breach. Lighting would be designed to provide security lighting at the entrance off Old Highway 80 and would be on after 5:00 p.m., and motion censored lights would also be installed at all entrances.

The County Sheriff's Department is currently meeting its response time goals and serving a population of over 2,000 permanent residents in the Mountain Empire Subregion (Uelen, pers. comm. 2019); therefore, operation of the Proposed Project would not result in the need for

additional law enforcement services or facilities and would not cause impacts as a result of the need for expanded government facilities.

Therefore, construction, operation, and decommissioning of the Proposed Project would not require the provision of new or physically altered governmental facilities for police services, the construction of which could cause significant environmental impacts. Therefore, **no impacts** would result from new or expanded police services facilities**.**

Switchyard

The number of workers on the switchyard site would be substantially higher during the construction phase than during the switchyard's operation. During construction activities, the Switchyard would employ approximately 41 workers (out of the 500 total) on site during the Proposed Project. These workers could temporarily increase the number of calls to law enforcement; however, the workers employed for construction are not anticipated to relocate permanently to the area with their families and are not expected to induce substantial population growth in the Mountain Empire and Jacumba area. It is anticipated that workers from San Diego to the west or Imperial Valley to the east would construct the switchyard, and that those workers would return to these communities after construction activities have concluded.

Once operational, the switchyard would be an unstaffed facility, except in cases of periodic maintenance and repair activities. Monitoring and control functions would be performed remotely from SDG&E's central operations facilities. Routine maintenance and repair activities would necessitate approximately six trips per year by a two- to four-person crew in a maintenance truck. Routine operations would require one or two workers in a light utility truck to visit the switchyard site on a weekly basis. Thus, the switchyard does not propose any full-time personnel on site but may include up to five people on site during operations inspections, maintenance, and repair activities. While unoccupied, the switchyard site would be protected by a 10-foot-tall chain-link security fence topped with barbed wire. Switchyard lighting would be placed near major electrical equipment. The yard lights would normally be turned off and would only be used during nighttime for security and safety reasons. The lights would be mounted near the switchyard gates and building entrances to allow for nighttime emergency repair and routine maintenance access. All entrance gates would be locked and monitored remotely to limit access to only qualified personnel. Warning signs would be posted, in English and Spanish, on the switchyard fence in accordance with federal, state, and local safety regulations. A switchyard ground grid would also be installed in accordance with applicable safety guidelines.

Therefore, construction and operation of the switchyard would not require the provision of new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts. Therefore, **no impacts** would result from new or expanded police services facilities**.**

3.1.6.3.3 Schools

Analysis

The demand for new or expanded school facilities and services is determined by permanent increases to the local population. Up to 500 workers would temporarily be on site per day during the construction of the Proposed Project, and up to 250 workers would temporarily be on site during decommissioning; however, due to the short duration of the construction and decommissioning phases—16 and 12 months, respectively—no workers are expected to permanently move to the area.

The Proposed Project, including the switchyard, does not anticipate any full-time personnel on site, but may include up to five people on site during operations, inspections, maintenance, and repair activities. This minimal increase of workers to the site would not directly cause an increase in population that would require new or expanded schools.

Due to the temporary nature of construction and decommissioning, and minimal increase of workers during operations, workers are not anticipated to temporarily relocate their families to the area and enroll their children in area schools. No new school facilities would need to be constructed that might result in physical environmental impacts, as a result of the Proposed Project, including the switchyard. Thus, there would be **no impacts** resulting from new school facilities or expansions of existing school facilities.

3.1.6.3.4 Other Public Services

Analysis

The Proposed Project does not anticipate any full-time personnel on site, but may include up to five people on site during operations inspections, maintenance, and repair activities. The temporary workers needed during construction and decommissioning activities, and minimal number of workers needed for operations, are not expected to relocate their families to the area. The increase in workers to the area is not substantial and is not expected to cause an indirect increase in demand for other public services or facilities. No other public service facilities, such as libraries, would need to be constructed that might result in physical environmental impacts, as a result of the Proposed Project, including the switchyard. Therefore, **no impacts** would result from new or expanded public services or facilities**.**

3.1.6.4 Cumulative Impact Analysis

The geographic extent for the analysis of cumulative impacts associated with public services consists of the service area for each public service provider that would serve the Proposed Project. Generally speaking, the cumulative study area for public services encompasses southeastern San Diego County as public services in the area have overlapping jurisdictions and provide services for the Proposed Project and adjacent projects.

The service area for the Boulevard Sheriff's station, which is approximately 200 square miles and includes the communities of Boulevard and Jacumba, determines the boundary for the cumulative analysis regarding law enforcement. This station would be the one to respond to a call from the Project site, in addition to existing or future calls within its service area, which could potentially result in cumulative impacts. Cumulative impact analysis for public services was conducted using the projects in Table 1-4, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects, in Chapter 1, Project Description.

Past development and population growth within southeastern San Diego has impacted the provision of public services and facilities. As the area becomes increasingly developed and as the permanent population grows, increased demand is placed on the existing public service system, which can become overwhelmed. As discussed above, southeastern San Diego consists of several small, rural communities spread out over a wide geographic area that are generally served by local volunteer and state fire departments and County law enforcement agencies.

3.1.6.4.1 Cumulative Fire Protection

The list of cumulative projects includes several other existing and proposed renewable energy projects in the vicinity, as described below. The cumulative projects also include a proposed campground/conference center expansion (Rough Acres Ranch Foundation Campground Facility), a casino expansion, a ranch expansion, a new well, and a new water tank, These projects would contribute to an increased need for fire protection services in the area due to the increase of human activity, ignition sources (such as electrical equipment), and combustible fuel in the area.

As described in Section 3.1.6.3.1, Fire Protection, the Proposed Project would meet the minimum travel times in Table S-1 in the Safety Element of the General Plan, and any increase in demand for fire protection services as a result of the Proposed Project would be addressed through the developer's participation in a Fire Services and Mitigation Agreement with SDCFA. Any increase in equipment or personnel required to service the Proposed Project could be accommodated within the current capacity of fire service facilities in the Project area.

Construction of cumulative projects, such as Boulevard Solar, Boulevard Energy Storage, Cameron Solar, Campo Wind with Boulder Brush Facilities, Torrey Wind, and the Rough Acres

Foundation Campground Facility may overlap with the Proposed Project during certain phases, which could result in a temporary cumulative increase in construction workers in the area that may increase demand for fire protection services associated with fire emergency response calls such that services ratios or response times would be substantially impacted. Projects on the list of cumulative projects would also participate in a Fire Service Agreements with the SDCFA, as required by the County. The Fire Services Agreements for these projects would ensure that each project would provide fair share funding to be used to augment existing fire emergency response capabilities of the SDCFA and would offset cumulative impacts of the projects. The funding would help maintain or enhance fire service ratios and response times in the area. Therefore, the Proposed Project's impacts with respect to fire protection, in addition to other past, present, and future projects **would not be cumulatively considerable**.

3.1.6.4.2 Police Protection

The list of cumulative projects includes several other existing and proposed renewable energy projects in the vicinity, as described below. These projects would contribute to incremental but small increases in population growth in the area similar to the Proposed Project. However, the cumulative projects would result in minimal demand for law enforcement services in the area, similar to that of the Proposed Project, and would not be considered cumulatively significant. The cumulative projects, including the other renewable energy and transmission projects, would not contribute substantially to cumulative impacts to law enforcement services, as these projects, similar to the Proposed Project, do not include permanent or temporary housing components that would cause direct permanent or temporary increases in population.

Construction and decommissioning (where applicable) of the cumulative projects would be temporary. Of the employees required during construction and decommissioning of the Proposed Project, few are expected to temporarily relocate to the area with their families. The temporary increase in population resulting from construction and decommissioning of the Proposed Project is not expected to substantially increase law enforcement service calls, or require the construction of new or expanded facilities in order to maintain acceptable service ratios and response times. The relatively modest number of construction workers and that the facility would be secured throughout construction and operation. Construction of cumulative projects such as the Rough Acres Foundation Campground Facility, Boulevard Solar, Boulevard Energy Storage, Cameron Solar, and Campo Wind with Boulder Brush Facilities and Torrey Wind, may overlap with the Proposed Project during certain phases. However, demands placed on local law enforcement services would be short term and intermittent, and would not require the construction and/or expansion of facilities.

Once operational, the Proposed Project does not anticipate any full-time personnel on site, but may include up to five people on site during operations inspections, maintenance, and repair activities.

As such, this increase in workers on site would be minimal. Therefore, the Proposed Project's impacts to police protection services, in addition to other past, present and future projects **would not be cumulatively considerable**.

3.1.6.4.3 Schools

As discussed above, the Proposed Project would not include a residential component or directly result in an increase in school-age children in the area, and therefore would not directly impact schools. Construction schedules of proposed cumulative projects, such as the Rough Acres Foundation Campground Facility, Boulevard Solar, Boulevard Energy Storage, Cameron Solar, and Campo Wind with Boulder Brush Facilities and Torrey Wind, may overlap with the Proposed Project during certain phases. However, temporary construction workers are not expected to relocate to the area with their families; therefore, the Proposed Project is not expected to cause substantial increases in demand for schools in the area. None of the projects on the Cumulative list are residential projects; therefore, similar to the Proposed Project, the cumulative projects would not result in the introduction of new students to the area.

Once operational, the Proposed Project does not propose any full-time personnel on site but may include up to five people on site during operations inspections, maintenance, and repair activities. Thus, the Proposed Project would require no permanent on-site employees who would reside in the surrounding area. Therefore, the Proposed Project's impacts to school facilities, in addition to other past, present, and future projects, **would not be cumulatively considerable.**

3.1.6.4.4 Other Public Services

The Proposed Project would increase the local population temporarily by approximately 500 workers during the peak construction period. The Proposed Project would also increase the local population temporarily by 250 workers during decommissioning. Impacts to library services are considered when a project adds permanent residential population to an area. Library services in the area would not be directly impacted by the Proposed Project since the Proposed Project would not add any permanent residents.

Therefore, for the reasons stated above, the Proposed Project's direct and indirect impacts relating to the expansion of or addition of new other public services, in addition to other past, present, and future projects, **would not be cumulatively considerable**.

3.1.6.5 Significance of Impact Prior to Mitigation

Fire Protection and Emergency Services

The Proposed Project would meet the County's minimum travel time standards from the closest fire station. Direct increase in demand for fire protection and emergency services could occur at

the Project site during construction, operation, and decommissioning when there is increased activity on site and a greater number of ignition sources on site. The developer would be required to participate in a Fire Protetion and Mitigation Agreement with SDCFA to increase funding for SDCFA equipment and personnel. Any increase in equipment or personnel required to service the Proposed Project could be accommodated within the current capacity of fire service facilities in the Project area. Construction, operation, and decommissioning of the Proposed Project would not require the provision of new or physically altered fire service facilities; therefore, **no impacts** would occur.

Police Protection

Construction, operation, and decommissioning of the Proposed Project would not require the provision of new or physically altered governmental police facilities, the construction of which could cause significant environmental impacts. Thus, there would be **no impacts** resulting from new or expanded police facilities.

Schools

Due to the temporary nature of construction and decommissioning, and minimal increase of workers during operations, workers are not anticipated to temporarily relocate their families to the area and enroll their children in area schools. No new school facilities would need to be constructed that might result in physical environmental impacts, as a result of the Proposed Project. Thus, there would be **no impacts** resulting from new school facilities or expansions of existing school facilities.

Other Public Services

The Proposed Project does not anticipate any full-time personnel on site but may include up to five people on site during operations inspections, maintenance, and repair activities. The temporary workers needed during construction and decommissioning activities, and minimal number of workers needed for operations, are not expected to relocate their families to the area. The increase in workers to the area is not substantial and is not expected to cause an indirect increase in demand for other public services or facilities. No other public service facilities, such as libraries, would need to be constructed that might result in physical environmental impacts, as a result of the Proposed Project. Therefore, **no impacts** would result from new or expanded public services or facilities**.**

3.1.6.6 Mitigation Measures

No mitigation measures are necessary.

3.1.6.7 Conclusion

Fire Protection

Construction, operation, and decommissioning of the Proposed Project would not require the provision of new or physically altered governmental fire service facilities, the construction of which could cause significant environmental impacts. Thus, there would be **no impacts** resulting from new or expanded fire service facilities

Police Protection

Construction, operation, and decommissioning of the Proposed Project would not require the provision of new or physically altered governmental police facilities, the construction of which could cause significant environmental impacts. Thus, there would be **no impacts** resulting from new or expanded police service facilities.

Schools

As the solar facility would be not include any full-time personnel on site, it would not directly cause an increase in population that would require new or expanded schools. There would be **no impacts** related to new school facilities or expansions of existing school facilities.

Other Public Services

The increase in workers to the area is not substantial and is not expected to cause an indirect increase in demand for other public services and library services. There would be **no impacts** related to new or expanded other public services or facilities**.**

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3.1.7 Transportation

This section discusses potential impacts to transportation resulting from construction and operation of the proposed JVR Energy Park Project (Proposed Project). The analysis is based on the review of existing conditions, technical data, and applicable laws, regulations, and guidelines.

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the effects of Proposed Project construction traffic on local roadways, on-site access road information, roadway hazards during construction, emergency access to and from the Project site. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this Environmental Impact Report (EIR).

3.1.7.1 Existing Conditions

Regional access to the Project site is provided by I-8. Local access to the Project site would be provided by Old Highway 80, and Carrizo Canyon Road, as shown on Figure 3.1.7-1, Project Access. The following provides a description of the existing street system within the vicinity of the Project area.

I-8. This four-lane interstate freeway provides for the majority of east–west Southern California traffic flow through the region, bypassing rural towns. I-8 provides two lanes in each direction with a posted speed limit of 70 mph. The section of I-8 in southeastern San Diego County is heavily used by recreational vehicles and container trucks. I-8 also serves as a transportation route between California and Arizona. Local freeway access to the Project site is provided at the I-8 Carrizo Gorge Road and at the junction of Old Highway 80. The annual average daily traffic (AADT) volume on I-8 near the Project site is approximately 18,000 vehicles (Caltrans 2017).

I-8 Access Road. This road functions as an interchange and provides access to I-8 and Carrizo Gorge Road. The 500-foot-long, two-lane, undivided roadway has no posted speed, and parking is restricted. There is a service station at the south end of the road. The intersection of Carrizo Gorge Road is controlled with yield signs and pavement markings on the east and west legs and the I-8 eastbound and westbound exit ramps are stop-controlled.

Old Highway 80. This two-lane undivided county road connects I-8 with Old Highway 80 with Jacumba Hot Springs. Old Highway 80 is classified by the County Mobility Element as a light collector with bike lanes (County of San Diego 2011a). The posted speed limit on Old Highway 80 is 55 miles per hour (mph), and on-pavement parking is restricted.

Carrizo Gorge Road. This two-lane, undivided county road connects I-8 with Old Highway 80. Carrizo Gorge Road is classified by the County Mobility Element as a light collector (County of San Diego 2011a). On-pavement parking is restricted. The intersection of Old Highway 80 is

controlled with a yield signs and pavement marking on the north leg of Carrizo Gorge Road. The north leg has a large flair that allows for separate southbound left- and right-turn movements.

Transit and Rail Facilities

The San Diego Metropolitan Transit Service (MTS) Bus Route 888 operates on Mondays and Fridays only, and provides service between the Westfield Parkway Plaza in El Cajon and the end of the line in Jacumba Hot Springs/Old Highway 80 and Campo Street. The closest stop to the Project site on Route 888 is Campo Street/Old Highway 80 (MTS 2017), which is located approximately 1.0 mile from the Project site.

The Project site includes an easement for the San Diego and Arizona Eastern Railway (Railway). The Desert Line portion of this railway transects north-south on the western portion of the Project site. The railroad's route originates in San Diego and terminates in El Centro. The Metropolitan Transit System (MTS) has owned the Desert Line portion of the Railway since 1979. On June 2, 2016, a binational agreement culminated in a lease agreement between the Baja California Railroad company (Baja Rail) and MTS. Since the agreement, no progress has been made on the Desert Line portion of the Railway. The segment within the Project site is currently not in operation.

3.1.7.2 Approach and Methodology

Vehicle Miles Traveled (VMT) is the metric used for the analysis of transportation impacts under California Environmental Quality Act (CEQA). Senate Bill 743, Public Resources Code Section 21099 and CEQA Guidelines Section 15064.3(b) changed the analysis of transportation impacts from Level of Service (LOS) or automobile delay to VMT. In addition, the Governor's Office of Planning and Research (OPR) approved the addition of new Section 15064.3 to the State's CEQA Guidelines, "Determining the Significance of Transportation Impacts," compliance with which is required as of July 1, 2020. The updated CEQA Guidelines state that "…generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts…" and define VMT as "…the amount and distance of automobile travel attributable to a project…". To implement the requirements of Senate Bill 743, as well as Public Resources Code 21099 and CEQA Guidelines Section 15064.3(b), the County adopted new Transportation Study Guidelines on June 24, 2020, which include the County's own VMT analysis guidelines and thresholds.

VMT is a metric that accounts for the number of vehicle trips generated by a proposed project and the length or distance of those trips. For purposes of CEQA, "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. OPR has clarified in the Technical Advisory and recent informational presentations that heavy-duty truck VMT is not required to be included in the estimation of a project's VMT. Other relevant considerations may include the effects of the project on transit and non-motorized traveled. It should also be noted that OPR and the County of

San Diego do not require a quantitative assessment of VMT generated by construction traffic and have not adopted a significance threshold for construction traffic.

VMT does not directly measure traffic operations but instead is a measure of network use or efficiency, especially if expressed as a function of population or employment (i.e. VMT per Resident). VMT tends to increase as land use density increases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations. VMT also serves as a proxy for impacts related to energy use, air pollution emissions, greenhouse gas (GHG) emissions, safety, and roadway maintenance. The relationship between VMT and energy or emissions is based on fuel consumption. The traditional use of VMT in environmental impact analysis is to estimate mobile air pollution emissions, GHGs, and energy consumption.

3.1.7.3 Regulatory Setting

Federal

Code of Federal Regulations

Title 23 of the Code of Federal Regulations, Section 450.220, requires each state to carry out a continuing, comprehensive, and intermodal statewide transportation planning process. This process must include development of a statewide transportation plan and transportation improvement program that facilities the efficient, economical movement of people and goods in all areas of the state.

State Regulations

The following state regulations pertaining to transportation and traffic would apply to the Proposed Project.

California Department of Transportation

Caltrans is responsible for planning, designing, building, operating, and maintaining California's State Highway System. Caltrans sets standards, policies, and strategic plans that aim to provide the safest transportation system in the nation for users and workers; maximize transportation system performance and accessibility; efficiently deliver quality transportation projects and services; preserve and enhance California's resources and assets; and promote quality service (Caltrans 2002).

In anticipation of SB 743 implementation, Caltrans released the Draft Transportation Impact Study Guide (TISG) in February 2020. Per the 2020 TISG, Caltrans' primary review focus is now VMT, replacing LOS as the metric used in CEQA transportation analyses.

The Project site is located within Caltrans District 11. Caltrans recommends use of OPR's recommended thresholds for land use projects and recommends following the guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018). Caltrans Draft Transportation Impact Study Guide, February 2020 and Safety Review Practitioners Guidance, will replace the Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Per the 2020 Transportation Impact Study Guide, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses (Caltrans 2020).

Additionally, Caltrans requires transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code. Section 35250 of the California Vehicle Code requires that the maximum height of a vehicle cannot exceed 14 feet absent a special permit, requiring pilot cars, which typically provide overhead height warning devices, to ensure that oversized loads do not exceed undercrossing height limits. Due to the likelihood of heavy truck loads and use of vehicles that may exceed 14 feet, it is anticipated that the Proposed Project would need to obtain special permits from Caltrans.

California Streets and Highways Code

The California Streets and Highways Code Division 1, Chapter 1, Article 3, Section 117; Division 1, Chapter 3 (regulations for the Care and Protection of State Highways); Division 2, Chapter 5.5 (regulations for the Care and Protection of County Highways); and Chapter 6 (regulations for the Obstructions and Injuries to County Highways) specify that permits issued by Caltrans be required for any roadway encroachment during truck transportation and delivery, as well as for any load that exceeds Caltrans' weight, length, or width standards for public roadways. The California Streets and Highway Code also includes regulations for the care and protection of state and county highways, and provisions for the issuance of written permits.

California Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law, created a process which now changes the way that transportation impacts are analyzed under CEQA. Senate Bill 743 required the Governor's Office of Planning and Research to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Under the new transportation guidelines, LOS, or automobile delay, is not considered an environmental impact under CEQA.

The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. Under the new guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The Governor's Office of Planning and Research's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. This applies to any project with a CEQA document that has not been released for public review by July 1, 2020.

Local Regulations

The following local/regional regulations pertaining to transportation and traffic would apply to the Proposed Project.

County of San Diego Transportation Study Guidelines

As mentioned previously, the County of San Diego Transportation Study Guidelines (TSG), adopted in June 2020 includes a methodology to analyze a proposed project's transportation impacts in accordance with Senate Bill 743, Public Resources Code Section 21099 and CEQA Guidelines Section 15064.3(b). The TSG identifies VMT analysis methodology, establishes VMT thresholds for CEQA transportation impacts, and identifies possible mitigation strategies for land use and transportation projects.

Per the TSG, the transportation VMT analysis for CEQA should be conducted using the SANDAG Regional Travel Demand Model. The model outputs can be used to produce VMT per Resident, VMT per Employee, VMT per Service Population, and Total VMT. A detailed transportation VMT analysis would apply to all land development projects, except the ones that meet at least one of the following screening criteria, or that have been determined to have potentially significant environmental effects based on substantial evidence, notwithstanding compliance with one or more of the following criteria:

- Projects located in a VMT Efficient Area – Using location-based screening maps (consistent with project land uses)
- Small Residential and Employment Projects – Projects that generate or attract less than 110 average daily vehicle trips (trips are based on number of vehicle trips after any alternative modes/location-based adjustments are applied)
- Projects located in a Transit Accessible Area
- Locally Serving Retail/Service Projects- Projects that are 50,000 square feet or less.
- Locally Serving Public Facilities and Other Uses - Public facilities that serve the local community including transit centers, public schools, libraries, post office, park-and-ride lots, other government offices, parks/trail heads, and passive public uses.
- Redevelopment Projects with Greater VMT Efficiency- The proposed project's total daily project VMT is less than the existing land use's total daily VMT.
- Affordable Housing – Projects that include 100% affordable housing

Projects that do not meet the above screening criteria would be required to include a detailed evaluation of the VMT produced by the project. The significance thresholds and specific VMT metric used to measure VMT are described by land use in the County's TSG.

The guidance from County of San Diego does not require a quantitative VMT analysis for construction traffic. OPR, nor the County have not specified VMT thresholds of significance for construction traffic.

County of San Diego Consolidated Fire Code

The County, in collaboration with the local fire protection districts, created the first Consolidated Fire Code (CFC) in 2001, which was last updated in 2017. The CFC contains the County's and fire protection districts' amendments to the California Fire Code. Emergency ingress/egress is established by the County's CFC. Ingress/egress is necessary for both citizen evacuation and to provide access for emergency vehicles in the event of a fire or other emergency. Section 503 of the CFC dictates minimum design standards for "Fire Apparatus Access Roads" and includes minimum road standards, secondary access requirements, and restrictions for gated roads (County of San Diego 2017).

County of San Diego Transportation Impact Fee Ordinance

The County developed a programmatic solution that addresses projected future road deficiencies in the unincorporated portion of the County. The County Transportation Impact Fee program has been used to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. The new projects are based on San Diego Association of Governments (SANDAG) regional growth and land use forecasts; SANDAG's Transportation Modeling was used to analyze projected buildout (year 2030) development conditions on the County's existing Mobility Element roadway network throughout unincorporated San Diego County (SANDAG 2018). It is anticipated that roadways in the Project vicinity would continue to experience increased levels of traffic congestion as future land use developments are approved and population growth occurs. However, this area of the County has limited services and does not anticipate significant growth over the next 20 years. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan. This plan, which considers freeway buildout over the next 30 years, will use federal, state, and TransNet funding to improve freeways to projected LOS objectives provided in the Regional Transportation Plan (SANDAG 2011).

Transportation Impact Fee fees have been collected at or before issuance of a development permit (including building permits). The fees are used to fund identified transportation facilities, or portions thereof, that provide increased road capacity necessitated by the cumulative impacts of future development. This program is based on a summary of projections contained in an adopted

planning document that evaluates regional or area-wide conditions contributing to cumulative transportation impacts. Although the program does not address every road in the unincorporated County, it is considered to be a broad-based approach to mitigation of cumulative traffic impacts from additional traffic generated by a project or series of projects (County of San Diego 2012a).

Subsequent to adoption of the County's Transportation Guidelines in June 2020, the County is currently not implementing the local Transportation Impact Fee program and is currently not collecting fees for mitigation of projects analyzed using VMT. The existing program was based on Level of Service impacts, which are no longer analyzed under CEQA in accordance with Senate Bill 743.

County of San Diego Department of Public Works – Permit Requirements

The County requires an encroachment permit for the placement of any structures on, over, or under County roads. Roadways owned and maintained by the County could potentially be affected by the Proposed Project construction. Encroachment permits are issued by the Department of Public Works for the installation of any tower, pole, or structure of any kind within, over, or under a County road right-of-way (ROW).

In addition to encroachment permits, the County's Department of Public Works requires a construction permit prior to initiation of any work within the County ROW, and a traffic control permit is typically required in concurrence with an encroachment and/or construction permit to ensure the safe travel of vehicles within a construction work zone.

County of San Diego Department of Public Works – Roadway Standards

The County has adopted roadway standards to establish minimum design and construction requirements for public and private road improvements required as conditions of land development approval in the unincorporated areas of the County. The standards are intended to keep the operating cost of maintaining public facilities at a reasonable level and also provide for the service and protection of the public. The minimum road width required per the County of San Diego Private Road Standards is 24 feet. For access provided by a publicly maintained road, the minimum width required per the County of San Diego Public Road Standards is 28 feet, which meets the minimum interim public road width (County of San Diego 2012b, 2012c).

3.1.7.4 Analysis of Proposed Project Effects and Determination as to Significance

Direct, indirect, and cumulative impacts pertaining to transportation are evaluated based on specified thresholds identified in the CEQA Guidelines, Appendix G and in the County of San Diego's Guidelines for Determining Significance, including the following:

- County Transportation Study Guidelines, 2020

- County Guidelines for Determining Significance, Transportation and Traffic, 2011
- Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic, 2011

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted or modified. In accordance with Senate Bill 743, the County adopted the Transportation Study Guidelines in 2020 to address Senate Bill 743, Public Resources Code Section 21099 and CEQA Guidelines Section 15064.3(b), and the change in analyzing a project's transportation impacts via automobile delay to vehicle miles traveled under CEQA. Accordingly, this EIR analyzes the impacts from the Project using the County's Transportation Study Guidelines, the questions posed in Appendix G, and, to the extent they remain consistent with Senate Bill 743, the County Guidelines for Determining Significance, Transportation and Traffic, 2011.

For the purposes of this analysis, the switchyard (as described in Chapter 1, Section 1.2.1.5 of the Project Description) is a component of the Project and has been analyzed as part of the whole of the action. However, this EIR highlights the specific analysis of the switchyard under each threshold of significance in the event responsible agencies have CEQA obligations related to the switchyard.

3.1.7.4.1 Program, Plan, Ordinance or Policy

Guidelines for Determination of Significance

Pursuant to Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Analysis

The County's General Plan Mobility Element is discussed in Section 3.1.4, Land Use and Planning section of this EIR.

The County adopted an Active Transportation Plan in October 2018 that updated the County's standards for bicycle facilities and classifications. This plan also included a Pedestrian Gap Analysis appendix that identifies potential sidewalk and pathway improvements in villages throughout the County. Per the Mountain Empire Mobility Element, a Class II-Bike Lane exists along Carrizo Gorge Road and Old Highway 80 in the vicinity of the Project site.

Table 3.1.7-1 summarizes the trip generation for the Proposed Project construction and operation phases of the Project. It is estimated that the Proposed Project would generate a total of 1,158 daily trips, with 320 (297 inbound and 23 outbound) trips during the AM peak hour and 320 (23 inbound and 297 outbound) during the PM peak hour, during peak construction operations. It is estimated that the Proposed Project would generate a total of 20 daily trips, with 8 (5 inbound and 3 outbound) trips during the AM peak hour and 8 (3 inbound and 5 outbound) during the PM peak hour, during daily operations.

During the construction and future decommissioning phases, there may be some construction work or construction-related traffic occurring that could temporarily impede movement of vehicles, transit, bicyclists and/or pedestrians along Carrizo Gorge Road and/or Old Highway 80. Therefore, **PDF-TR-1** (Traffic Control Plan), **PDF-TR-2** (Preparation of a Construction Notification Plan) and **PDF-TR-3** (Notification of Property Owners and Provision of Access), would be prepared to ensure the safe and efficient movement of traffic through the project area and that local residents/motorists are properly notified of construction activities that could affect daily travel through the area. Additionally, a single point of contact would be established using the Private Development Construction Inspection (PDCI) which ensures construction work in the County is completed in accordance with approved plans and State and County requirements to assure safe communities and roads are provided for the public.

Due to the nature of the Proposed Project, the trips generated during the construction and future decommissioning phases would be short-term and temporary. Although temporary impacts are potentially significant, project development features (**PDF-TR-1**, **PDF-TR-2** and **PDF-TR-3**) reduce the impacts of temporary construction trips below significance. Trips generated during operation would be nominal and would not have the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impact would be **less than significant**.

3.1.7.4.2 Vehicle Miles Traveled

Guidelines for Determination of Significance

Pursuant to Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would exceed the following threshold:

b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1)? (CEQA Guidelines Appendix G)

CEQA Guidelines Section 15064.3(b) focuses on VMT for determining the significance of transportation impacts. Section 15064.3(b) is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. The Project

would involve construction that would generate temporary construction-related traffic for approximately 13 months and nominal operations traffic. Section 15064.3(b)(3) recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type and states that, for many projects, a qualitative analysis of construction traffic may be appropriate.

In December 2018, the Governor's Office of Planning and Research (OPR) issued a Technical Advisory on Evaluating Transportation Impacts In CEQA (Technical Advisory) to assist lead agencies by providing technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.

The County has adopted thresholds of significance to evaluate transportation impacts related to a project's VMT, and a Transportation Study Guide (TSG) to provide guidance on conducting VMT analysis. This guidance comports with CEQA Guidelines section 15064.3 and OPR's Technical Advisory, which focus on a project's operational contribution to VMT.

The guidance from County of San Diego does not require a VMT analysis for construction traffic. Neither OPR or the County has specified models or methods to estimate VMT or VMT thresholds of significance for construction traffic. Therefore, a qualitative analysis of construction traffic is provided below.

Analysis

Operations

For operations impacts, the County has identified several "screening criteria," whereby if a project meets "at least one of the screening criteria [it] would have a less than significant impact due to project characteristics and/or location" absent substantial evidence to the contrary. (County TSG, p. 17.) One of the screening criteria provides: "Projects generating less than 110 daily vehicle trips (trips are based on the number of vehicle trips calculated using national ITE trip generation rates with any alternative modes/location-based adjustments are applied) may be presumed to have a less than significant impact absent substantial evidence to the contrary." (*Id.* at 18.)

OPR has recommended that "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact." (OPR Technical Advisory, p. 12.), This screening criteria is based on a categorical exemption provided by CEQA for existing facilities, including additions to existing structures, that would generate or attract an additional 110-124 trips per 10,000 square feet (based on typical project types such as general office building, single tenant office building, office park, and business park for which trip generation increases linearly with building footprint) so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) According to CEQA, Public Resources

Code section 21084, classes of projects within a categorical exemption have been determined not to have a significant effect on the environment. Similarly, transportation impacts not exceeding those of a project within the categorical exemption established by CEQA Guideline 15031(e)(2) can be presumed not to be significant.

The solar facility, including the switchyard, would be not be staffed onsite. Maintenance and operation of the solar facility would generate a nominal number of trips. Per the County's TSG, *Screening Threshold for Small Projects*, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant VMT impact for transportation. As mentioned previously, the operation of the Proposed Project is conservatively estimated to generate 20 daily trips, including 8 trips during the AM peak hour, and 8 trips during the PM peak hour. Therefore, utilizing the guidance provided by the TSG, the operation of the Proposed Project, including the switchyard, would not generate a significant number of trips and thereby would not cause substantial amount of VMT. In addition, the TSG does not identify the Proposed Project as a land use type that must be analyzed due to its potential to cause significant transportation impacts, and on that basis, the Proposed Project is not required to be analyzed for significance under VMT thresholds. (TSG, at Appendix D.) Therefore, the operation of the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

As an alternative basis for assessing a project's VMT impacts, the OPR Technical Advisory notes that "projects that generate or attract fewer than 110 trips per day may be assumed to cause a less-than-significant transportation impact." (Technical Advisory, at p. 12). Further, the Technical Advisory does not identify the Proposed Project as the type of project that would generate potentially significant transportation impacts with respect to VMT. On that basis, the operation of the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

Construction and Decommissioning

CEQA Guidelines Section 15064.3(b)(3) recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. Specifically, Section 15064.3(b)(3) states that a qualitative analysis of construction traffic may be appropriate for VMT analysis. OPR's Technical Advisory states "Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis." (P. 7, fn 12.) The guidance from County of San Diego does not require a quantitative VMT analysis for construction traffic, and neither OPR nor the County has specified models or methods to estimate VMT or VMT thresholds of significance for construction traffic. Therefore, a qualitative analysis of construction traffic VMT is provided below.

Pursuant to SB 743, the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. Vehicle-trip generation (for construction workers and trucks) as a result of Proposed Project construction has been summarized in Table 3.1.7-1. The VMT for the Proposed Project using approximate trip lengths for construction worker commute, vendor, and haul trips has been estimated using default values for the San Diego region from the California Emissions Estimator Model (CalEEMod) and has been included in the Proposed Project's air quality and greenhouse gases analysis. This analysis determined the Proposed Project's GHG impacts would not be significant.

Even though it is anticipated that about 15% of the construction workers would carpool to the site, managing worker and vendor trip lengths is not feasible because of the remote location and duration of individual activities. Limited accessibility to alternative modes of transportation is available for workers due to the remote location of the Project in the rural portion of county. However, to further reduce, prior to start of construction the developer would implement a voluntary construction period Transportation Demand Management (TDM) program to encourage construction workers to carpool or use alternative transportation modes in order to reduce the single-occupancy vehicle trips and temporary VMT related to the construction of the Proposed Project. The TDM program would include following components:

- Encouragement of carpooling among workers to reduce worker commuter trips entering and exiting the Project Area.
- A transportation package would be provided to workers, prior to commencing work on the Project, with information about how to access the project by alternative transportation and benefits of doing so.
- The applicant will evaluate the feasiblity of a vanpool or shuttle service to facilitate worker commute trips if feasible.

Moreover, construction related trips are temporary and would not generate permanent trips. Once construction is completed, the construction-related traffic would cease and any such traffic would return to pre-construction conditions. Because construction traffic VMT will be reduced by the TDM program and will be eliminated on completion of construction and later decommissioning work, the Proposed Project would not result in impacts that would significantly interfere with (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses.

Therefore, the Proposed Project's construction and decommissioning VMT would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

3.1.7.4.3 Hazards

Guidelines for Determination of Significance

Pursuant to Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would:

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

The determination of significant hazards to an existing transportation design feature shall be on a case by-case basis, considering the following factors:

- Design features or physical configurations of an access road that may adversely affect the safe transport of vehicles along the roadway;
- The percentage or magnitude of increased traffic on the road that would affect the safety of the roadway;
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers that may result in vehicle conflicts with other vehicles or stationary objects;
- Conformance of existing and proposed roads to the requirements of the private or public road standards, as applicable.

The determination of significant hazards to pedestrians or bicyclists shall be on a case by-case basis, considering the following factors:

- Design features/physical configurations on a road segment or at an intersection that may adversely affect the visibility of pedestrians or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
- The amount of pedestrian activity at the project access points that may adversely affect pedestrian safety.
- The preclusion or substantial hindrance of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
- The percentage or magnitude of increased traffic on the road due to the proposed project that may adversely affect pedestrian and bicycle safety.
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers that may result in vehicle/pedestrian, vehicle/bicycle conflicts.

- Conformance of existing and proposed roads to the requirements of the private or public road standards, as applicable. The potential for a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

Analysis

Construction

Potential road hazards can occur due to a design feature or physical configuration of existing or proposed roads that can adversely affect the safe transport of vehicles along a roadway. As described previously, primary access to Project would be via two-lane undivided roadways of Carrizo Gorge Road and Old Highway 80. The Project does not propose any changes to the design of Carrizo Gorge Road or Old Highway 80. As such, there are no known hazards along these existing roadways.

The Proposed Project is located in a relatively remote area of unincorporated San Diego County; therefore, a majority of construction materials and equipment would be brought to the Project site from long distances and/or construction workers would have to travel from surrounding communities or other areas within San Diego County as well as from the Imperial County to the east. Project-related traffic would use I-8 for regional travel, and Carrizo Gorge Road and Old Highway 80 for accessing the Project site. It is anticipated that during the peak construction of the Proposed Project, approximately 500 workers will be working across the entire Project site. Workers would arrive and depart between 6:00 a.m. – 4:00 p.m. during the construction period of approximately 13 months.

A typical construction day would generate approximately 30 trucks, which would include the transportation of Proposed Project component parts; movement of heavy equipment; and use of dump trucks, concrete trucks, water trucks, and subcontractor trucks. These trucks are expected to use the I-8 access road and the height of the under-crossing on I-8 would be considered to calculate the maximum height of the trucks that can possibly use this access road. The California Vehicle Code (Section 35250) suggests that the maximum height of a vehicle cannot exceed 14 feet. The Project applicant would need to contact Caltrans and obtain special permits for vehicles that exceed 14 feet in height. Also, any excessive height/length vehicles are expected to require pilot cars, which typically provide overhead height warning devices to ensure that oversized loads do not exceed undercrossing height limits. To ensure that construction related activities and traffic do not cause a hazardous condition, the applicant shall prepare a Traffic Control Plan (TCP) as specified by project design feature **PDF-TR-1** (see Section 3.1.7.7.). The TCP would address construction traffic on both regional and local roads in the Project area. Implementation of **PDF-TR-1** would ensure that trucks, or any other construction equipment, would not create a safety hazard and/or be a temporary inconvenience to travelers along regional and local roadways. The County-required TCP

would address the increased traffic anticipated on local area roadways during Proposed Project construction and would contain measures for construction noticing, signage, and policy guidelines. For the State Highway System, Caltrans requires a TCP to be submitted to District 11's Transportation Permits Issuance Branch at least 30 days prior to the start of any construction.

In addition, property owners and others who may be affected during Project construction would be notified to address potential conflicts that may arise between construction traffic and day-to-day traffic on local area roadways. **PDF-TR-2** (Preparation of a Construction Notification Plan) and **PDF-TR-3** (Notification of Property Owners and Provision of Access), would be prepared to ensure the safe and efficient movement of traffic through the project area and that local residents/motorists are properly notified of construction activities that could affect daily travel through the area.

The Proposed Project would involve construction of access roads and improvements to provide access and circulation within the Project site. A safe and adequate sight distance would be required at all new roadways to the satisfaction of the County Director of the Department of Public Works, and all improvements would be constructed according to County private road standards (County of San Diego 2012b). Access roads would be designed in compliance with County private road standards and designed to allow safe passage of construction vehicles, including oversized trucks. Furthermore, the Proposed Project would comply with fire protection measures defined in the CFC. In addition, the Proposed Project would not entail the introduction of curves, slopes, walls, or other barriers that would create potential conflicts between vehicles or potential conflicts between vehicles and stationary objects.

PDF-TR-1 (TCP) would ensure measures required for the sole convenience of safely passing non-construction traffic (including transit, bicyclists and pedestrians) through and around construction areas would be implemented. The Project's impacts to bicycle and pedestrian facilities in the study area would be **less than significant**.

In summary, with implementation of **PDF-TR-1** (TCP)**, PDF-TR-2** (Preparation of a Construction Notification Plan) and **PDF-TR-3** (Notify Property Owners and Provide Access), construction of the Proposed Project would not substantially increase hazards and impacts would be **less than significant**.

Operation

The Project does not propose any changes to the design of Carrizo Gorge Road or Old Highway 80. The access driveways off Carrizo Gorge Road and Old Highway 80 shown on Figure 3.1.7-1 would be designed per County of San Diego Public Road Standards and Design Standards to meet applicable standards of safety, design, and sight distance. Once operational, the Project would have access driveways, a perimeter drive and interior driveways within the solar facility. Access to the

solar facility from Carrizo Gorge Road and Old Highway 80 would be through construction of six driveways that would be located at the following five locations:

- Access 1 – Full access driveway along Carrizo Gorge Road (east leg), approximately 1,000 feet southeast of the I-8 interchange;
- Access 2 – Full access driveway along Carrizo Gorge Road (west leg), approximately 1,450 feet southeast of the I-8 interchange;
- Access 3 – Full access driveway along Carrizo Gorge Road (east leg), approximately 2,100 feet southeast of the I-8 interchange;
- Access 4 – Full access driveway along Carrizo Gorge Road (west leg), approximately 2,800 feet southeast of the I-8 interchange;
- Access 5 – North and south leg full access driveways along Old Highway 80, approximately 1,200 feet east of Campo Street.

Operation of the Proposed Project would not substantially increase hazards and impacts would be **less than significant**.

Switchyard

As previously discussed, construction of the switchyard would include construction of a new permanent access road and improvements to provide access and circulation within the switchyard site. A new permanent access road would incorporate applicable County standards regarding internal road design and circulation, particularly those provisions related to emergency vehicle access. The switchyard site would be accessed from Carrizo Gorge Road. Adequate sight distance would be required at this new roadway to the satisfaction of the County Director of the Department of Public Works, and all improvements would be constructed according to County private road standards (County of San Diego 2012b). The switchyard would generate additional traffic on regional and local roads and would likely require the use of oversize construction vehicles. A typical construction day would generate approximately five trucks, which would include the transportation of Proposed Project component parts; movement of heavy equipment; and use of dump trucks, concrete trucks, water trucks, and subcontractor trucks.

PDF-TR-1 (TCP) would be implemented to ensure that trucks, or any other construction equipment, would not create a safety hazard and/or be a temporary inconvenience to travelers along Carrizo Gorge Road. The applicant will also follow construction notification procedures in accordance with County and Caltrans' requirements as mentioned in **PDF-TR-1** (TCP), **PDF-TR-2** (Preparation of a Construction Notification Plan) and **PDF-TR-3** (Notify Property Owners and Provide Access).

The access road to the switchyard would be designed in compliance with County private road standards and designed to allow safe passage of construction vehicles, including oversized trucks. In addition, the switchyard would not entail the introduction of curves, slopes, walls, landscaping, or other barriers that would create potential conflicts between vehicles or potential conflicts between vehicles and stationary objects. Proposed permanent fencing would be included around the switchyard, but it would be relatively transparent and would not impair the visibility of motorists on Carrizo Gorge Road.

As mentioned above, the switchyard would be un-staffed and operation would generate a nominal amount of traffic. The operational traffic would not create hazards to existing geometric design features of the transportation system. It would cause a nominal increase in traffic that would not impact the safety of the roadway or vehicles. Therefore, impacts would be **less than significant**.

3.1.7.4.4 Emergency Access

Guidelines for Determination of Significance

Pursuant to Appendix G of the CEQA Guidelines, a project would have a significant impact on the environment if it would:

d) Would the Project result in inadequate emergency access?

Analysis

During construction, as part of the **PDF-TR-1** (TCP), the applicant would establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities. This would ensure that the Proposed Project would not result in inadequate emergency access during construction.

Access to the solar facility during operations would be provided by a total of six driveways shown on Figure 3.1.7-1. These driveways would be paved, would be a minimum of 24 feet in width, and would be fully accessible to emergency services via a Knox Box placed at each access driveway. Within the fenced solar facility, the perimeter access would be constructed to a minimum improved width of approximately 24 feet. The interior access would be constructed to a minimum improved width of 20 feet. All access would provide a minimum inner turning radius of 28-feet, would be graded and maintained to support the imposed loads of a fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather driving capabilities. Minimum vertical clearance of 13 feet 6 inches from the driving surface shall be maintained for the interior access. Thus, the Proposed Project has been designed to allow ease of access for emergency responders both externally and internally.

There would be adequate access to emergency service providers such as fire protection during the construction and operation of the Proposed Project; therefore, impacts would be **less than significant**.

3.1.7.5 Cumulative Impact Analysis

Program, Plan, Ordinance or Policy

The Proposed Project trips during construction would be temporary and short term. During operations, the trips would be nominal. Cumulative energy generation projects would also generate trips during construction which would be temporary and short term. Implementation of features such as Traffic Control Plan, Construction Notification Plan and Notification of Property Owners by those cumulative projects would further reduce any potential construction period transportation impacts to an adopted program, plan or policy. Additionally, PDCI may coordinate with concurrent projects that are under construction and require inspection from County.

The cumulative projects are also expected to generate an insignificant amount of operational project trips. Additionally, SANDAG Series 13 traffic forecast data shows a general increase of only 300 daily vehicles along the study roadways between years 2020 and 2035, indicating a very nominal population increase. Therefore, the Proposed Project would **not have result in a cumulatively considerable impact** on any program, plan, or policy addressing the circulation system.

Vehicle Miles Traveled

As described previously, construction related VMT would be temporary and short term. Once construction is completed the VMT from construction related traffic would cease and go back to pre-project level. The operation of the project would not generate significant number of trips and thereby not cause substantial amount of VMT. As such, the Proposed Project **would not result in a cumulatively considerable impact** for vehicle miles traveled.

Hazards

The reasonably foreseeable cumulative projects in the Project area, as previously described, would individually need to comply with requirements for grading and building permits from the County, provide for traffic control and safety, and address design hazards for road construction. From the view of cumulative projects in the area, the other projects would utilize other access roads than the Proposed Project. SANDAG traffic forecasts indicate a nominal increase in traffic from planned projects due to a nominal increase in population. The potential for increase in pedestrian or bicycle activity under cumulative conditions is limited. All proposed driveways would be constructed to the requirements of the private or public road standards. Therefore, hazardous conditions due to design features would not occur and the Proposed Project **would not result in a cumulatively considerable impact** related to hazards.

Emergency Access

As part of the **PDF-TR-1** (TCP), the applicant would establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities. As described in Section 2.12, Wildfire, the Proposed Project would cumulatively contribute to increase in potential demand for emergency services such as fire response. The Project would include fire access and circulation throughout the Project site including emergency access. Further, the Proposed Project would implement a Fire Protection and Mitigation Agreement with the SDCFA to help fund fire services that would be used to improve future fire services and implement a site-specific Fire Protection Plan and Construction Fire Protection Plan to reduce the risk of wildfire on the site during operations and construction and to improve the effectiveness of an emergency response should a fire occur on site. Therefore, the Project, **does not result in a cumulatively considerable impact** related to emergency access.

3.1.7.6 Significance of Impacts Prior to Mitigation

Plans, Policies and Programs

As presented in Section 3.1.7.4 the Proposed Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impacts would be **less than significant**.

Vehicle Miles Traveled

As presented in Section 3.1.7.4 the construction related VMT would be temporary and short term. Measures to reduce the VMT generated by workers and trucks are limited, and there are no thresholds or significance criteria for temporary, construction-related VMT. Further, OPR and County does not require a quantitative assessment of VMT generated by heavy-duty trucks, and CEQA Guidelines 15064.3 states that "a qualitative analysis of construction traffic may be appropriate."

Maintenance and operation of the solar facility would generate or attract fewer than 110 trips per day which would meet the County's screening threshold for small projects that may be assumed to cause a less-than-significant VMT impact. Therefore, the Proposed Project's construction transportation would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

Hazards

With implementation of project design features **PDF-TR-1** (TCP)**, PDF-TR-2** (Preparation of a Construction Notification Plan)**, and PDF-TR-3** (Notify Property Owners and Provide Access), construction of the Project would not significantly increase hazards during construction. Once

operational, the proposed project would have access driveways, perimeter access and interior access within the solar facility. Access to the solar facility from Carrizo Gorge Road and Old Highway 80 would be through construction of six driveways which would be designed per County of San Diego Public Road Standards and Design Standards to meet applicable standards of safety, design, and sight distance. Therefore, the impacts would be **less than significant**

Emergency Access

As part of the **PDF-TR-1** (TCP), the applicant would establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities. This would ensure that the Proposed Project would not result in inadequate emergency access during construction. The Proposed Project would be designed to allow ease of access for emergency responders both externally and internally. There would be adequate access to emergency service providers such as fire protection during the construction and operation of the Proposed Project; therefore, impacts would be **less than significant**.

Cumulative Impacts

The Proposed Project would **not result in any cumulatively considerable impacts**.

3.1.7.7 Mitigation Measures and Project Design Features

The project design features listed below would be implemented and would ensure impacts would be less than significant during construction. All transportation impacts were determined to be less than significant; therefore, no mitigation measures are required.

PDF-TR-1 **Traffic Control Plan.** Prior to obtaining a grading permit from the County of San Diego, the applicant shall implement a construction Traffic Control Plan (TCP) that includes the following measures:

- Temporary traffic control devices in accordance with the California Department of Transportation's (Caltrans) California Manual on Uniform Traffic Control Device to identify locations/sections where construction is ongoing. This may include slow-moving-vehicle warning signs, signage to warn of merging trucks, barriers for separating construction and non-construction traffic, use of traffic control flaggers, and any additional measures required for the sole convenience of safely passing non-construction traffic (including transit, bicyclists and pedestrians) through and around construction areas.
- Coordination with Caltrans to secure the necessary encroachment and trip permits necessary for specialized haul trucks. Also, any excessive height/length

vehicles should use pilot car services to provide safe over-the-road operations and overhead height warnings, if necessary.

- Notification of the California Highway Patrol, if necessary, to facilitate slowing freeway traffic to ensure safe access for motorists.
- Coordination with Caltrans, California Highway Patrol, and County officials, including the Sheriff's department. For the State Highway System, Caltrans requires a TCP to be submitted to District 11's Transportation Permits Issuance Branch at least 30 days prior to the start of any construction.
- Employment of a contract transport company that would be responsible for surveying the route to determine how turns on existing roads would be accomplished and ensuring that is reflected in the TCP.
- Establishment of procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities.

PDF-TR-2 **Preparation of Construction Notification Plan.** Forty-five days prior to construction, the project applicant would prepare and submit a construction notification plan to the appropriate land use jurisdiction agency for approval. The construction notification plan would identify the procedures that would be used to inform property owners of the location and duration of construction, identify approvals that would be needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The construction notification plan would address at a minimum two of the following components

Public notice mailer

A public notice mailer would be prepared and mailed no fewer than 15 days prior to construction. The notice would identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice would state the type of construction activities that would be conducted and the location and duration of construction, including all helicopter activities. The project applicant or construction contractor would mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice would be prepared and distributed.

Public liaison person and toll-free information hotline

The project applicant would identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person would be included in notices distributed to the public. The project applicants would also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls would be addressed in the construction notification plan.

PDF-TR-3 **Notify property owners and provide access.** To facilitate access to properties that might be obstructed by construction activities, the project applicant would notify property owners and tenants at least 24 hours in advance of construction activities and would provide alternative access if required.

3.1.7.8 Conclusion

This section provides a synopsis of the conclusions reached in each of the threshold and impact analyses, with implementation of any required mitigation measures and project design features.

Plans, Policies and Programs

The Proposed Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impacts would be **less than significant**.

Vehicle Miles Traveled

Maintenance and operation of the solar facility would generate or attract fewer than 110 trips per day which would meet the County's screening threshold for small projects that may be assumed to cause a less-than-significant VMT impact for transportation. The Proposed Project's construction transportation would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

Hazards

With implementation of project design features **PDF-TR-1** (TCP)**, PDF-TR-2** (Preparation of a Construction Notification Plan)**, and PDF-TR-3** (Notify Property Owners and Provide Access), construction of the Project would not significantly increase hazards during construction. Therefore, the impacts would be **less than significant**

Emergency Access

As part of the **PDF-TR-1** (TCP), the applicant would establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities. There would be adequate access to emergency service providers such as fire protection during the construction and operation of the Proposed Project; therefore, impacts would be **less than significant**.

Cumulative Impacts

The Proposed Project would **not result in any cumulatively considerable impacts**.

Table 3.1.7-1
Trip Generation Summary

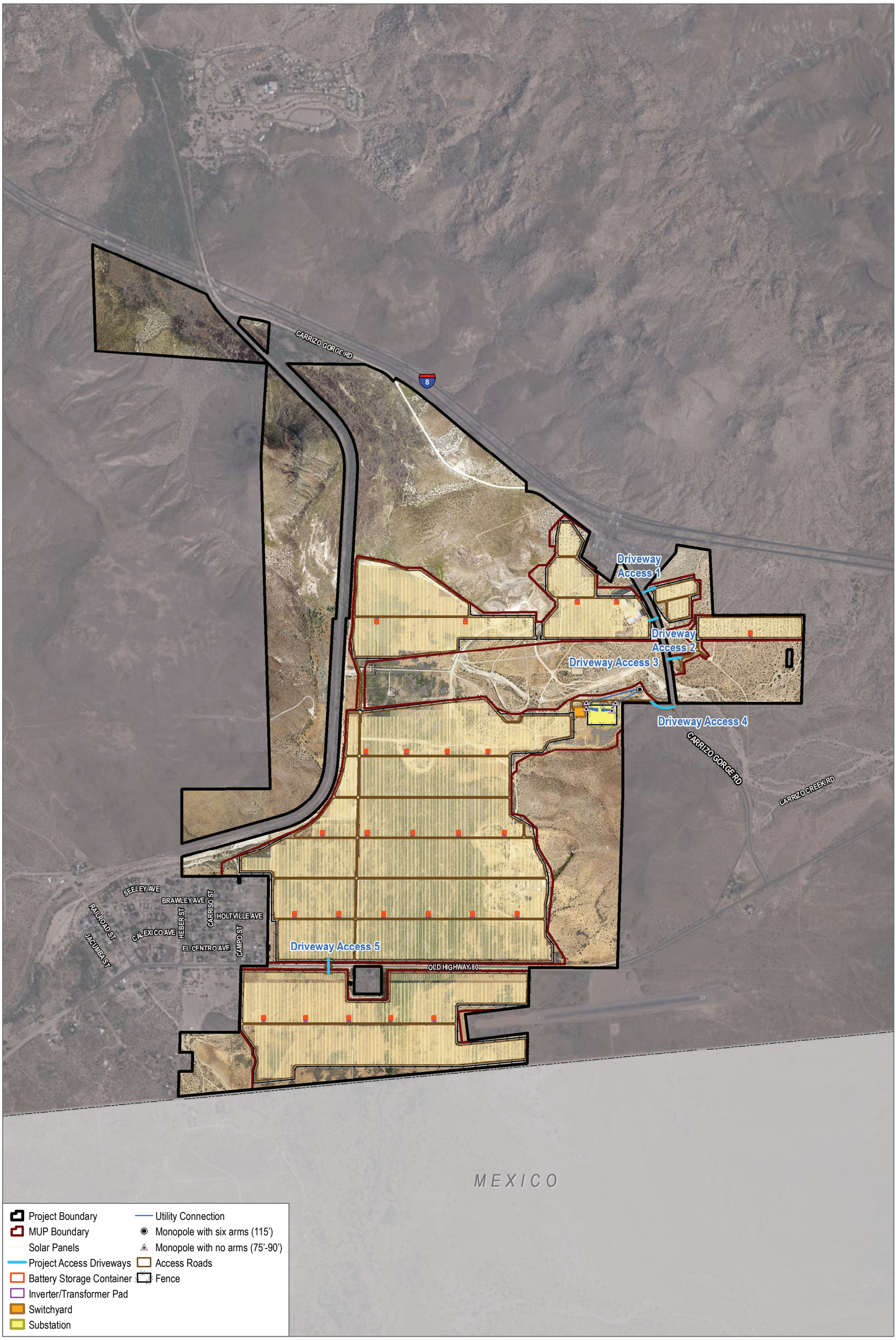
Description	Units	Trip Rate	Daily trips	AM Peak-Hour					PM Peak-Hour				
				% of ADT[a]	*In:Out Ratio[a]*	*In*	*Out*	*Total*	*% of ADT[a]*	*In:Out Ratio[a]*	*In*	*Out*	*Total*
JVR Solar Construction													
Daily Workers	462 emp.	2.3 / emp.	1,063	30%	9.42:0.58	300	19	319	30%	0.58:9.42	19	300	319
Carpool Reduction (15% reduction)	69 emp.	-2.3/ emp.	-159	30%	9.42:0.58	-45	-3	-48	30%	0.58:9.42	-3	-45	-48
Heavy Construction/Delivery Vehicles[b]	22 trucks	2 / truck	44	15%	7.78:2.22	5	2	7	15%	2.22:7.78	2	5	7
Passenger Car Equivalent[c]	22 trucks	6 / truck	132	15%	7.78:2.22	15	6	21	15%	2.22:7.78	6	15	21
Total JVR Solar Construction Operations Traffic			**1,036**			**270**	**22**	**292**			**22**	**270**	**292**
Switchyard Construction Operations													
Daily Workers	38 emp.	2.3 / emp.	87	30%	9.42:0.58	25	1	26	30%	0.58:9.42	1	25	26
Carpool Reduction (15% reduction)	6 emp.	-2.3/ emp.	-13	30%	9.42:0.58	-4	0	-4	30%	0.58:9.42	0	-4	-4
Heavy Construction/Delivery Vehicles[b]	8 trucks	2 / truck	16	15%	7.78:2.22	2	0	2	15%	2.22:7.78	0	2	2
Passenger Car Equivalent[c]	8 trucks	6 / truck	48	15%	7.78:2.22	6	0	6	15%	2.22:7.78	0	6	6
Total Switchyard Construction Operations Traffic			**122**			**27**	**1**	**28**			**1**	**27**	**28**
Daily Workers	500 emp.	2.3 / emp.	1,150	30%	9.42:0.58	325	20	345	30%	0.58:9.42	20	325	345
Carpool Reduction (15% reduction)	75 emp.	-2.3 / emp.	-172	30%	9.42:0.58	-49	-3	-52	30%	0.58:9.42	-3	-49	-52
Heavy Construction/Delivery Vehicles[b]	30 trucks	2 / truck	60	15%	7.78:2.22	7	2	9	15%	2.22:7.78	2	7	9
Passenger Car Equivalent[c]	30 trucks	6 / truck	180	15%	7.78:2.22	21	6	27	15%	2.22:7.78	6	21	27
Total Construction Traffic			**1,158**			297	23	320			23	237	320
Daily Operations													
Daily Workers	2 emp.	4 / emp.	8	25%	1.00:0.00	2	0	2	25%	0.00 :1.00	0	2	2
Heavy Maintenance/Delivery Vehicles[b]	2 trucks	2 / truck	4	50%	5.00:5.00	1	1	2	50%	5.00 :5.00	1	1	2
Passenger Car Equivalent[c]	2 trucks	6 / truck	12	50%	5.00:5.00	3	3	6	50%	5.00 :5.00	3	3	6
Total Daily Operations Traffic			**20**			**5**	**3**	**8**			**3**	**5**	**8**

Notes: emp. = employees.

[a] Custom Trip Generation Rates based on peak construction operations and daily operations information provided by developer. Information includes anticipated number of daily workers, heavy vehicles and work schedules.

[b] Excluded from totals and shown for reference only.

[c] Passenger Car Equivalent of 3.0 is used for Heavy Construction/Delivery Vehicles and Heavy Maintenance/Delivery Vehicles.



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 3.1.7-1

Project Access Driveways

JVR Energy Park Project

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3.1.8 Utilities and Service Systems

This section discusses potential impacts to utilities and service systems, including water, wastewater, and solid waste hauling and disposal, resulting from the implementation of the Proposed Project. Electrical and natural gas systems are not included in this analysis because the Proposed Project would not require extension of natural gas services, and the Proposed Project would construct electrical generation and transmission facilities as a part of the Project. The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical reports prepared for this Proposed Project:

- Drainage Study - JVR Energy Park Project (Appendix I)
- Groundwater Resources Investigation Report - JVR Energy Park Project (Appendix J)
- Groundwater Monitoring and Mitigation Plan (Appendix A of the Groundwater Investigation Report)
- Stormwater Quality Management Plan - JVR Energy Park Project (Appendix K)

These reports were prepared consistent with the County of San Diego (County) Guidelines for Determining Significance and Report Format and Content Requirements: Hydrology (Hydrology Guidelines; County of San Diego 2007a), Guidelines for Determining Significance and Report Format and Content Requirements: Surface Water Quality (Surface Water Quality Guidelines; County of San Diego 2007b), and Guidelines for Determining Significance and Report Format and Content Requirements: Groundwater Resources (County of San Diego 2007c).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the availability of water and the estimation of demand for water. These concerns are addressed in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this Environmental Impact Report (EIR).

3.1.8.1 Existing Conditions

The Proposed Project would be located in the Jacumba area of southeastern San Diego County (County). The Project site is located on privately owned land consisting of 24 parcels located to the south of Interstate (I)8, immediately east of the unincorporated community of Jacumba Hot Springs, and immediately north of the U.S./Mexico international border. The Project site is located within the Jacumba Subregional Group Area of the County's Mountain Empire Subregional Plan Area.

An existing transmission corridor transects the northern area of the Project site. The east-west corridor is located immediately north of the proposed switchyard and adjacent substation sites. Existing transmission infrastructure installed within the corridor includes two 500 kV

transmission lines (i.e., Southwest Powerlink and Sunrise Powerlink) on 155-foot tall transmission towers. An additional 138 kV transmission line parallels the 500 kV transmission lines. The transmission lines extend to the east and beyond the Project site. The East County Substation and Jacumba Solar facility are located over 1.7 miles away to the east.

Baseline utilities and service systems information was obtained through a review of other recent development review documents including the Final Environmental Impact Report (EIR) for the Jacumba Solar Energy Project (County of San Diego 2016), as well as of several websites as cited below.

Hydrological Setting

The contributing watersheds to the Project site cover 71,040 acres (111 square miles), with 76% located in Baja California, Mexico (Appendix J). The contributing watersheds are located in the Upper Carrizo Creek watershed as defined by the U.S. Geological Survey (see Figure 2.7-4, Hydrologic Areas). The majority of flow from Mexico north into the Jacumba Valley is derived from the Flat Creek subwatershed, which includes Blue Angel Peak and an unnamed subwatershed. The subwatersheds predominantly located in the United States are the Boundary Creek and Walker Canyon-Carrizo Creek subwatersheds. The Jacumba Valley ultimately drains through a narrow constriction north of Jacumba Hot Springs known as the Carrizo Gorge.

Climate & Precipitation

Jacumba Hot Springs experiences warm summer months and cool winters. Average temperatures vary greatly within the region. Mean maximum temperatures in the summer months reach the high-80s to low-90s degrees Fahrenheit. Temperatures may fall below freezing in the winter, with snow levels occasionally below 2,500 feet (WRCC 2019).

The precipitation that recharges the Project site falls within the contributing watersheds. Annual precipitation totals at the Jacumba rain gauge varied from a high of 22.16 inches in the 1982-1983 water year to a low of 2.26 inches in the 2001–2002 water year (Appendix J). The majority of the Flat Creek subwatershed receives an average of 11 inches of precipitation per year. The lower elevations of the subwatershed receive an average of 9 inches of precipitation per year. Mean annual precipitation, as determined from the County of San Diego map entitled "Groundwater Limitations Map" on file with the Clerk of the Board of Supervisors as Document No. 195172, indicates the Walker Canyon-Carrizo Creek subwatershed receives an average of 9 inches of precipitation per year. The Groundwater Limitations Map indicates that the majority of the Boundary Creek subwatershed receives an average of 14 inches of precipitation per year at its highest elevation, and an average of 9 inches of precipitation per year at its lowest (Appendix J). The annual estimated evapotranspiration for the Project site is 18.75 inches (Appendix J).

Hydrogeologic Units

The Project site is located within the California Department of Water Resources Bulletin 118 defined Jacumba Valley Groundwater Basin, Department of Water Resources Basin No. 7-47 (Appendix J). The Jacumba Valley Groundwater Basin consists of two primary aquifer units. The upper alluvial aquifer unit reaches up to 175 feet in thickness and consists of Holocene-age gravels, sands, and clays (Dudek 2016a; DWR 2004). In some areas, this aquifer unit is underlain by the Jacumba Volcanics that reportedly act as a semi-confining to confining unit to the lower aquifer. The lower aquifer consists of the Tertiary-age Table Mountain Formation described as medium- to coarse-grained sandstone and conglomerate, and may reach up to 600 feet in thickness (Appendix J).

Surface Water Quality

The beneficial uses of the surface water bodies in the Project area have been designated by the Colorado River Regional Water Quality Board (RWQCB) in the Water Quality Control Plan for the basin (otherwise known as the Basin Plan). The beneficial uses provide the basis for determining appropriate water quality objectives that are needed to maintain the beneficial uses of these water bodies. The Basin Plan for each region also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make up the water quality standards for the region.

The objective of the federal Clean Water Act (CWA) is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. There are no water bodies occurring within the Proposed Project area that are listed on the CWA 303(d) List (impaired water bodies) (SWRCB 2016). The Project is not in a watershed with a high receiving water risk, as defined in the Construction General Permit (CGP) Guidance (SWRCB 2018). High risk watersheds are mapped Hydrologic Unit Code (HUC) Level 12 watersheds that drain to waterbodies that are either 1) CWA 303(d) listed as being impaired for sediment/siltation, 2) have a U.S. Environmental Protection Agency-approved, sediment-related Total Maximum Daily Load, or 3) have the existing beneficial uses of SPAWN, MIG, and COLD according to the Basin Plan (RWQCB 2019).

Groundwater Demand and Resources

The Mountain Empire Subregion relies on groundwater to supply local water (County of San Diego 2011a). The availability of groundwater varies from location to location. Intensity of development within the Subregion is limited because the area is totally dependent on local groundwater resources for potable water (County of San Diego 2011b).

Water service in the Proposed Project area consists exclusively of groundwater wells—either private, tribal, state, federal, or part of small community water districts. Groundwater from the Jacumba Valley alluvial aquifer is the primary source of water supply for land uses in the Project area. Agriculture located on the Jacumba Valley Ranch historically extracted the majority of groundwater from the Jacumba Valley alluvial aquifer. Currently no water is being extracted from the Jacumba Valley Ranch for agricultural uses.

The current water demand for the Jacumba Valley alluvial aquifer includes potable demand for Jacumba Valley Ranch Water Company (formerly the Ketchum Ranch Water Company), and potable and non-potable demand from the Jacumba Community Services District (JCSD).

The Jacumba Valley Ranch Water Company is classified as a transient non-community water system. According to County Department of Environmental Health Small Drinking Water System files, seven connections—three ranch homes, two gas stations, and two fire hydrants—are part of the Jacumba Valley Ranch water system (Appendix J). Estimated water demands for the Jacumba Valley Ranch Water Company is 5 f.

Most residences and commercial uses in the Project vicinity rely on JCSD groundwater wells for their source of water. The JCSD pumps local groundwater from district-owned wells for distribution to residential connections. JCSD is responsible for the community of Jacumba's domestic water system, which currently provides service to residential and commercial properties. At present, JCSD supplies potable water to 239 connections from JCSD Well #4 (Appendix J). JCSD also supplies non-potable water for commercial sale. In addition to JCSD potable water demand, the Groundwater Resources Investigation (Appendix J) assumed a consumptive use of 3 acre-feet per year (afy) for unidentified private domestic wells located in the basin.

Groundwater Quality

The availability of groundwater quality data from the major unconfined alluvial aquifers of San Diego County vary based on use. Existing water quality data for large highly utilized unconfined alluvial aquifers is continually collected by state and local water agencies as well as the California Department of Public Health and the DWR.

Of California's approximately 16,000 public-supply wells, 80% are in groundwater basins designated by the California Department of Water Resources (DWR) and characterized as unconfined alluvial aquifers (USGS 2011). The County's Groundwater Resources Guidelines do not identify the Proposed Project area as being within a specific groundwater problem area (such as an overdrafted basin or areas with high levels of naturally occurring radioactive elements) (County of San Diego 2007c).

Groundwater on and near the Project site is routinely sampled for water served for potable use. Groundwater is sampled by the JCSD for potable wells and submitted to the State Water Resources Control Board (SWRCB). The Jacumba Valley Ranch Water Company (formerly the Ketchum Ranch Water Company) samples groundwater in accordance with requirements set forth by the County of San Diego Department of Environmental Health for a Transient Non-Community water system. Less frequent or one-time groundwater quality sampling has occurred near the Project site for leaking underground storage tank cleanup sites (SWRCB 2019).

Spring water in the northern area of the Jacumba Valley at Carrizo Gorge had measured total dissolved solids concentrations ranging from 2,000 to 6,000 milligrams per liter. Surface water drainage measured from the Flat Creek watershed and the Boundary Creek watershed have had recorded total dissolved solids at 292 to 422 milligrams per liter and 1,640 milligrams per liter, respectively (Roff and Franzone 1994). Historically, groundwater included sodium chloride, calcium chloride, and calcium sulfate) (Appendix J).

Wastewater

Wastewater services in the Mountain Empire Subregion are provided by small-scale waste treatment facilities or by private septic systems. There is no formal sanitation district in the Project area. The vast majority of the community relies on individual septic tanks that are the responsibility of home owners (CPUC and BLM 2011).

Solid Waste

Residential solid waste disposal in unincorporated San Diego County was historically facilitated through the use of rural bin sites. Essentially, rural bin sites function as transfer stations at which residents dispose of residential waste, and licensed haulers transport the waste to an area landfill. However, as of May 1, 2009, all rural bin sites in unincorporated San Diego County were closed by Allied Waste Industries (County of San Diego 2012). There are six permitted active landfills located within the County with remaining capacity. The landfills nearest the Project area in San Diego County are the Sycamore Landfill in Santee (approximately 52 miles northwest of the Project site) and the Otay Landfill in Chula Vista (approximately 48 miles west of the Project site). The Sycamore Landfill has a permitted disposal rate/throughput of 5,000 tons per day, and a remaining capacity of 113,972,637 cubic yards (as of September 6, 2020) (CalRecycle 2020a). The Otay Landfill has a permitted disposal rate/throughput of 6,700 tons per day, and a remaining capacity of 21,194,008 cubic yards (as of September 6, 2020) (CalRecycle 2020b).

3.1.8.2 Regulatory Setting

Federal Regulations

National Pollution Discharge Elimination System Permits In California, the SWRCB and its RWQCBs administer the National Pollution Discharge Elimination System (NPDES) permit program. The NPDES permit system was established in the Clean Water Act to regulate point-source discharges and nonpoint-source discharges to surface waters of the United States. The NPDES program characterizes receiving water quality, identifies harmful constituents, targets potential sources of pollutants, and implements a comprehensive stormwater management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The RWQCB also issues Waste Discharge Requirements that serve as NPDES permits under the authority delegated to the RWQCBs under the Clean Water Act. In November 1990, under Phase I of the urban runoff management strategy, the Environmental Protection Agency published NPDES permit application requirements for municipal, industrial, and construction stormwater discharges. With regard to municipalities, the permit application requirements were directed at jurisdictions owning or operating municipal separate storm sewer systems (MS4s) serving populations of 100,000 or more, or contributing significant pollutants to waters of the United States.

State Regulations

The following state regulations pertaining to utilities and service systems would apply to the Proposed Project.

California Integrated Waste Management Board Solid Waste Policies

Assembly Bill (AB) 939, the Integrated Waste Management Act, established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (now the California Department of Resources Recycling and Recovery, or CalRecycle) and local agencies in the implementation of programs geared at (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. AB 939 also included waste diversion mandates that require all cities and counties to divert 50% of all solid waste through source reduction, recycling, and composting activities. The Integrated Waste Management Act also requires that each county provide capacity for solid waste generated within its jurisdiction that cannot be reduced or recycled for a 15-year period (CalRecycle 2012).

Regional Water Quality Control Board

The statutes that govern the activities under the Project that may affect water quality are the federal Clean Water Act (33 USC 1251 et seq.) and the Porter-Cologne Water Quality Control

Act (PorterCologne Act) (California Water Code, Section 13000 et seq.). These acts provide the basis for water quality regulation in the Project Area.

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of water quality control by establishing statewide policies and plans for implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The RWQCB adopts and implements a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan (California Water Code Sections 13240–13247). The Project Area is located east of the Pacific/Salton Divide and is outside the jurisdiction of the San Diego RWQCB. Because of this, the Proposed Project is exempt from classification as a priority development project. Requirements that apply to all land development projects including Standard Projects include implementation of source control and site design BMPs as described in Chapter 4 of the BMP Design Manual. Detailed submittal requirements including documentation of each selected BMP are provided in Chapter 8 of the BMP Design Manual.

Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended by Order 2010-0014-DWQ)

On September 2, 2009, the SWRCB issued a new NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), that became effective July 1, 2010. For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (i.e., CGP) in order to avoid and minimize water quality impacts attributable to such activities. The CGP applies to all projects where construction activity disturbs 1 or more acres of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The CGP requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the Section 303(d) list for sediment (which the Project site does not).

Local Regulations

County of San Diego On-Site Wastewater System Groundwater Policy

On-site wastewater treatment systems discharge pollutants to groundwater, and therefore are regulated by the State Water Code. State Water Code Section 13282 allows RWQCBs to authorize a local public agency to issue permits for and to regulate on-site wastewater treatment systems "to ensure that systems are adequately designed, located, sized, spaced, constructed and maintained." The RWQCB with jurisdiction over San Diego County authorizes the County Department of Environmental Health to issue certain on-site wastewater treatment system permits that ensure compliance with the County of San Diego Onsite Wastewater Treatment Groundwater Policy throughout the County, including within incorporated cities. No city within San Diego County is authorized to issue these permits.

County of San Diego Construction and Demolition Materials Ordinance

The County of San Diego Construction and Demolition Materials Ordinance (Sections 68.508 through 68.518 of the County Code of Regulatory Ordinances) is intended to increase diversion of construction and demolition materials from landfills in order to conserve landfill capacity and extend the useful life of local landfills. The ordinance requires that projects totaling over 40,000 square feet of construction, prepare a debris management plan that specifies the type of project, total square footage of construction, and (among other items) the estimated volume and weight of construction and demolition debris that would be disposed of at a landfill. Applicants of applicable projects are required to submit a performance guarantee (payment) to the County to ensure that the project complies with the diversion standards (i.e., projects shall recycle 90% inert construction and demolition debris and 70% of all other construction and demolition debris) of the Construction and Demolition Materials Ordinance. As the Proposed Project would involve more than 40,000 square feet of construction, it is considered an applicable project under the Construction and Demolition Materials Ordinance.

County of San Diego Best Management Practice Design Manual

The 2019 County of San Diego BMP Design Manual provides guidance for land development and public improvement projects to comply with the 2013 MS4 Permit (Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100). The BMP Design Manual has been updated and replaces the February 2016 version. It is focused on project design requirements and related postconstruction requirements, not on the construction process itself (County of San Diego 2019).

County of San Diego Grading Ordinance

The County Code Title 8, Division 7, Excavation and Grading, Clearing and Watercourses (Grading Ordinance), echoes protections at the federal level by prohibiting any actions or development that would impede water flows, and addresses grading and clearing near watercourses. The Grading Ordinance requires that projects involving more than 200 cubic yards of grading, clearing, and/or removal of natural vegetation obtain a grading permit. Grading permits are discretionary and require compliance with CEQA. Additional information specific to grading permit requirements is discussed in Section 2.5, Geology, Soils, and Seismicity, of this EIR.

Chapter 6 of the Grading Ordinance exists to protect people and property against flood hazards by prohibiting the alteration of the surface of land to reduce the capacity of a watercourse, and prohibit any action that impairs, impedes, or accelerates the flow of water in a watercourse in such a manner that adversely affects adjoining properties. The Grading Ordinance prohibits any land alteration or construction of structures in, upon, or across a watercourse without first obtaining a permit.

Enforcement occurs at the time that grading plans or improvement plans are reviewed during the grading permit process. The County official will not approve grading plans or improvement plans unless the official determines that the proposed grading does not create an unreasonable hazard of flood or inundation to people or property. The Project Area is identified by the Federal Emergency Management Agency as being within Zone D (Appendix K), which indicates that flood risk is undetermined because the agency has not conducted a flood hazard analysis. The Project Area is not downstream of a dam and thus would not be subject to inundation in the event of a dam failure; nor is the Project Area subject to seiche or tsunami (due to the great distance to the ocean or large body of water). In addition, the Project Site is not within any County-identified flood hazard areas (e.g., alluvial fan flooding area) (County of San Diego 2007). Even though the Project Site is not within an identified flood hazard area as defined by either the Federal Emergency Management Agency or the County, the provisions of the Grading Ordinance apply to the Proposed Project facilities because the Project would result in land alteration and construction of structures within a watercourse, as defined by the ordinance.

San Diego County Groundwater Ordinance

The County adopted the San Diego County Groundwater Ordinance in 1991; it was last amended in 2013. The Groundwater Ordinance establishes regulations for the protection, preservation, and maintenance of groundwater resources and is contained within the San Diego Code of Regulatory Ordinances, Title 6, Division 7 Chapter 7 Groundwater Sections 67.701 – 67.750 (County of San Diego 2013). The purpose of the ordinance is to ensure that development does not occur in groundwater-dependent areas of the County unless adequate supplies are available

to serve both existing and proposed uses. Section 67.722 (All Other Projects) of the Groundwater Ordinance regulates all unincorporated areas within the County outside Borrego Valley. For applicable discretionary permit applications, the following findings must be made: (1) For projects using greater than 20 afy or 20,000 gallons per day, groundwater resources must be adequate to meet the groundwater demands both of the project and the groundwater basin if the basin were developed to the maximum density and intensity permitted by the General Plan, and (2) for all other projects, that groundwater resources must be adequate to meet the groundwater demands of the project.

The San Diego Groundwater Ordinance defines a water intensive use as, "Any land use that requires a permit listed in Section 67.711 and is not exempt from this ordinance, and that will require more water than 20 afy or more than 20,000 gallons per day." While there is an initial peak water demand required for Project construction, operational water demands are minimal, and when Project water demands are amortized over the life of the Project, do not represent a water intensive use.

County of San Diego Watershed Protection Ordinance

On May 8, 2013, the San Diego RWQCB adopted a new Municipal Stormwater Permit (NPDES Permit No. R9-2013-0001) that covered the San Diego County Co-permittees. The Municipal Stormwater Permit mandates that the County develop new and updated Runoff Management Plans and Programs, including Water Quality Improvement Plans and a Jurisdictional Runoff Management Plan. These plans were submitted to the RWQCB on June 26, 2015. Permit requirements are generally implemented in the unincorporated County under authority of the Watershed Protection, Stormwater Management, and Discharge Control Ordinance. The amended MS4 Permit, like all previous iterations, requires the County to establish and maintain adequate legal authority to implement all updated Regional MS4 Permit provisions. The Watershed Protection, Stormwater Management, and Discharge Control Ordinance has been amended to ensure that it is current with the minimum requirements of the recently amended Regional MS4 Permit. The amendments include updating terminology and definitions related to land development priority development projects, removal of outdated sections, minor updates to discharge prohibitions, and the incorporation of an optional program to allow development projects to satisfy some of its stormwater compliance obligations at off-site locations

County of San Diego General Plan

Updated (and adopted) in August 2011, the San Diego County General Plan guides future growth in the unincorporated areas of the County and considers projected growth anticipated to occur within various communities. The Land Use Element, Community Services and Infrastructure section contains policies and objectives that were determined to be applicable to Proposed

Project components. Refer to Section 3.1.4, Land Use and Planning, for policies and objectives of the County of San Diego General Plan that are applicable to the Proposed Project.

Coordination among Facility Planning, Financing Programs and Land Use Planning

- **Policy LU-12.1: Concurrency of Infrastructure and Services with Development.** Require the provision of infrastructure, facilities, and services needed by new development prior to that development, either directly or through fees. Where appropriate, the construction of infrastructure and facilities may be phased to coincide with project phasing.
- **Policy LU-12.3: Infrastructure and Services Compatibility.** Provide public facilities and services that are sensitive to the environment with characteristics of the unincorporated communities. Encourage the collocation of infrastructure facilities, where appropriate.

Water Supply

- **Policy LU-8.1:** Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.
- **Policy LU-**8.2: Require development to identify adequate groundwater resources in groundwater dependent areas, as follows:
    - In dependent areas within currently identified groundwater overdrafted basins, prohibit new development from exacerbating overdraft conditions, and
    - In areas without current overdraft groundwater conditions, evaluate new groundwater-dependent development to assure a sustainable long-term supply of groundwater is available that will not adversely impact existing groundwater users.
- **Policy LU-8.3:** Discourage development that would significantly draw down the groundwater table to the detriment of groundwater-dependent habitat.
- **Policy LU-13.1: Adequacy of Water Supply.** Coordinate water infrastructure planning with land use planning to maintain an acceptable availability of a high quality sustainable water supply. Ensure that new development includes both indoor and outdoor water conservation measures to reduce demand.
- **Policy LU-13.2: Commitment of Water Supply.** Require new development to identify adequate water resources, in accordance with State law, to support the development prior to approval.

The following policies identified in the General Plan, Conservation and Open Space Element would be applicable to Proposed Project components:

- **Policy COS-17.1: Reduction of Solid Waste Materials.** Reduce greenhouse gas emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with State law.
- **Policy COS-17.2: Construction and Demolition Waste.** Require recycling, reduction and reuse of construction and demolition debris.
- **Policy COS-17.6: Recycling Containers.** Require that all new land development projects include space for recycling containers.
- **Policy COS-19.1: Sustainable Development Practices.** Require land development, building design, landscaping, and operational practices that minimize water consumption.
- **Policy COS-19.2: Recycled Water in New Development.** Require the use of recycled water in development wherever feasible. Restrict the use of recycled water when it increases salt loading in reservoirs.

Mountain Empire Subregional Plan

The Mountain Empire Subregional Plan (a supplement to the County General Plan) establishes goals and policies to guide development within the areas of Tecate, Potrero, Boulevard, Campo/Lake Morena, Jacumba, and the Mountain Empire Balance which together compose the Mountain Empire Subregion of southeastern San Diego County. The goals and policies of the Subregional Plan are intended to be more specific than those of the County General Plan as they consider the distinct history, character, and identity of Mountain Empire communities.

Policies in the Mountain Empire Subregional Plan that relate to the Proposed Project are presented in Table 3.1.4-4 of this EIR.

Public Facilities and Services

- Uses proposed for property adjacent to substations or transmission line right-of-ways should be reviewed for possible impacts to the power facilities and vice versa.

3.1.8.3 Analysis of Project Effects and Determination as to Significance

The Proposed Project is a solar energy generation and energy storage facility, which includes a switchyard that would be transferred to SDG&E once constructed. For the purposes of this analysis, the switchyard (as described in Chapter 1.2.2 of this EIR) is a component of the Project

and has been analyzed as part of the whole of the action. However, the EIR highlights the specific analysis of the switchyard under each threshold of significance in the event that responsible agencies have CEQA obligations related to the switchyard.

3.1.8.3.1 Water/Wastewater

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not include significance thresholds or guidance for determining significance for impacts to utilities and service systems. Therefore, for the purpose of this EIR, Appendix G of the California Environmental Quality Act (CEQA) Guidelines applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if the project would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Analysis

The Proposed Project would be an unmanned facility that would be monitored and operated from an off-site supervisory control and data acquisition (SCADA) system. For these reasons, the Proposed Project would not require or result in the relocation or construction of new or expanded water or wastewater treatment, natural gas, or telecommunications facilities which could cause significant environmental effects. Furthermore, the Proposed Project is a solar energy generation and storage facility that would generate electric power through solar energy and thus would not require or result in the relocation or construction of new or expanded electric power facilities as a result of the Proposed Project.

Switchyard

The switchyard would also be an unmanned facility that would be monitored and operated from an off-site SCADA system. For these reasons, the switchyard would not require or result in the relocation or construction of new or expanded water or wastewater treatment, natural gas, or telecommunications facilities which could cause significant environmental effects. Furthermore, the switchyard is a component of an energy facility that would generate electric power and thus would not require or result in the relocation or construction of new or expanded electric power facilities as a result of the Proposed Project

Water

The following analysis focuses on whether there are sufficient water resources to serve the Proposed Project. Additionally, the following analysis briefly discusses stormwater and drainage facilities, which are more fully discussed in Section 2.7, Hydrology and Water Quality, of this EIR.

The Project site is located in a groundwater-dependent area of San Diego County. The Project would use groundwater from two existing on-site groundwater wells (Well #2 and Well #3) in the Jacumba Valley alluvial aquifer. These two wells were previously used as agricultural wells for the Jacumba Valley Ranch and Bornt Farms (Dudek 2020). Both wells have been tested and documented to produce sufficient water supply for the Project as discussed in more detail below. Estimated water demand by the Proposed Project during the construction phase, operation and maintenance, and decommissioning phases is discussed in more detail in the following subsection.

Estimated Groundwater Demand by the Proposed Project

Construction

Estimated construction water demand by construction activity is provided in Table 3.1.8-1. As shown in Table 3.1.8-1, the Project would require a maximum water demand of approximately 358,436 gallons per day (approximately 250 gallons per minute) for approximately the first 6 weeks during grading activities. Total construction water demand would be approximately 140 af (af) over 365 days. This demand constitutes the peak of the water demand for the Proposed Project and would be of short duration (365 days).

Operation and Maintenance

During operation, the Proposed Project would require water for panel washing up to four times per year. Similar solar facility operations use approximately 0.3 gallons of water per square yard of panel. Based on the planned 90 MW capacity of the Proposed Project, approximately 300,000 panels at approximately 21 square feet per panel totaling 6,259,500 square feet (695,500 square yards) may be washed up to 4 times per year. Estimated operational water demand by operational activity is provided in Table 3.1.8-2. As shown in Table 3.1.8-2, annual operational water demand for would be approximately 2.6 afy for panel washing, and approximately 8.4 afy for irrigation of the landscape buffers. Therefore, the total operational water demand would be approximately 11 afy. It should be noted that actual water use during operation for panel washing may be considerably less based on documented water demand for the nearby active Jacumba Solar project. Project operations would go on for approximately 35 years.

Decommissioning

It is estimated that the amount of water necessary to decommission the Proposed Project would be less than that required for construction, because there would be no need to use water for concrete mixing or to hydrate and compact on-site fills. Estimated decommissioning water demand by activity is provided in Table 3.1.8-3. As shown in Table 3.1.8-3, the activities associated with decommissioning would not include grading, and based on the estimates calculated for construction, water demand for decommissioning dust abatement would be approximately 40 af of water total. Additional equipment washing and modest compaction needs, if necessary, would require approximately 10 af. Thus, the total estimated water demand for decommissioning is approximately 50 af. Project decommissioning would require 50 af over a 10-month period at the end of the useful life for dust abatement, equipment washing and compaction.

Total Estimated Water Demand for Proposed Project

In summary, the Project would use up to 140 af (45.6 million gallons) during construction for 1 year, approximately 11 afy during operations and maintenance over 38 years, and 50 af for a 10-month period during decommissioning.

Estimated Groundwater Demand by all Current Users of the Basin

Below is a discussion of current groundwater demand for the various other parties known to extract groundwater from the Jacumba Valley alluvial aquifer.

Current groundwater demand from the Jacumba Valley alluvial aquifer includes extraction by JCSD, Jacumba Valley Ranch Water Company, and a few potential domestic well owners. The Project site, which was historically produced an excess of 2,000 afy, no long extracts groundwater for agriculture. The Jacumba Valley Ranch Water Company, which has historically extracted an excess of 242 afy, currently supplies approximately 5 afy for three ranch homes, two gas stations, and two fire hydrants (Barrett 1996; McCullough, pers. comm. 2015).

JCSD continues to extract both potable and non-potable groundwater from the Jacumba Valley alluvial aquifer. At present, JCSD supplies potable water to 239 connections from JCSD Well #4. .Based on the number of connections and an estimated 0.5 afy per connection, JCSD potable water demand is estimated to be 119.5 afy (Appendix J). This estimate roughly coincides with average historical water demand from 1991 to 1995 (average 119 afy), and conservatively overestimates more recent production data received by the previous JCSD General Manager in 2014 (Appendix J).

JCSD also supplies non-potable water for commercial sale. Historically, JCSD has supplied non-potable water from Well #6, a fractured rock well not screened in the Jacumba Valley alluvium. Beginning in 2016, JCSD began supplying non-potable water from the Highland Center Well

and the Park Well, both screened in the Jacumba Valley alluvium. Maximum annual groundwater extraction from the Jacumba Valley alluvial aquifer by JCSD for non-potable water use is 53.6 afy but in 2018 JCSD was estimated to produce 4 afy on non-potable water from the Highland Center Well and Park Well (Appendix J).

In addition, there may be small volumes of groundwater (approximately 3 afy) extracted from domestic wells located in the residential area in Jacumba Hot Springs. Table 3.1.8-4 provides water demand from the Jacumba Valley alluvial aquifer.

Estimated Future Demand by all Users of the Basin

Table 3.1.8-5 provides historic, current and future water demand during the Proposed Project's construction and ongoing operations. As shown in Table 3.1.8-5, historically groundwater demand from the Jacumba Valley alluvial aquifer has been estimated to be up to 2,066 afy (Barrett 1996). However, a drastic reduction in groundwater production has occurred since agriculture irrigation ceased on Jacumba Valley Ranch.

The current groundwater demand from the Jacumba Valley alluvial aquifer from all users is estimated to be 131.5 afy (Table 3.1.8-5). Future demand is expected to include JCSD potable and non-potable demand, Jacumba Valley Ranch Water Company, and private domestic users. Potable groundwater use from JCSD, the Jacumba Valley Ranch Water Company, and private domestic users. JCSD has the potential to serve non-potable from the Highland Center and the Park Well. JCSD completed a manganese water treatment system for Wells #7 and #8 that is serving all potable water demands for its customers (Appendix J). This treatment system came online on March 6, 2020. Wells #7 and #8 source water from the fractured rock aquifer rather than the Jacumba Valley alluvial aquifer. The future projected water demand conservatively evaluates the Proposed Project and other projects taking place concurrently. An additional 140 af would be extracted during Proposed Project construction, resulting in a 1-year extraction of 442 af from the aquifer, assuming other groundwater users continue their current estimated extraction amounts. After Proposed Project construction, ongoing groundwater productions from the alluvial aquifer are estimated to be 30.3 afy, based on 11 afy of Proposed Project water use for operations and maintenance, 11.3 af of continuous non-potable water use by JCSD and 8 afy for private domestic and Jacumba Valley Ranch Water Company (Table 3.1.8-5). Additionally, the Proposed Project would extract groundwater for decommissioning in the future.

Estimated Groundwater Supply

Supply from Well No. 2 and Well No. 3

As discussed above, water for the Proposed Project would be supplied by on-site groundwater wells #2 and #3 screened in the Jacumba Valley alluvial aquifer. The Groundwater Investigation

Report (Appendix J) inspected and tested for suitability the two on-site groundwater wells that are proposed to supply groundwater to the Proposed Project (Well #2 and Well #3). The tests obtained approximate long-term production rates, estimated drawdown at off-site wells and groundwater-dependent habitat, and estimated aquifer properties. These tests determined a maximum annual production of approximately 511 afy from well #2 and 564 afy from well #3, which are significantly greater than the Project water demand of 140 af of water during Project construction (1 year), 11 afy for ongoing operations and maintenance (35 years), and 50 af for decommissioning and dismantling (1 year).

Groundwater Storage

The Groundwater Investigation Report (Appendix J) found that the current groundwater in storage within the Jacumba Valley alluvial aquifer, including the portion of the alluvial aquifer located in Mexico, is conservatively estimated to be 9,005 af (Appendix J). Table 3.1.8-6 provides a breakdown of the current groundwater storage within the Jacumba Valley alluvial aquifer.

The Groundwater Investigation Report (Appendix J) evaluated the long-term groundwater availability in context of the current available groundwater in storage, historical groundwater levels, and water demand. The volume of groundwater in storage varies depending on the rate of recharge and the volume of water pumped from storage (water demand). Sustainable groundwater availability is less than the historical average groundwater production rate of 2,066 afy from 1932 to 1977. This is observed during dry periods when the Jacumba Valley experienced groundwater overdraft, as indicated by declining groundwater levels in the alluvial aquifer wells. Pumping by Jacumba Valley Ranch between 2003 and 2013 also resulted in groundwater level declines in the alluvial aquifer. Bornt Farms grew lettuce and spinach on up to 465 acres, year-round, with an estimated maximum extraction rate of 995 af per year (Barrett 1996; UC Davis 2011). Due to Bornt Farms irrigation and below average precipitation recorded in the contributing watersheds over the last decade, the water demands exceeded available recharge, resulting in groundwater level decline. Several years of drought and limited non-potable extraction by JCSD likely contributed to the current groundwater level decline.

The Proposed Project proposes to extract groundwater for 1 year at a maximum quantity of 140 af. This one time use of groundwater for construction is approximately 10% of the annual production quantity of Bornt Farms, and 5% of the annual production quantity of Jacumba Valley Ranch. After Proposed Project construction, groundwater extraction for operation and maintenance would be 0.9% of the annual production quantity of Bornt Farms and 0.5% of the annual production quantity of Jacumba Valley Ranch for the maximum groundwater historically extracted from the Project site. Groundwater extraction for decommissioning and dismantling would be 5% of the annual production quantity of Bornt Farms and 2% of the annual production quantity of Jacumba Valley Ranch for the maximum groundwater historically extracted from the Project site.

Supply and Demand Comparison

The Proposed Project proposes to use 140 af during construction for 1 year. Assuming no recharge to the aquifer, the Proposed Project alone would reduce groundwater in storage by 1.6% during construction. As discussed above, the estimated maximum extraction from all known sources during the period of Proposed Project construction is 442 af. Thus, the total reduction of groundwater in storage from all sources during the construction period is estimated to be 4.9%. Assuming a Proposed Project lifetime of 40 years (1 year of construction, 38 years of operation and maintenance, and 1 year of decommissioning), the Groundwater Investigation Report found that the Proposed Project would use 619 af of groundwater from the alluvial aquifer total. As discussed above, the most recent estimates calculated groundwater in storage in the aquifer to be 9,005 af. Other groundwater uses within the basin including reasonably foreseeable projects would use 1,054 af of water. This equates to a total water demand of 1,673 af, which results in an 18.6% reduction in storage over 40 years, assuming no recharge to the aquifer. This calculation demonstrates that groundwater would not be depleted to 50% or less of the estimated basin storage capacity of 9,005 af. Since the Project would not exceed the 50% reduction in groundwater storage threshold, the peak demand of construction would be of short duration, and other future groundwater demands would be met, there would be sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. In addition, the Proposed Project would have sufficient water supplies available to serve the project and reasonable foreseeable future development during normal, dry and multiple dry years. Impacts would be **less than significant**.

Switchyard

The switchyard would also be an unmanned facility that would be monitored and operated from an off-site SCADA system. For these reasons, the switchyard would not require or result in the relocation or construction of new or expanded water or wastewater treatment, natural gas, or telecommunications facilities which could cause significant environmental effects. Furthermore, the switchyard is a component of an energy facility that would generate electric power and thus would not require or result in the relocation or construction of new or expanded electric power facilities as a result of the Proposed Project.

The switchyard component of the Proposed Project will be constructed along with the other components of the Project; therefore, this component is part of the approximately 140 af that will be required for the Project's construction. As discussed above, the Groundwater Resources Investigation Report (Appendix J) found that the current groundwater in storage within the Jacumba Valley alluvial aquifer is estimated to be 9,005 af, and that the total depletion in

groundwater in storage as a result of the Proposed Project's construction would be substantially less than the 50% reduction in storage County threshold even assuming no recharge to the aquifer, the peak demand for water would be of short duration, and other cumulative groundwater demands would be met.

The switchyard's construction water demand would be of even shorter duration and would not require as much grading or dust control. In addition, the switchyard's annual operating demand, post-construction, would be approximately 0.01 af of water annually, which is such a minimal amount of af that it would not exceed the County threshold of 50% reduction in groundwater storage assuming no recharge to the aquifer. The pumping rates from onsite wells equate to maximum annual production of approximately 511 afy from Well #2 and 564 afy from Well #3, which are significantly greater than the switchyard's water demand of 0.01 af of water for ongoing operations and maintenance. Therefore, there are sufficient water supplies available to serve the switchyard and reasonably foreseeable future development during normal, dry and multiple dry years and the switchyard would not require or result in the relocation or construction of new or expanded water facilities. Impacts would be **less than significant.**

Stormwater

The Drainage Report prepared for the Proposed Project (Appendix I) analyzed potential impacts of the Project in relation to the hydrology and drainage patterns. Watershed hydrologic run-off calculations were performed for the 100-year storm event using the San Diego County Unit Hydrograph Program (SDUH). Additionally, an analysis of the 100-year flood level was conducted using the Army Corps of Engineers (ACOE) Hydrologic Engineering Centers River Analysis System (HEC-RAS) software (Appendix I). The SDUH and HEC-RAS analysis estimated on-site flood depths for a 100-year flood event are greater than six feet for an area concentrated primarily between Stations 20 and 68 at a maximum of 5 feet, with an average depth of 2 two to 3 three feet across the portion of the Project site subject to flooding.

The Drainage Report (Appendix I) determined that the Proposed Project would produce approximately 1.9 acres (0.0030 square miles) of impervious area. The impervious area would include the proposed photovoltaic tracker pile areas, inverter skid platforms, the battery energy storage areas and the additional substation and switchyard pads. The proposed all weather access road would remain pervious. The Drainage Report determined that the additional impervious area represents 0.0027% of the watershed that is contributing to the stream passing through the proposed site. This increase in impervious area constitutes a small enough area that would not change the overall drainage pattern. The water runoff will flow overland across the Project site in a similar manner as it does in the pre-developed state. Thus, the additional impervious area would have minimal to no impact on existing watershed hydrologically (Appendix I).

As discussed in Section 3.1.8.2 above, a range of state and local water quality regulations and ordinances apply to the Project that require the applicant to submit and implement a Project-specific SWPPP during construction and a Standard SWQMP for operation and maintenance activities.

Because the Project would consist of more than 1 acre, the applicant would be required to submit a Notice of Intent to the SWRCB to obtain approval to carry out construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction-phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports. The SWPPP would apply to the Project as a whole and would include reference to the major construction areas, temporary materials staging areas, access roads, and work associated with generation tie-line facilities. BMPs to be implemented in accordance with the SWPPP would address alteration of drainage patterns, velocity and peak flow rates, and erosion control. The exact location and type of temporary BMPs to be installed during construction would depend on site-specific conditions, `the construction schedule, and proposed activities, all of which would be outlined in the construction SWPPP. Typical BMPs for similar projects include energy dissipaters, silt fences, fiber rolls, gravel/sand bags, construction road stabilization, and stabilized construction entrances. As the project-specific SWPPP is prepared, the location, type, and number of specific BMPs may be refined based on the final designs to most effectively achieve the objective of reducing turbidity and other pollutant loads in stormwater runoff. The provisions of the CGP ensure that site-specific conditions are taken into consideration when developing the construction SWPPP, that personnel developing and implementing the construction SWPPP are qualified, and that BMPs are adequately monitored and maintained.

Permanent water quality BMPs to be installed and maintained on the Project site, per the County of San Diego's BMP Design Manual, are also identified in the Project Standard Stormwater Quality Management Plan (SWQMP) (Appendix K). Private development projects are required to implement measures to ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable; and receiving water quality objectives are not violated throughout the life of the Project. The SWQMP includes details of construction and post-construction BMPs to address potential and anticipated water quality impacts. Control measures to reduce the discharge of stormwater pollutants to the maximum extent practicable would include:

- Implementation of site design and source control BMPs
- Inclusion of low-impact development features that conserve natural features, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff

- Compliance with requirements for construction-phase controls on sediment and other pollutants
- Outlet protection (e.g., energy dissipaters and velocity dissipation devices)
- Inclusion of infiltration swales where feasible to reduce localized increases in peak runoff

Velocity dissipaters would include lining the outlet of the proposed engineering channels with coarse rocks and boulders, to protect the natural banks from scour and increase the roughness of the channel to slow the velocity of flows exiting the site. In addition, infiltration swales may be installed within certain sub-basins within the Project site to accommodate small, localized increases in peak flow under a 100-year storm event. These measures would be effective at minimizing the potential adverse effects of all Project-related increases in localized peak flow rates (i.e., around the base of solar panels).

As described in more detail in Section 2.7, Hydrology and Water Quality, the Proposed Project would not result in changes to the rate, volume, and location of stormwater runoff, and would avoid the Carrizo Wash and Boundary Creek watercourses that run through the site. The Project would also implement the required Standard SWQMP, SWPPP, and requirements to obtain permits from the ACOE and RWQCB pursuant to the CWA. In addition, with the implementation of mitigation measure **M-HYD-1** (perimeter fencing design), as described in Section 2.7, Hydrology and Water Quality, the exiting drainage patterns of the Project site would be maintained and flood water would be allowed to pass through the Project site unaltered. The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

Because implementation of the operational BMPs per the SWQMP and the construction BMPs per the SWPPP is a condition of the Major Use Permit, and because the drainage study has demonstrated the Proposed Project has been designed to maintain existing drainage patterns (see Appendices I and K), the Proposed Project would not require the construction of new stormwater drainage facilities beyond what is described and included within the Project's SWQMP (Appendix K) and analyzed in Section 2.7, Hydrology and Water Quality. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded storm water drainage, the construction or relocation of which could cause significant environmental effects. Impacts would be **less than significant**.

Switchyard

Stormwater runoff from the switchyard site is anticipated to be minimal during construction and operation. The switchyard site would be included as a component of the SWPPP

prepared for the Project site. The SWPPP identifies all BMPs for the construction that would be implemented to minimize disturbance, protect slopes, reduce erosion, and limit or prevent various pollutants from entering surface water runoff. The switchyard site is also included in the grading plans prepared for the larger Project site. The grading plans would also include details on the location and type of BMPs necessary to reduce the potential for Project-induced erosion and scour, including temporary BMPs to be implemented during construction (per the statewide CGP), and permanent BMPs to be installed and maintained (per the County SWQMP). Permanent water quality BMP measures would ensure that the development of the switchyard component will not produce pollutant discharges and runoff flows to the maximum extent practicable. The Proposed Project's SWQMP would include details of construction and post-construction BMPs to address potential and anticipated impacts from stormwater runoff on the switchyard site. Therefore, the switchyard would not require the construction of new stormwater drainage facilities beyond what is described and included within the Project's SWQMP (Appendix K) and analyzed in Section 2.7, Hydrology and Water Quality. Therefore, impacts would be less than significant.

3.1.8.3.2 Solid Waste

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not include significance thresholds or guidance for determining significance for impacts to utilities and service systems. Therefore, for the purpose of this EIR, Appendix G of the CEQA Guidelines applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. A significant impact would result if the project would:

- 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.
- Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Analysis

Wastes generated by construction of the Proposed Project would primarily consist of concrete, wood, and scrap metal that would be collected for recycling on the site to the extent possible, and would be sent to off-site recycling facilities where feasible. Total construction waste sent to local landfills is not anticipated to be substantial. Construction wastes could be dispersed among the landfills nearest to the Project site, which have sufficient remaining capacity to meet existing solid waste demands in addition to the waste from construction of the Proposed Project. Minimal wastes would be generated during operation of the facility, as the Project would be an unmanned facility that would be monitored remotely.

During decommissioning of the facility, Project components would be recycled to the extent possible. Therefore, it is anticipated that wastes would be similar to those generated during construction. Though exact landfill capacities at the time of decommissioning cannot be known at this time, it is currently anticipated that approximately 80% of the materials that make up the system, (a combination of aluminum, glass, steel, copper, and concrete), would be recyclable . The remaining materials would be sent to a landfill during decommissioning. Based on the requirement of the Integrated Waste Management Act that the County provide for sufficient solid waste capacity in its landfills for a 15-year period (to be periodically updated), it is anticipated that the local landfills would have capacity to accept the waste from decommissioning activities. Total waste sent to local landfills during construction, operation, and decommissioning of the Proposed Project is not anticipated to be substantial.

Overall, for the reasons stated above, impacts to local solid waste collection, transfer, and disposal capacities as a result of the Proposed Project would be **less than significant.**

Switchyard

Wastes generated by construction of the switchyard would primarily consist of concrete, wood, and scrap metal that would be collected for recycling on the site to the extent possible, and would be sent to off-site recycling facilities where feasible. Total construction waste sent to local landfills would not be substantial. Switchyard construction wastes could be dispersed among the landfills nearest to the Project site, which have sufficient remaining capacity to meet existing solid waste demands in addition to the waste from construction of the Proposed Project. Minimal wastes would be generated during operation of the switchyard, as the switchyard would be an unmanned facility that would be monitored remotely.

Overall, for the reasons stated above, impacts to local solid waste collection, transfer, and disposal capacities as a result of the switchyard would be **less than significant.**

3.1.8.4 Cumulative Impact Analysis

The geographic extent for the analysis of cumulative impacts associated with utilities consists of southeastern San Diego County. This geographic extent is appropriate because utilities are provided by local jurisdictions or districts. Cumulative impact analysis for utilities has been conducted using the projects in Table 1-4 in Chapter 1 of this EIR.

As discussed above, southeastern San Diego County consists of several small rural communities lacking municipal water and sewer utility systems that rely on groundwater for water supply and private septic systems for sewer. So while increased development and population growth can lead to additional funds available to provide additional public services to maintain service ratio

standards, the lack of water and sewer infrastructure in the Proposed Project area severely limits the potential for utilities to be augmented by incremental increases in funding.

3.1.8.4.1 Water

As indicated in Table 1-4, several utility-scale renewable energy projects are proposed for southeast San Diego County, including wind and solar projects, and supporting infrastructure, such as transmission lines and electrical substations as well as some smaller residential and other public facilities projects. Based on foreseeable renewable energy projects, JCSD is proposing to extract up to 290 af of groundwater from the Highland Center and Park Wells for construction of five renewable energy projects. Water demand from all reasonably foreseeable projects includes: 123 af for the Campo Wind Project and 50 af for the Boulder Brush Facilities, 76 af for the Torrey Wind project, 37 af for the Rugged Solar project and 4 af for the Cameron Solar project (all values rounded to the nearest acre-foot) with the operation and maintenance water demand for each project as follows: 7 afy for Torrey Wind, 0.25 afy for Campo Wind and 0.03 afy for Cameron Solar. With many of these projects expected to undergo construction in the next few years, the JCSD will experience increasing demands on groundwater resources, associated in particular with the construction phase of these projects. Certain residential, commercial, and/or institutional projects seeking permits and approvals in the area could also contribute to long-term demands on groundwater resources. Because this area of the County is entirely groundwater-dependent, water systems are limited to private wells for domestic and agricultural purposes, and small community water systems that serve a limited number of customers. As discussed in Section 3.1.8.3.1 above and in Table 3.1.8-5 below, the Proposed Project, along with other proposed project in the cumulative scenario, would not require or result in the construction of new off-site water or wastewater treatment facilities because the Project would be an unmanned facility that would be monitored remotely and water needs will be met through extraction of groundwater from on-site wells. The other renewable energy and transmission projects in the area would employ similar methods for water needs as the Proposed Project and would not likely require new or expanded water or wastewater treatment facilities. The JCSD project to develop a new well at the existing monitoring well site know as Park Well, would results in an additional potable water supply in the Jacumba community and an available increase in JCSD capacity. This well would tap into a different groundwater source than the existing wells intended to be used for the construction and operation supply of cumulative projects.

Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact**.

3.1.8.4.2 Stormwater Drainage Facilities

The Proposed Project includes the development of stormwater drainage facilities, as described in the Project's SWQMP, which would be adequate to serve the Project's increase in peak runoff and

100-year peak flow events. No other cumulative project would drain into the proposed drainage facilities developed for the Proposed Project, and each cumulative project would address stormwater flows on a site-by-site basis. The Proposed Project, along with other projects occurring in the area, would be required to comply with applicable federal, state, and local water quality and stormwater drainage regulations (see Section 2.7, Hydrology and Water Quality). The Proposed Project would not require or result in the construction of new or additional stormwater drainage facilities beyond what is included as part of development of the Project. As such, the Proposed Project would not cumulatively contribute to a significant cumulative impact regarding the construction of new stormwater drainage facilities.

Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact**.

3.1.8.4.3 Wastewater Treatment

As discussed above, the Proposed Project would not include an on-site private septic system to treat wastewater. The Project would be an unmanned facility that would be monitored remotely. Therefore, the Proposed Project would **not contribute to a cumulatively considerable impact relative to wastewater treatment systems.**

3.1.8.4.4 Solid Waste

As discussed above, construction of the Proposed Project would generate construction wastes that would be recycled to the extent possible. The waste generated by construction that would be sent to local landfills is not anticipated to overwhelm the remaining capacity of local landfill facilities such that these facilities would not be able to serve existing demand. Area landfills have sufficient capacity to accommodate the minor volume of waste expected to be generated during operation of the Proposed Project. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact.**

Although exact volumes are unknown, construction of reasonably foreseeable projects in the area would generate wastes which would be transported to a landfill for disposal. Each cumulative project would comply with the County of San Diego's Construction and Demolition Materials Ordinances as applicable. The same landfills used during construction and operation of the Proposed Project would likely be used by waste haulers to dispose of wastes generated in the Project area by reasonably foreseeable cumulative projects. However, due to the temporary nature of construction and due to the remaining capacities of area landfills as discussed above (the Sycamore and Otay Landfills have a combined remaining capacity of over 135 million cubic yards (CalRecycle 2016a, 2016b)), and because construction of all reasonably foreseeable cumulative projects would not necessarily occur concurrently with the construction of the Proposed Project, local and regional landfills and waste haulers are anticipated to have sufficient

remaining capacity to serve all reasonably foreseeable cumulative projects. Therefore, the Proposed Project **would not contribute to a cumulatively considerable impact** relative to solid waste collection, transfer, and disposal capacities during construction.

3.1.8.5 Significance of Impacts Prior to Mitigation

The Proposed Project's impacts, including cumulative impacts, to utilities and service systems, including water, wastewater treatment or stormwater drainage, electric power, natural gas, and telecommunications facilities, and solid waste hauling and disposal would be **less than significant.**

3.1.8.6 Mitigation Measures and Design Considerations

No mitigation measures related to utilities and service systems are necessary.

3.1.8.7 Conclusion

The Proposed Project's impacts, including cumulative impacts, to utilities and service systems, including water, wastewater treatment or stormwater drainage, electric power, natural gas, and telecommunications facilities, and solid waste hauling and disposal would be less than significant.

Table 3.1.8-1
Estimated Construction Water Demand

Activity	Description	Total Estimated Water Demand (af)[1]
Site preparation (clearing, grubbing, grinding, and dust control)	Limited clearing and grubbing will be required for fallowed agricultural land at Jacumba Valley Ranch. Assume pre-weeding od soils with 1-inch of water over 570.5 acres	48
Grading	Grading of 264,000 cubic yards. Uses estimated of on-site moisture and optimum soil of moisture to gain compaction to determine required input of water	39
Concrete	Estimated based on 65 enclosures with concrete pads measuring 14 feet by 44 feet by 1 foot. One substation pad measuring 110 feet by 215 feet by 1.5 feet. Assumes concrete free installation of beams driven into the soil using a pile/vibratory/rotary driving technique. +100% contingency added for uncertainty. Additional 15% added for additional concrete use for fence posts, lighting posts etc.	1
Dust Abatement[2]	Value used from Jacumba Solar Construction Estimate: (6) 3,000-gallon water trucks per day	37
Other construction needs	Water necessary for other construction needs, such as filling tanks for fire protection; washing stations for vehicles/equipment (noxious weed mitigation); the 1,500-foot gen-tie line; and hydroseeding	15
	Total Construction Water Use	**140**

Source: Appendix J

1. 1 acre-foot equals 325,851 gallons.
2. Dust abatement is included in the estimate for initial site preparation (first 40 days); therefore, general dust abatement was assumed to occur over 104 days (i.e., the remainder of the construction phase).

Table 3.1.8-2
Estimated Operational Water Demand

Activity	Estimated Water Demand (af)
Panel washing (up to 4 times per year)	2.6
Landscape buffer	8.4
Total Water Use per Year	**11**

Source: Appendix J

Table 3.1.8-3
Estimated Decommission and Dismantling Water Demand

Activity	Estimated Water Demand (af)
Decommissioning Dust Abatement	40
Equipment Washing and Compaction	10
Total Water Use per Year	**50**

Source: Appendix J

Table 3.1.8-4
Jacumba Valley Alluvial Aquifer Existing Water Demands Outside of Proposed Project

Groundwater Extraction Sources	Wells Names	Total Water Demand (afy)
Jacumba Valley Ranch Water Co.	Well KM	5[a]
Jacumba Community Services District (potable)	Well 4	119.5[b]
Jacumba Community Services District (non-potable)	Highland Center Well, Park Well	53.6[c]
Potential Domestic Wells	Private Domestic Wells	3[d]
	Total Water Demand	181.1

Source: Appendix J

a. Jacumba Valley Ranch Water Company has seven connections: three ranch homes, two gas stations, and two fire hydrants. No water demand was assigned to the fire hydrants. Water demand is estimated at approximately 1 acre-foot per connection.
b. Estimated based on 0.5 afy for 239 potable Jacumba Community Services District connections.
c. Maximum demand based on meter reads from February 2017 to February 2018.
d. Not all domestic wells are currently active or known; however, a consumptive water demand of 0.5 afy has been assigned to up to six potential domestic wells

Table 3.1.8-5
Estimated Jacumba Valley Alluvial Aquifer Groundwater Demand

Land Use	Historical Water Demand (afy)	Current Water Demand (afy)	Future Demand During Project Construction (afy)	Future Ongoing Project Water Demand (afy)	Future Maximum Demand (af)
Project site (Jacumba Valley Ranch; Bornt Farms)	2,066; 741-995	0	140	11	140
Jacumba Valley Ranch Water Company	242	5	5	5	5
Private domestic[a]	3	3	3	3	3
JCSD (potable)	80-146[b]	119.5	0[c]	0[c]	0
JCSD (non-potable)	53.6	4[d]	4 (ongoing)[d] 290 (one-time use)[e]	4 (ongoing)[d] 7.3 (future O&M)	294[e]
Total water estimated Demand	**2,212[f]**	**131.5**	**302**	**19.3**	**302**
Total water estimated demand with Project	**2,212[f]**	**131.5**	**442**	**30.3**	**442**

Source: Appendix J
Notes: afy = acre-feet per year; JCSD = Jacumba Community Services District.

[a] Not all domestic wells are currently active or known; however, a consumptive water demand of 0.5 afy has been assigned to up to six potential domestic wells.
[b] JCSD #1 and #2 supplied all potable demands for the community of Jacumba Hot Springs until JCSD Wells #3 and #4 were drilled in the early 1970s. As of March 2020, JCSD is no longer pumping water for potable supply from the alluvial aquifer.
[c] Future JCSD potable water demand will be supplied from Wells #7 and #8, completed in the fractured rock aquifer.
[d] Assumes current groundwater demand based on Dudek metered data from 2018.
e Water demand from all reasonably foreseeable project includes: 50-af for Boulder Brush, 76 af for Torrey Wind, 123 af for Campo Wind, 37 af for Rugged Solar and 4 af for Cameron Solar (all values rounded to the nearest acre-foot). O&M water demand is 7 afy for Torrey Wind, 0.25 afy for Campo Wind and 0.03 afy for Cameron Solar.
f Assumes maximum concurrent water demand from JCSD potable demand and Jacumba Valley Ranch.

Table 3.1.8-6
Jacumba Valley Alluvial Aquifer Groundwater in Storage Estimate

Alluvial Aquifer Compartments*	Area (acres)	Leighton Alluvial Thickness (1991) (feet)	Average Alluvial Thickness (feet)	Depth to Water 2018 (feet below ground surface)	Average Saturated Thickness (feet)	Specific Yield (unitless)	Storage (af)
A	240.94	50+	37.5	35.14	2.36	0.10	56.86
B	104.70	50+	50	35.14	14.86	0.10	155.58
C	439.40	120+	81.75	43.5	38.25	0.10	1,680.71
D	1,082.73	100+	117	57.87	59.13	0.10	6,402.18
E	193.61	80+	95.0	58.36	36.64	0.10	709.39
Total Groundwater in Storage (rounded af)							**9,005**

* **Compartment Details:**
A Aquifer thickness estimated from an average alluvial thickness observed in well log Lwel 6933 and B-12 (Leighton 1991a). Depth to water extrapolated from Well #3 (Lwel 16419)
B Aquifer thickness defined by Leighton 1991a. Depth to water extrapolated from Well #3 (Lwel 16419)
C Aquifer thickness estimated from Well #3 (Lwel 16419), Well #2 (Lwel 1814), Test Hole (L well 20450), and Leighton B-7 (Leighton 1991a). Depth to water averaged from Well #3 (Lwel 16419) and Well #2 (Lwel 1814).
D Aquifer thickness estimated from Well J2 (Swenson 1981), Test Holes (Lwell 17922 and 201411), and the Southwest Irrigation Well (Lwell 18031). Depth to water estimated from Well #1.
E Aquifer thickness estimated from the Highland Center Well (Lwell 001506), and Wells J3 and J4 (Swenson 1981). Depth to water estimated from an average of the Highland Center Well (Lwel 001506) and the Park Well.

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3.2 Effects Found Not Significant During Initial Study

This section provides a discussion of the environmental issue areas where the effects were identified as no impact or less than significant during preparation of the Initial Study and did not require further analysis. For the Proposed Project, the only issue area discussed in this section is population and housing. This environmental issue area was screened out as part of the preliminary evaluation and scoping process for the JVR Energy Park Project (Project). Further, no public comments were received during the scoping process indicating that this issue area should be addressed further. The Initial Study was made available by the County of San Diego (County) at the time the Notice of Preparation was released (March 7, 2019) and is included in Appendix A of this Environmental Impact Report. A summary of the findings from the Initial Study for population and housing is provided in this section.

3.2.1 Population and Housing

The County's Guidelines for Determining Significance do not include sections on Population and Housing. Therefore, for purpose of this EIR, CEQA Guidelines Appendix G applies to the direct and indirect impact analysis, as well as the cumulative impact analysis.

A significant impact would result if the Project would:

- 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)); or,
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The JVR Energy Park Project (Project) would develop a utility-scale solar energy generation and storage facility that improves electrical reliability in the San Diego region and supplies California and the County of San Diego with additional renewable energy supplies. During construction and decommissioning, the Proposed Project would employ a total of approximately 500 workers, with a daily maximum of 500 workers at the peak of construction and approximately 250 workers during decommissioning. It is anticipated that workers from the San Diego region to the west or Imperial Valley to the east would construct and decommission the Proposed Project. Because of the presence of locally available workers in San Diego County, and because of the relatively short duration of construction (approximately 13 months) and decommissioning (approximately 10 months), workers are not expected to relocate to the area with their families.

During the operational phase, the Proposed Project would be an unmanned facility that would be monitored remotely and would not have any full-time personnel on site. Up to five people may periodically be on site during operations for inspections, maintenance, and repair activities. The operational workers are likely to come from the San Diego region to the west, and are also not anticipated to relocate to Jacumba Hot Springs or the Mountain Empire Subregion given their limited time at the site annually. Accordingly, the limited scale of the Proposed Project construction, operation and decommissioning would not affect the population base within the Project area.

The Proposed Project would not induce substantial unplanned population growth in the community of Jacumba Hot Springs or the Mountain Empire Subregion. The Proposed Project does not include a residential component that would cause permanent or temporary population increases, nor would it extend roads or infrastructure (e.g., water, sewer, etc.) into previously unserved areas. Additionally, the Proposed Project would not include any physical or regulatory changes that would remove a restriction to, or encourage population growth in the area, including, but not limited to, the following: large-scale residential development; accelerated conversion of homes to commercial or multifamily use; regulatory changes including General Plan Amendments encouraging population growth, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. Therefore, the Project would not result in a direct or indirect impacts to population and housing.

The electricity generated by the Proposed Project would be fed directly into the regional electricity grid and would not serve or facilitate any growth of the local population directly. The Proposed Project is intended to support the state's transition to 100% renewable energy generation and to improve electrical reliability in the San Diego region as a whole. Accordingly, the Project would supplement the region's energy supply and would not encourage housing growth or result in growth-inducing impacts in the Jacumba Hot Springs or the Mountain Empire Subregion.

The NOP identified one residence on the Project site; however, subsequently a Historical Resources Technical Report (2020) was prepared for the Proposed Project which identified four unoccupied dwellings. These structures are proposed to be demolished as part of the Proposed Project. The loss of four unoccupied dwellings would not result in a substantial loss of housing.

Thus, the Proposed Project would not result in a substantial population increase in the community of Jacumba Hot Springs or across the Mountain Empire Subregion, and it would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

For these reasons, the Project would have a **less than significant impact** on population and housing, as identified in the Initial Study.

CHAPTER 4 PROJECT ALTERNATIVES

Section 15126.6 of the California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a reasonable range of alternatives to the Proposed Project or to the Proposed Project location that would feasibly attain most of the Proposed Project objectives, but would avoid or lessen any significant environmental impacts. An EIR should evaluate the environmental impacts of the alternatives compared to the Proposed Project. This chapter of the EIR describes and evaluates project alternatives and is intended to implement the requirements set forth in the CEQA Guidelines (14 CCR 15000 et seq.). This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines Section 15126.6(e)(2).

4.1 Rationale for Alternatives Selection

The following discussion covers a reasonable range of feasible alternatives that focuses on avoiding or substantially lessening any significant effects of the Proposed Project, even if these alternatives would not attain all of the Proposed Project objectives or would be more costly. The discussion focuses on alternatives to the Proposed Project that are capable of feasibly meeting most of the Proposed Project objectives identified in Chapter 1, Project Description, of this EIR, which have been included below for ease of reference. According to the CEQA Guidelines, many factors may be taken into account when addressing the feasibility of alternatives, such as environmental impacts, site suitability as it pertains to various land use designations, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional boundaries (CEQA Guidelines, 15126.6(f)(1)).

As described in Chapter 1, the Proposed Project objectives are as follows:

1. Develop a solar energy project with a rated capacity of up to 90 megawatts (MW) of alternating current (AC) and an energy storage facility that can supply electricity to indirectly reduce the need to emit greenhouse gases caused by the generation of similar quantities of electricity from either existing or future nonrenewable sources to meet existing and future electricity demands, including during on-peak power periods.
2. Develop a renewable solar energy project that can meet the criteria to achieve the maximum federal solar Investment Tax Credit, which is intended to decrease the cost of renewable energy generation and delivery, promote the diversity of energy supply, and decrease dependence of the United States on foreign energy supplies.
3. Assist in achieving the state's Renewables Portfolio Standard (RPS), as mandated under the 100 Percent Clean Energy Act of 2018 (Senate Bill 100), by developing and

constructing California RPS-qualified solar generation from eligible renewable energy resources by December 31, 2045.

4. Develop a utility-scale solar energy project that improves electrical reliability for the San Diego region by providing a source of local generation as near as possible to existing San Diego Gas and Electric (SDG&E) transmission infrastructure.
5. Provide a new source of energy storage that assists the state in achieving or exceeding its energy storage targets, consistent with the terms of Assembly Bill 2514, and its greenhouse gas reduction targets, consistent with Assembly Bill 32 and Senate Bill 32.
6. Site a solar energy project in an area within San Diego County that has excellent solar attributes, including but not limited to high direct normal irradiance, in order to maximize productivity.
7. Develop a utility-scale solar energy facility within San Diego County that supports the economy by investing in the region and creates construction jobs.

In order to identify alternatives to the Proposed Project, the Applicant and County reviewed a broader range of alternatives. Based on initial review and consideration, it was determined that some of these preliminary alternatives did not accomplish most of the Proposed Project objectives, as listed above, or would result in greater impacts than the Proposed Project. Thus, these alternatives were rejected and were not fully analyzed in this EIR. The alternatives that were considered and rejected are discussed in Section 4.2.

Two alternatives would meet most of the Project objectives, are potentially feasible, and would avoid or lessen impacts as compared to the Proposed Project. These include a Community Buffer Alternative and the Reduced Project Alternative, as shown in Figures 4-1 and 4-2. Additionally, a No Project Alternative is required to be included in the range of alternatives. Under the No Project Alternative, two scenarios are analyzed: 1) No Development; and 2) Buildout as contemplated in the County's planning documents.

The three alternatives, as listed below, are fully analyzed in this EIR. For each of these alternatives, the analysis includes a description of the alternative and a comparison of the environmental effects relative to the Proposed Project. These Project alternatives are addressed in Sections 4.3 to 4.5 in this chapter as follows:

- Alternative 1: No Project Alternative (No Development and Buildout Scenarios)
- Alternative 2: Community Buffer Alternative
- Alternative 3: Reduced Project Alternative

Thus, the reasonable range of alternatives for this Project is determined to consist of the Proposed Project, No Project Alternative, Community Buffer Alternative, and Reduced Project Alternative. CEQA does not require a particular number of alternatives, only that a reasonable range be considered. The alternatives studied constitute a reasonable range because they contain enough variation to facilitate informed decision making and public participation that leads to a reasoned choice. (CEQA Guidelines, 15126.6(a)-(f)). Also, according to CEQA Guidelines Section 15126.6(d), discussion of each alternative should be sufficient "to allow meaningful evaluation, analysis, and comparison with the Proposed Project." Therefore, the significant effects of each alternative are discussed in less detail than those of the Proposed Project, but in enough detail to provide decision makers with perspective and a reasoned choice among alternatives to the Proposed Project.

An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, or one that would not achieve most of the basic Proposed Project objectives. Finally, the Environmentally Superior Alternative shall be identified and if it is the No Project Alternative, the next most Environmentally Superior Alternative shall be identified (refer to Section 4.8).

The Proposed Project would result in potentially significant and unavoidable adverse impacts for which feasible mitigation measures would not reduce the impacts to below a level of significance for aesthetics (Section 2.1) and mineral resources (Section 2.8). Implementation of feasible mitigation measures would reduce potentially significant impacts to the following issue areas to less than significant: air quality (Section 2.2), biological resources (Section 2.3), cultural resources (Section 2.4), geology, soils, and seismicity (Section 2.5), hazards and hazardous materials (Section 2.6), hydrology and water quality (Section 2.7), noise (Section 2.9), paleontological resources (Section 2.10), tribal cultural resources (Section 2.11) and wildfire (Section 2.12).

Potential impacts to the following issue areas were determined not to be significant after further evaluation: agricultural resources; energy; greenhouse gas (GHG) emissions; land use and planning; parks and recreation; public services; transportation; and utilities and service systems. One issue, population and housing, was determined to not be significant or have no impact during the Initial Study process.

Sections 4.3 through 4.5 compare the impacts of the No Project Alternative, the Community Buffer Alternative, and the Reduced Project Alternative to the impacts of the Proposed Project. A qualitative summary of these alternatives that compares their potential impacts is provided in Table 4-1, Summary of Alternatives to the Proposed Project.

4.2 Alternatives Considered but Rejected

As noted previously, the purpose of an alternatives analysis is to develop alternatives to the Proposed Project that substantially lessen at least one of the significant environmental effects identified as a result of the Proposed Project, while still feasibly meeting most of the Project objectives. Project alternatives that would avoid or reduce the severity of impacts identified under the Proposed Project are addressed later in this chapter.

In addition to the Project alternatives fully analyzed in this EIR as discussed above, the Project Applicant and County went through an extensive site planning process to identify and avoid constraints, which included analysis of numerous site plans for the Proposed Project. This site planning process was intended to create a project that optimizes energy generation, while being sensitive to environmental constraints, and ultimately resulted in the Proposed Project. Several site plans were considered but were subsequently rejected from further analysis in the EIR because they did not accomplish most of the Proposed Project objectives or would result in greater impacts than the Proposed Project. As discussed in more detail below, the alternatives considered and rejected include:

- Energy Efficiency Ordinance
- Distributed Generation and Storage Policy (Rooftop Solar Panels)
- Wind Energy
- Alternative Locations
- ECO Substation Connection Alternative (No Switchyard)
- Community Buffer with Southwest Expansion

4.2.1 Energy Efficiency Ordinance Alternative

Description

Under this Energy Efficiency Ordinance Alternative, the Proposed Project would not be built and the equivalent energy (90 MW of AC) would be supplied through energy conservation activities. These conservation efforts would be completed via Energy Conservation programs designed to reduce the overall use of energy.

Currently there are already a number of energy conservation programs under the direction of the California Public Utilities Commission (CPUC) for customers to be serviced by the Project, including programs developed by SDG&E, the County of San Diego, other counties where the Project electricity would be utilized, Southern California Edison and other local utilities. Local utilities provide programs, such as inline energy profiling and in-home energy audits, to make

customers more aware of their energy usage and of ways to conserve, as well as a variety of free brochures on improving energy efficiency. These programs include financial incentives for installing specific energy-efficient appliances. The County of San Diego (County) already has a Green Building Incentive Program (County of San Diego 2012) to encourage homeowners and builders to utilize energy conservation, natural resource conservation, and water conservation to assist in overall reductions of energy use. The County also has a 2015-2020 Strategic Energy Plan (County of San Diego 2015) that outlines approaches and goals to reduce its own energy usage, including energy efficient new construction and measures to improve energy efficiency.

Feasibility

As the County does not have jurisdiction over local or regional energy utilities or utility providers, this Energy Efficiency Ordinance Alternative would consist of the County of San Diego and other counties implementing additional energy efficiency measures beyond those currently in place. These programs could include incentives for the use of energy efficient appliances, and further energy efficiency incentives for new construction. To implement such an alternative, a funding source would need to be identified to implement the Energy Efficiency Ordinance Alternative. Due to the nature of the programs and lack of methods to recuperate costs, however, it is assumed that the source of funding would have to be via grants. At this time no grants have been identified as available to feasibly implement this alternative. In addition, this alternative could not be implemented by the County in a reasonable period of time because it would take years to reduce the demand necessary to offset 90 MW of energy.

Ability to Meet Project Objectives

The Energy Efficiency Ordinance Alternative would result in a significant reduction in impacts as compared with the Proposed Project as this alternative would not require additional physical development on land in order to offset energy demands. However, while energy efficiency would reduce energy demand and overall GHG emissions, it would not meet the Proposed Project objectives, including providing additional energy (Objective 1), utilizing the Investment Tax Credit to provide additional renewable energy (Objective 2), achieving the state RPS by providing renewable energy source (Objective 3), providing a solar project to increase electrical reliability for San Diego region (Objective 4), providing energy storage to help the state meet or exceed AB 2514 goals and greenhouse reduction targets (Objective 5), providing a solar project in an area with excellent solar attributes (Objective 6), or providing a project that invests in infrastructure that provides construction jobs within San Diego County (Objective 7). This alternative is also outside the control of the project Applicant and could not be implemented by the project Applicant.

Conclusion

Since this alternative would not feasibly meet the Proposed Project objectives and would not be feasible to be implemented by the County (or other counties where energy from the Project would be utilized) in a reasonable period of time, it was eliminated from further consideration in this EIR.

4.2.2 Distributed Generation and Storage Policy (Rooftop Solar Panels) Alternative

Description

The Distributed Generation and Storage Policy Alternative would consist of distributed generation and energy storage, including residential and commercial roof-top solar panels throughout San Diego County and other counties where energy from the Project would be utilized in place of the Proposed Project. Based on the National Renewable Energy Laboratory (NREL; NREL 2018) data for average systems installed in California in 2017, the average size of a residential rooftop PV system is 6.2 kW DC. Therefore, to deliver the equivalent capacity of 90 MW of the Proposed Project and its energy storage, this alternative would include 14,500 domestic systems with equivalent home battery systems to secure the equivalent capacity and energy storage proposed by the Proposed Project.

Feasibility

The Distribution Generation Policy Alternative would result in a significant reduction in impacts as compared with the Proposed Project as this alternative could focus facilities within developed and urbanized areas in order to generate additional energy. Thus, the Distributed Generation and Storage Policy (Rooftop Solar Panels) Alternative (Distribution Generation and Storage Policy Alternative) was considered. While this alternative would result in a significant net reduction in project impacts as compared with the Proposed Project, it is outside the control of, and could not be implemented by the Project Applicant, the County or other counties where the Project electricity would be utilized within a reasonable period of time.

Given recent averages for domestic rooftop solar installations, the number of new installations required to deliver up to an additional 90 MW of solar electricity by 2021 render this alternative highly speculative and therefore infeasible from a technical and commercial perspective. Per the CPUC annual reporting (CPUC 2019), 8,001 MW of solar capacity was built between 2007 and 2018 through 926,986 solar projects throughout the state. Within the SDG&E service area, this included 1,037 MW of energy generated through 143,559 projects during this 11-year period. Per the County's 2018 Climate Action Plan Annual Report (County of San Diego 2019), the County permitted approximately 194.87 MW of residential PV during the 4-year period between 2014 and 2018. It would take a substantial amount of time for an additional 90 MW of power to be generated by individual residential and commercial PV projects on top of the already occurring

distributed solar photovoltaics. As battery storage is not always paired with residential and commercial PV nor paired at the same amount of energy generated by the PV, it is expected that proving the equivalent energy storage would take even more time than the PV component. It is also the case that the federal solar tax credit has started to phase out with declining tax benefits every year through 2022. The federal solar tax credit will be unavailable for residential projects after year-end 2021, and unavailable for commercial projects after year-end 2022. Further, SDG&E has met its net metering threshold. Given these two factors, the historical pace of rooftop solar installation may not continue, making it less likely that homeowners will invest in rooftop solar installations, not more likely. It is also unclear how the Applicant could feasibly obtain control to provide distributed solar PV and battery storage equivalent to this 90 MW generation level. This is one of the many factors that may be taken into account when addressing the feasibility of alternatives (CEQA Guidelines §15126.6(f)(1)).

In addition to this alternative being outside of the Applicants' control, it is also outside the control of the County to approve the acquisition of energy from distributed generation sources by investor-owned utilities, such as SDG&E. Instead, the authority to direct investor-owned utilities (IOUs) to procure additional utility-side distributed generation and to determine how customer-side distribution generation is compensated rests with the CPUC. While SDG&E indicates they are monitoring the use of small-scale distributed generation projects to meet its renewable goals, the ultimate methods that SDG&E uses to meet its RPS goals depends on the mandated RPS procurement programs and CPUC, as well as the required integrated resource planning that considers cost-effectiveness "to ensure that customers receive the least-cost best-fit resources" (SDG&E 2020). These RPS procurement programs include the Green Tariff Shared Renewables (GTSR), Bioenergy Market Adjusting Tariff (BioMAT), Renewable Auction Mechanism (RAM) Program and Bioenergy Renewable Auction Mechanism (BioRAM). It is noted that SDG&E satisfied the BioRAM requirement, and that program is now closed. It is speculative whether the CPUC would allow the IOUs to procure any additional utility-side distributed generation in San Diego County beyond what it has already mandated.

Larger scale rooftop solar (greater than 1 MW) was also considered under the Distributed Generation and Storage Policy Alternative. While it is possible for such larger scale distributed generation resources to be used to meet the state's RPS goals, it is speculative whether the CPUC would approve acquisition of additional distributed generation in San Diego County or other counties that would use the Project's electricity in light of the current situation. It is speculative whether up to 90 MW of distributed generation could reach commercial operation in a timely manner considering the time necessary to achieve CPUC approval, seek bids for applicable projects, and bring the projects to fruition. In fact, SDG&E has indicated they are limiting the use of the RAM program to an as-needed basis because a more streamlined procurement process is needed to effectively complete projects under that program (SDG&E 2020). As an example of

the difficulty in implementing distributed generation projects, SDG&E has pursued implementing up to 26 MW of utility-owned solar PV generation under its CPUC-approved Solar Energy Project since 2010. In 2011, SDG&E contracted for eight distributed solar projects totaling 17 MW under the Solar Energy Project. However, permitting, site and contractor issues arose, and costs of the projects were exceeding the allowed rate of $3.50/W(dc). In 2015 SDG&E held another call for contract to find distributed generation projects that would fit in the allowed rate, and no contracts were executed. As such, it is not reasonable to assume 90 MW of distributed generation could be generated in a reasonable amount of time or with feasible cost from programs such as this.

The County and other counties that utilize the Project's electricity can implement policies to remove administrative hurdles to taking advantage of programs already established by the CPUC; however, the policies cannot be guaranteed to result in quantified distributed solar energy generation due to the nature of the programs and lack of jurisdiction to require participation in the programs. For example, the County has already adopted a Property Assessed Clean Energy (PACE) Program that enables property owners to finance energy reduction improvements (County of San Diego 2020). The PACE Program is voluntary and allows for the financing of energy efficient projects, water efficiency projects and renewable energy upgrades that can be repaid through annual property tax bills. However, the County does not have the authority to require property owners to participate, and the amount of energy ultimately generated by such a program is not reliable. Overall, this Distributed Generation Policy Alternative is not feasible for the Applicant to implement.

Given recent averages for rooftop solar installations, the sheer number of new installations required to deliver up to an additional 90 MW of solar electricity by 2021 render this alternative infeasible from a practical timing perspective. In addition, this alternative could not guarantee that 90 MW of renewables would be generated considering the County-controlled energy conservation programs and other counties' energy conservation programs are voluntary and the County, other counties that utilize the Project's electricity, and the Applicant do not have control to ensure rooftop solar is installed. Accordingly, this alternative would not be feasible, as it could not be implemented by the Project Applicant in a reasonable period of time.

Ability to Meet Project Objectives

The Distributed Generation and Storage Policy Alternative would not meet the majority of the Project objectives. This alternative could, at least for a short time, potentially utilize the Investment Tax Credit to provide additional renewable energy (Objective 2), and reduce greenhouse gas emissions consistent with AB 32 and Senate Bill (SB) 32 and provide energy storage per Assembly Bill 2514 (AB) (Objective 5). However, this alternative would not meet the remainder of the Project objectives. As indicated above, there is no way to ensure that this

alterative would be able to provide up to 90 MW of renewable energy and accompanying battery storage to meet energy demand during on-peak periods to meet Objective 1.

Objective 3 would not be met by this alternative since rooftop solar is ineligible to contribute toward the RPS and there is no mechanism to allow developers to purchase or trade small-scale distributed generation energy. In order to use the renewable energy credits (RECs) from distributed generation solar energy systems, those systems must report generation to the Western Renewable Energy Generation Information System (WREGIS), and must use a meter that has an independently-verified accuracy rating of 2 percent or higher, before any RECs associated with the distributed generation can count toward a utility's RPS (California Energy Commission 2013). Furthermore, Senate Bill SBx1-2 and Decision 11-12-052 set limits on the use of unbundled RECs for RPS compliance. SDG&E can only use unbundled RECs to meet 10% of its RPS obligation after 2017 (CPUC 2017). Finally, in significant part due to the transaction costs associated with having net-metered distributed PV participate in the REC market, including reporting and metering costs and the costs of engaging in a multitude of small transactions, no viable market for such unbundled RECs has yet to be developed (Crossborder Energy 2013). Therefore, the likelihood of distributed generation contributing to SDG&E's RPS obligations in the same manner as the Proposed Project is slim. As a consequence, the lack of a market for tradable RECs means that no agreed mechanism currently exists to allow developers to purchase or trade small-scale distributed generation that could displace the development of utility-scale solar facilities, which contribute to the RPS goals. With respect to larger scale rooftop solar (greater than 1 MW), while it is possible for such larger scale distributed generation resources to be used to meet the state's RPS goals, as noted above, it is speculative whether the CPUC would approve acquisition of additional distributed generation in San Diego County and other counties that utilize the Project's electricity in light of its ongoing programs. Therefore, this alternative would not meet Objective 3.

This alternative would not meet Objective 4 because it would not improve electrical reliability for the San Diego region, nor would it be utility-scale solar project. Thus, this alternative would not meet Objective 4. As there is not a mechanism to ensure that the solar would be located in an area with excellent solar attributes or equivalently required renewables in the best location to maximize production, the Distribution Generation Policy Alternative would not meet Objective 6. Finally, as the Distribution Generation Policy Alternative would not create a utility-scale solar project that would support the economy by creating construction jobs, it would also not meet Objective 7. Thus, the Distribution Generation Policy Alternative would not meet most of the seven Project objectives.

Conclusion

This alternative would not meet most of the Project objectives and could not be feasibly implemented by the Project Applicant and, therefore, it was eliminated from further consideration in this EIR.

4.2.3 Wind Energy Alternative

Description

The Wind Energy Alterative would involve providing a 90 MW wind energy generation facility in San Diego County. Thus, this alternative would install industrial scale wind turbines rather than a solar array. As with the Proposed Project, the Wind Energy Alternative would also include supporting infrastructure improvements such as transmission lines, substation, switchyard, metrological stations, access, and water tanks. In some circumstances, wind projects are a viable alternative to solar projects; however, only approximately 1.5% of the unincorporated areas of San Diego County has wind resources suitable for utility-scale wind energy facility development. The County has developed a Wind Resource Map as a part of the Wind Energy Zoning Ordinance Amendment and General Plan Amendment to the Mountain Empire Subregional Plan (Boulevard Chapter) and Borrego Springs Community Plan to Allow Wind Energy Development, POD 10-007 (County of San Diego 2013). Several of areas suitable for wind energy generation are already being pursued by other applicants and are not available. The Proposed Project site is not a viable wind energy generation location, and the Applicant lacks site control over land with suitable wind power potential in San Diego County. Further, it would take years to negotiate site control and conduct due diligence on such an alternative site.

Feasibility

In order to be considered as an alternative under CEQA, the alternative must reduce a significant impact of the Project. A wind energy project is not anticipated to reduce aesthetic impacts. Tall industrial scale wind turbines would typically be located on topographically elevated areas that are visible from a distance. In addition, wind energy projects would result in an additional night lighting impact due to the Federal Aviation Administration lighting requirements for flight safety as well as shadow flicker that would not occur under a solar project. A wind energy project would also result in impacts to biological resources. Thus, this alternative would likely require biological open space easements that may result in significant and unavoidable impacts to mineral resources. Thus, impacts to mineral resources may not be reduced to less than significant. In addition, wind energy projects also typically result in additional biological impacts related to bird strikes. Wind turbines may also generate operational noise that is above and beyond that of the Proposed Project. Thus, noise impacts may not be reduced.

Ability to Meet Project Objectives

The Wind Energy Alternative could meet Objective 5 related to meeting energy storage and greenhouse gas targets; however, this alternative would not meet most of the Project objectives as described below. This alternative would not provide additional energy through a solar energy project (Objective 1). This alternative would not develop a renewable solar energy project utilizing the Investment Tax Credit to provide additional renewable energy (Objective 2). This alternative would not achieve the state RPS by developing a California RPS-qualified solar generation from eligible renewable energy resources by December 31, 2045 (Objective 3). This alternative would also not provide a solar project to increase electrical reliability for San Diego region (Objective 4). In addition, this alternative would not provide a solar project in an area with excellent solar attributes (Objective 6). Finally, this alternative would not develop a utility-scale solar energy facility within San Diego County that supports the economy by investing in the region and creates construction jobs (Objective 7). Overall, the Wind Energy Alternative would not meet most of the Project objectives.

Conclusion

Since this alternative would not likely lessen or avoid the significant impacts from the Proposed Project and would not meet most of the objectives, it was eliminated from further consideration in this EIR.

4.2.4 Alternative Locations

Description

The Alternative Locations Alternative would consist of placing a 90 MW solar energy generation and storage facility with supporting improvements in another location within the unincorporated County area. To be a viable alternative, it is assumed that the Alternative Locations would consist of areas with excellent solar resources and locations in close proximity to existing transmission lines with capacity to convey the energy generated by the alternative.

Feasibility

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the Proposed Project would be avoided or substantially lessened by developing the Proposed Project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) lists several factors that may be taken into account when addressing

feasibility of alternatives (any alternative, not just alternative locations) and states that "No one of these factors establishes a fixed limit on the scope of reasonable alternatives."

The Proposed Project site has been selected in accordance with Objective 4, locating solar facilities as near as possible to existing SDG&E transmission infrastructure. In addition, the Proposed Project site was specifically selected due to its excellent solar attributes in accordance with project Objective 6. The Proposed Project site location also provides high direct normal irradiance, both because of its elevation and because the Jacumba area climate zone provides hot summers and mild winters with minimal coastal marine influence, which is also beneficial for solar energy production. Both of the siting criteria also assist in meeting Objective 1 of providing 90 MW of AC energy.

The Applicant and County have explored a number of alternative locations throughout San Diego County and have screened these locations for their capability to meet the Project objectives, including the presence of excellent solar attributes. There are no other known readily available parcels of undeveloped land of similar size in the eastern portion of the County that could accommodate development of the Proposed Project that have not already been considered and rejected for development of a similar solar project, provide adequate site accessibility, and/or could be acquired by the Applicant within a reasonable period of time. Ultimately, the Applicant does not own or have the ability to easily acquire other sites in the San Diego region in order to provide an Alternative Location project.

Ability to Meet Project Objectives

The Alternative Location Alternative has the potential to meet the basic Project objectives, as it would include a 90 MW utility-scale solar facility in another location within San Diego County (Objective 1). It is assumed it could potentially utilize the Investment Tax Credit (Objective 2), count towards state managed RPS goals (Objective 3), and provide energy storage and GHG reductions (Objective 5), as well as would include a utility scale project within San Diego County that would invest in the region and provide construction jobs (Objective 7).

Since there is no potential alternative site identified, however, it is speculative to determine if the Alternative Location would meet location objectives such as being located near existing infrastructure (Objective 4) and being located in an area with excellent solar attributes (Objective 6). Nonetheless, the Alternative Location could potentially meet the majority of the Project objectives if a feasible site is found.

Conclusion

In conclusion, an alternate project location was dismissed from further evaluation because a suitable site was not identified within the County that would avoid or substantially lessen impacts from the Proposed Project, and/or would be potentially feasible.

4.2.5 ECO Substation Connection Alternative (No Switchyard)

Description

SDG&E recently completed the East County (ECO) substation project. A 13.3-mile 138 kV transmission line connecting the ECO Substation with the Boulevard Substation Rebuild was also completed. A Proposed Project alternative was considered that would eliminate the on-site switchyard and would instead include a 4-mile underground line that would extend from the Project site to the ECO substation. As detailed in the ECO Substation Draft EIR project description (CPUC 2010), the 138 kV transmission line typically requires a 100-foot-wide right-of-way (ROW) that may be disturbed during initial construction and routine maintenance. A four-mile, 100-foot-wide ROW totals 48.5 acres. As it is assumed the line would be underground, this impact area does not include the 150-foot brush clearance radius that is typically included for poles. Based on information from the ECO Substation IR (CPUC 2010), the impact area is assumed to include a 15-foot-wide access/maintenance roadway plus a 24-foot-wide temporary impact area for trenching and line installation. Thus, a 4-mile line would result in approximately 7.27-acres of permanent impacts and 11.6 acres of temporary impacts. As additional access roadways may be required along with a staging area, this may potentially underestimate the area that would be impacted by the 4-mile line. This alternative would not include construction of the on-site switchyard, but all other aspects of the ECO Switchyard to Substation Connection Alternative would be the same as the Proposed Project within the Project site.

Feasibility

In regards to feasibility, it is unknown if there is capacity at the ECO substation to accommodate 90 MW or if use of the substation by the Applicant would be approved by SDG&E. The ECO Substation Connection Alternative would reduce the on-site impacts of the 3.2 acre switchyard to air quality; biological resources; cultural resources; geology, soils, and seismicity; hazards and hazardous materials; mineral resources; paleontological resources; and tribal cultural resources. While these impacts on-site would be reduced under this ECO Substation Connection Alternative, this alternative would result in additional 7.27-acres of permanent impacts and 11.6 acres of temporary impacts off-site that would far exceed the switchyard impact area avoided on-site. This off-site impact area primarily includes Sonoran mixed woody succulent scrub, as well as shadescale scrub and Peninsular juniper woodland and scrub that are considered sensitive

habitat. Drainages also cross the corridor, and sensitive plants (sticky geraea, slender-leaved ipomopsis, scarlet gilia, oceanblue larkspur and Palmer's grapplinghook) are located within this area (CPUC 2010). Thus, biological resource impacts would be significantly increased compared to the Proposed Project. The additional trenching would also increase air emissions and GHG emissions due to the larger area impacted, additional earthwork, and longer construction schedule. This area may also contain subsurface cultural, geological, and paleontological resources that would be impacted by grading activities. It is assumed that visual impacts and potential wildfire risk increases would be temporary and would be less than significant since the lines would be undergrounded and a construction fire protection plan (CFPP) would be implemented during construction. Overall, the ECO Substation Connection Alternative would ultimately result in more impacts than the Project.

In conclusion, the ECO Substation Switchyard Connection Alternative is potentially infeasible.

Ability to Meet Project Objectives

As the only change would be to the switchyard, this alternative would continue to meet the majority of Project objectives, as it would include 90 MW of renewable energy generation (Objective 1), use of the Investment Tax Credit (Objective 2), providing RPS-eligible renewables (Objective 3), GHG reductions (Objective 5), location of solar in an excellent solar attribute area (Objective 6), and would support the San Diego County economy (Objective 7). Due to the need to extend a transmission line 4 miles, it would not meet Project Objective 4 that is intended to locate near SDG&E facilities to reduce transmission infrastructure needs. Overall, the ECO Substation Connection Alternative would meet 6 of the 7 Project objectives.

Conclusion

While this alternative would meet most of the basic Project objectives, this alternative was eliminated from further consideration because it could not be feasibly implemented by the Project Applicant and would not reduce impacts.

4.2.6 Community Buffer with Southwest Corner Expansion

Description

This Community Buffer with Southwest Corner Expansion would include a 450-foot buffer from the residential properties north of Old Highway 80. This 16.1-acre buffer area would specifically provide a noise buffer from residential uses during project construction, as well as operations, and would also provide a visual buffer from these properties. To partially offset the loss in solar panels from the 450-foot buffer area, this alternative would expand panels into 13.5 acres in the

southwestern corner of the Project site. Overall, this alternative would reduce the development footprint relative to the Project by approximately 1.9 acres.

Due to the terrain within the southwest corner, the number of feasible PV modules in the hill area is reduced compared to the number of modules that could be installed on level terrain. Therefore, this alternative would reduce the number of PV modules on the site by approximately 25,758 for a total of 274,242 PV modules. This reduction in PV modules would reduce energy generated by approximately 11.4 MW relative to the Proposed Project, which would result in a total of 78.6 MW generated by this alternative compared to the Proposed Project's generation of 90 MW. The battery storage, switchyard, overhead and underground lines and other project components would be the same as the Proposed Project. The length of construction may be slightly reduced under this Alternative, but the daily construction would remain the same as the Proposed Project, as would site access and number of employees.

Feasibility

The Community Buffer with Southwest Expansion would include a 450-foot buffer from residential uses north of Old Highway 80. The loss in PV modules in the buffer area would be partially offset by installing PV modules in the southwestern corner of the site. However, due to the terrain in the southwest corner the number of PV modules that could be installed is more limited as compared to level terrain. This alternative would not have a substantial effect to the geology and paleontological resource impacts. The provision of a 450-foot buffer from the community would reduce aesthetic impacts, but not to a level less than significant. This alternative would also reduce air quality and noise impacts. Due to the avoidance of the 16.1-acre area that is primarily fallow agriculture and the additional impacts to 13.5 acres of an area with higher habitat quality, impacts to biological habitat and some species would be increased. An additional biological resource impact would occur to jurisdictional wetlands and Quino checkerspot butterfly. In addition, this alternative would impact a significant cultural resources and tribal cultural resources site, thereby increasing impacts to cultural and tribal cultural resources. Overall, the Community Buffer with Southwest Expansion would not be feasible, as it would result in greater significant impacts than the Proposed Project.

Ability to Meet Project Objectives

The Community Buffer with Southwest Expansion would generally meet all project objectives, although to a slightly lesser degree that the Proposed Project would. For example, this alternative would result in approximately 25,758 fewer PV modules, resulting in a total of 274,242 PV modules. This alternative would generate 78.6 MW, which is less than the Proposed Project (90 MW). Therefore, this alternative would not achieve 90 MW of renewable energy generation

(Objective 1), providing RPS-eligible renewables (Objective 3), and achieving GHG reductions (Objective 5) to the same extent as the Proposed Project.

Conclusion

Since the Community Buffer with Southwest Expansion would likely result in greater significant impacts than the Proposed Project and would not achieve Project Objectives to the extent of the Proposed Project, it was eliminated from further consideration in this EIR.

4.3 Analysis of the No Project Alternative

4.3.1 No Project Alternative Description and Setting

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. According to CEQA Guidelines, Section 15126.6(e), the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation for the EIR is published, as well as what would be reasonably expected to occur in the foreseeable future if the Proposed Project was not approved, based on current plans and consistent with available infrastructure and community services. If the project is other than a land use or regulatory plan, the No Project Alternative is the circumstance under which the Proposed Project does not proceed. If the Project did not proceed and no development was proposed, then the Project site would remain in its existing condition and all impacts identified in Chapter 2 of this EIR would be avoided. However, the No Project Alternative must also describe the events or actions that would be reasonably expected to occur in the foreseeable future if the Proposed Project was not approved.

The existing County General Plan land use designation for the majority of the Proposed Project development footprint is Specific Plan; therefore, it is reasonable to assume that if the Project was not approved that the Specific Plan are portion of the Project site would be developed.

For purposes of this No Project Alternative analysis, the previously proposed Ketchum Ranch Specific Plans for the Project site were considered as to what could potentially be developed within the Project site. The Ketchum Ranch Specific Plan was a multi-use concept; a residential community with recreational and visitor oriented commercial uses on approximately 1,250 acres. The conceptual land use plan included 1,110 dwelling units, active/passive open space for recreational uses such as an 18-hole golf course, a wastewater reclamation facility, and other supporting uses. In 2006, another applicant submitted an application for a proposed Specific Plan that identified 2,125 residential units, commercial development, a school site, parks and open spaces, sewage treatment facility, and supporting infrastructure. However, a revised Specific Plan was submitted which substantially reduced the number of residential units to 1,048 dwelling

units, and included a 285-acre golf course, a hotel, and other project components. The proposed Ketchum Ranch Specific Plan was withdrawn in 2011.

Thus, for purposes of the No Project Alternative two scenarios are analyzed below. Under the buildout No Project Alternative it is anticipated that the Project site would be developed as a multi-use concept, including residential units, commercial, recreation, and supporting infrastructure. The number of residential units under the buildout No Project Alternative is anticipated to be up to 1,110 units.

4.3.2 Comparison of the Effects of the No Project Alternative to the Proposed Project

Aesthetics

No Development No Project Alternative

Under the No Development No Project Alternative, the visual conditions of the Project site would be retained in their current state. As such, the No Development No Project Alternative would avoid the Proposed Project's impacts to aesthetics under the no development scenario. This includes avoidance of the significant and unavoidable visual character and quality impacts related to the change in the established rural, open and unencumbered character of the Project site (**Impacts AE-1 and AE-2**). The No Development No Project Alternative scenario would also avoid the panoramic view impacts of the project (**Impacts AE-3** through **AE-9)**, including impacts to scenic views from I-8, Old Highway 80, and local, State and Federal recreational areas. The No Development No Project Alternative scenario would also avoid the cumulative impacts of the Proposed Project (**Impacts AE-CU-1** and **AE-CU-2**), includes cumulative impacts to visual character and scenic vistas. Refer to EIR Section 2.1, Aesthetics, for additional details regarding aesthetic impacts of the Project. While the Proposed Project includes mitigation measures **M-AE-1** through **M-AE-6** to reduce visual character and quality and panoramic view impacts, these impacts would remain significant under the Proposed Project. Overall, the no build No Project Alternative would avoid all significant and unavoidable aesthetic impacts of the Proposed Project.

In summary, if no development were to occur under the No Development No Project Alternative, then all aesthetic impacts identified for the Project (see Section 2.1, Aesthetics) would be avoided. However, it is reasonable to expect the Project site would be developed as discussed in Section 4.3.1. Thus, the following analysis is provided to disclose the potential aesthetic impacts of the Buildout No Project Alternative.

Buildout No Project Alternative

Under the Buildout No Project Alternative, the visual conditions of the Project site would be changed to a developed multi-use community with up to 1,110 residential units, commercial development, recreational and open space uses, and infrastructure improvements. Regarding the size, scale and massing, the Buildout No Project Alternative is assumed to include one to two-story residential buildings that would be similar in height to existing structures in the area but the commercial uses may be at a larger size, scale and massing than currently present. It is assumed that the proposed structures would be primarily neutral colors and colors that would not significantly contrast with development in the vicinity. The residential and commercial structures would also be expected to be more uniform in appearance, differing from the existing non-uniform appearance of development in the community.

The Buildout No Project Alternative would appear substantially denser than the existing Jacumba Hot Springs community and substantially greater in overall scale given the number of residential units expected and total area that could be developed. The existing community is approximately 250 acres, and considering some open space would be included in the Buildout No Project Alternative, the developed community is anticipated to be increased by 1,110 residential units and approximately 1,000 acres, considering some open space would be included in the Buildout No Project Alternative. This substantial increase in community size as well as the increase in density and suburban character would significantly alter the existing undeveloped character of the Project site. Overall, the No Project Alternative would result in a contrast to the existing visual character and quality of the Project site due to the change of the site from an open rural site to a developed multi-use community.

Relative to the Proposed Project, the visual contrast would be less under the Buildout No Project Alternative considering the change to an expanded, more intense community would be more consistent with the existing Jacumba Hot Springs area versus a change to a solar facility. Overall, the Buildout No Project Alternative would reduce the solar and switchyard visual contrast impacts to the Jacumba Hot Springs community character **(Impacts AE-1, Impact AE-CU-1**). However, the Buildout No Project Alterative would continue to result in a significant visual contrast with the existing visual character and quality of the area considering the significant change from an open undeveloped site to a developed multi-use community.

As described above, the Buildout No Project Alternative would change the character of the Project site and viewshed from a rural open character to a more urbanized community. This change in character would significantly alter the existing visual character of the Project site relative to the Project's impact to valued visual community character (**Impact AE-2, Impact AE-CU-2**); however, the solar facility character would be less compatible than an expanded community

character would be. Thus, the Buildout No Project Alternative would result in a lesser impact to valued visual community character than the Proposed Project.

In regard to impacts to focal and panoramic vistas, I-8, Old Highway 80, and Local, State and Federal recreational areas were analyzed as key viewpoint locations. Currently the panoramic views from the key views (see Figures 2.1-8 to 2.1-17) include rural residential with a substantial amount of undeveloped open land. Due to the openness of the area, these views include long-distance panoramic views.

The Buildout No Project Alternative would change approximately 1,000 acres from open land to a developed community. Considering the existing community is approximately 250 acres of existing development, the No Project Alternative would increase the developed community by approximately four times the size of the existing community and the number of residential units would be substantially increased.

Relative to the Proposed Project, the buildout development area would be increased to approximately 1,000 acres instead of the 643 acres impacted by the Project. In addition, the buildout would include a community with varying buildings and a roadway network, instead of uniform rows of dark colored solar panels and battery energy storage system containers. From the key view locations, the buildout would include some taller structures with greater mass than the solar facility. From distant views, the Buildout No Project Alternative would likely result in less contrast to the existing conditions and would have less of an impact on panoramic views than the Proposed Project. These views include I-8 (**Impact AE-3**), State Parks lands (Anza-Borrego Desert State Park Lands and Carrizo Gorge Wilderness) to the west of the Project (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), or Table Mountain (**Impact AE-9**).

From closer viewpoints, the Buildout No Project Alternative may have similar or greater impacts to long-distance mountain views than the Proposed Project due to the additional height expected from structures versus solar panels. Thus, the No Project Alternative would have similar or potentially greater impacts to Old Highway 80 (**Impact AE-4**) and Jacumba Community Park **(Impact AE-5**).

Air Quality

No Development No Project Alternative

Under the No Development No Project Alternative, no additional air quality emissions would occur and the Project's significant impacts related to toxic air contaminants (TAC) as well as criteria pollutants would be avoided. Specifically, the construction diesel exhaust emissions from the Proposed Project was determined to result in a cancer risk on site above the 1 in 1 million

threshold without application of T-BACT (**Impact AQ-1**). Proposed Project emissions of NO_x, PM_{10}, and $PM_{2.5}$ would exceed the daily emissions threshold of significance (**Impact AQ-CU-1**). While the Proposed Project would implement mitigation measures **M-AQ-1** and **M-AQ-2** to reduce emissions during construction to below a level of significance, the No Development No Project Alternative would entirely avoid these air quality emission impacts of the Project.

Buildout No Project Alternative

The Buildout No Project Alternative would generate construction and operational emissions associated with a multi-use development, which would include up to 1,100 residential units. Construction of approximately 1,000 acres of community uses would entail additional grading, building construction, architectural coatings, infrastructure improvements, and paving than the Proposed Project. In addition, the construction period would be longer than the Proposed Project construction schedule considering the additional grading and construction efforts required. Overall, the daily construction-related emissions would be expected to increase under the Buildout No Project Alternative due to the more extensive construction activities required. Thus, the buildout No Project Alternative would result in greater impacts than the Project related to diesel exhaust emissions (**Impact AQ-1**) as well as No_x, PM_{10} and $PM_{2.5}$ criteria air pollutants (**Impact AQ-CU-1**). In addition, other criteria pollutant emissions would be greater than the Proposed Project.

In addition to construction-related air quality emissions, the Buildout No Project Alterative would result in increased air quality emissions during operations compared to the Proposed Project. A multi-use community would generate emissions from transportation (mobile sources), energy use, water use, and solid waste generation. Due to the size of the community proposed, operational air quality impacts of the buildout No Project Alternative would be potentially significant. Conversely, the Proposed Project would provide a source of "clean" solar energy that would reduce energy-related emissions during operations and would require minimal transportation for operation. As such, the Proposed Project air quality operational impacts would be significantly less than the Buildout No Project Alternative, as the operations would not generate substantial traffic, energy, water, or solid waste (EIR Section 2.2, Air Quality).

Sewer treatment facilities have the potential to generate substantial odor if proper odor control measures are not implemented. As the sewer treatment facility for the buildout scenario could be located in proximity to existing Jacumba Community Hot Springs, future residents in other areas, and future residents of the multi-use community, exposure of odor-sensitive uses to odors could occur under this alternative. Thus, the Buildout No Project Alternative could potentially result in significant odor impacts. The Proposed Project would not generate significant odor impacts. Thus, the Buildout No Project Alternative would have greater odor impacts than the Proposed Project.

Biological Resources

No Development No Project Alternative

The existing site conditions would remain under the No Development No Project Alternative, including existing biological resources. Therefore, no impacts to biological resources would occur under this alternative. When compared to the Proposed Project, the No Development No Project Alternative would avoid all impacts to biological resources. This includes avoidance of the following biological impacts: State-listed Tricolored blackbird (**Impact BI-W-2**), special status plants (**Impacts BI-SP-1 to BI-SP-4**), special status wildlife (**Impacts BI-W-1** and **BI-W-2, BI-W-5, BI-W-6**), nesting birds (**Impacts BI-W-3**), bats (**Impacts BI-W-4**), raptor foraging habitat (**Impact BI-W-2**), wildlife movement (**Impacts BI-WLC-1 to WLC-3**), core wildlife area (**Impact BI-WLC-2**), burrowing owls (**Impact BI-W-2**), riparian habitat and sensitive vegetation communities (**Impacts BI-V-1** to **BI-V-4**), and jurisdictional resources (**Impacts BI-JAR-1** to **BI-JAR-3**). The Project would mitigate these potential impacts to below a level of significance with **M-BI-1** to **M-BI-12** that include biological monitoring; habitat preservation; construction-related indirect or temporary avoidance measures; resource management plan; nesting bird and bat surveys; bat roost avoidance; prevention of invasive plant species; O&M guidelines; and noise reduction measures. While these impacts would ultimately be reduced to below a level of significance by mitigation under the Proposed Project, the No Development No Project Alternative would completely avoid impacts to biological resources since no change to the resources would occur. In summary, if no development were to occur under the No Project Alternative, then all biological resource impacts identified for the Project (see Section 2.3, Biological Resources) would be avoided.

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed. Therefore, the buildout scenario would include a larger footprint than the Proposed Project (anticipated increase of approximately 257 acres). In addition, the Buildout No Project Alternative would introduce more people and more development to the area that would potentially result in greater potential for indirect impacts to biological resources from human and pet intrusion into open space, lighting, water quality, invasive plants, and other impacts. Thus, impacts related to the following biological resources would be expected to be increased relative to the Proposed Project: State-listed Tricolored blackbird (**Impact BI-W-2**), special status plants (**Impacts BI-SP-1 to BI-SP-4**), special status wildlife (**Impacts BI-W-1** and **BI-W-2, BI-W-5, BI-W-6**), nesting birds (**Impacts BI-W-3**), bats (**Impacts BI-W-4**), raptor foraging habitat (**Impact BI-W-2**), wildlife movement (**Impacts BI-WLC-1 to WLC-3**), core wildlife area (**Impact BI-WLC-2**), burrowing owls (**Impact BI-W-2**), riparian habitat and sensitive vegetation communities (**Impacts BI-V-1** to **BI-V-4**), and

jurisdictional resources (**Impacts BI-JAR-1** to **BI-JAR-3**). Similar to the Project, it is expected that mitigation measures (similar to **M-BI-1** to **M-BI-12**) would be feasible to implement to reduce these potential biological resource impacts to below a level of significance.

Cultural Resources

No Development No Project Alternative

Under the No Development No Project Alternative, the cultural resources on the Project site would not be disturbed. Therefore, no impacts to cultural resources would occur under this alternative. When compared to the Proposed Project, the no development No Project Alternative would avoid all impacts to cultural resources. This includes avoidance of **Impact CR-1** related to undiscovered cultural resources within the potential impact area, and **Impact CR-2** related to the potential impacts to undiscovered human remains during construction. The Proposed Project would mitigate these impacts to below a level of significance via **M-CR-1** to **M-CR-4** that require temporary fencing, archaeological monitoring, a Cultural Resources Treatment Agreement and Preservation Plan, and Long-term Preservation of Resources. While these impacts would ultimately be reduced to below a level of significance by proposed mitigation under the Proposed Project, the no development No Project Alternative would completely avoid impacts to cultural resources since no change to the resources would occur.

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed. Compared to the Proposed Project, this would increase ground disturbance by 257 acres. Thus, impacts related to the following cultural resources would be expected to be greater relative to the Proposed Project: **Impact CR-1** related to undiscovered cultural resources within the potential impact area, **Impact CR-2** related to the potential impacts to undiscovered human remains during construction. Similar to the Proposed Project, it is expected that mitigation measures (similar to **M-CR-1** to **M-CR-4**) would be feasible to implement to reduce these potential cultural resource impacts to below a level of significance.

Geology, Soils, and Seismicity

No Development No Project Alternative

The No Development No Project Alternative would not involve any construction or structures. Thus, the No Development No Project Alternative would avoid the Proposed Project's significant geologic impacts related to potential static settlement, liquefaction, possible lateral spread and expansive soils during construction and operation (**Impacts GEO-1 and GEO-2**). While the Proposed Project's geologic impacts would be reduced to below a level of significance

with implementation of mitigation measure **M-GEO-1** that requires a final site-specific geotechnical report that demonstrates compliance with the California Building Code requirements, the No Development No Project Alternative would entirely avoid these impacts considering no improvements would occur in areas subject to potential static settlement, liquefaction, possible lateral spread, and expansive soils. Thus, all geologic impacts identified for the Proposed Project (see Section 2.5, Geology Soils and Seismicity) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed. This would result in more site disturbance relative to the Project. In addition, the buildout includes up to 1,100 residential unit and other units, while the Proposed Project would be an unstaffed operation (except for routine O&M). Thus, the Buildout No Project Alternative impacts related to underlying geologic conditions would be potentially greater than the Project due to the increased impact area as well as a greater potential risk to impact lives and property. Thus, the impacts related to potential static settlement, liquefaction, possible lateral spread and expansive soils during construction and operation (**Impacts GEO-1 and GEO-2**) would be increased by the buildout No Project Alternative. Similar to the Project, it is expected that mitigation (similar to **M-GEO-1**) would be feasible to implement to reduce these potential geologic impacts to below a level of significance.

Hazards and Hazardous Materials

No Development No Project Alternative

The No Development No Project Alternative would not involve the construction or operation of any facilities. Thus, the No Development No Project Alternative would avoid the Proposed Project's significant hazards and hazardous materials impacts related to construction and operational-related impacts that could exacerbate wildfire risks (**Impacts HAZ-1 and HAZ-2**) and cumulative impacts to emergency response and wildland fire hazards (**Impacts HAZ-CU-1 and HAZ-CU-2**). While the Proposed Project's hazards and hazardous materials impacts would be reduced to below a level of significance with implementation of mitigation measure **M-WF-1, M-WF-2** and **M-WF-3** that requires the implementation of the design and fire protection measures in the Proposed Project's site specific Fire Protection Plan (FPP) and CFPP and a Fire Protection and Mitigation Agreement, the No Development No Project Alternative would entirely avoid these impacts considering no facilities would be constructed or operated on the Project site. Thus, all hazards and hazardous materials impacts identified for the Proposed Project (see Section 2.6, Hazards and Hazardous Materials) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

Similar to the Proposed Project, the Buildout No Project Alternative would include adherence to all regulations pertaining to hazards and hazardous materials. Previously identified asbestos and lead-based paint would be removed by a certified abatement contractor in accordance with CalOSHA, California Department of Public Health, and San Diego County Air Pollution Control District. All hazardous materials would also be handled in accordance with regulations during construction and operations. While the Project site is within the Jacumba Airport Influence Area and within the safety zone areas, the buildout scenario would be required to comply with FAA regulations and provide consistency with the Jacumba Airport ALUCP (ALUC 2020) that would ensure no significant hazards either to the development or the airport would occur. In addition, under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed, which is larger than the development footprint of the Proposed Project. In addition, the Buildout No Project Alternative includes up to 1,100 residential units and other facilities, while the Proposed Project would be an unstaffed operation (except for routine O&M). With this amount of residential development, the buildout scenario is anticipated to generate 3,165 residents, which would increase the residents in the area from 561 to 3,725 residents (SANDAG 2016). This increase in the number or residents and homes would result in a greater potential risk to impact lives and property by increasing the amount of fire ignition sources on the Project site. Thus, impacts related to wildfire hazards would be potentially greater under this alternative. Even with the implementation of mitigation measures **M-WF-1** (design and fire reduction features in a site-specific FPP), **M-WF-2** (site-specific CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement that would provide funds used to support fire agency capabilities), the Buildout No Project Alternative creates a greater risk of wildfire hazard that could result in loss, injury or death on the property because there would be more people occupying the site. There is also an increase in the potential to interfere with emergency response even with mitigation. Thus, the direct and cumulative impacts related to potential wildland hazards during construction and operation (**Impacts HAZ-1, HAZ-2, HAZ-CU-1, and HAZ-CU-2**) would be increased by the Buildout No Project Alternative. The cumulative impacts to interference with emergency response, would also be increased by the Buildout No Project Alternative.

Hydrology and Water Quality

No Development No Project Alternative

The No Development No Project Alternative would not involve the construction or operation of any facilities. Thus, the No Development No Project Alternative would avoid the Proposed Project's significant hydrology and water quality impacts associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence during construction and operation of the Proposed Project (**Impact HYD-1**). While the Proposed Project's hydrology and water

quality impacts would be reduced to below a level of significance with implementation of mitigation measure **M-HYD-1** that requires a perimeter fencing and layout plan that avoids the blockage and/or redirection of storm flows (see Section 2.7, Hydrology and Water Quality), the No Development No Project Alternative would entirely avoid this impact considering no facilities would be constructed or operated on the Project site. Thus, all hydrology and water quality impacts identified for the Proposed Project (see Section 2.7, Hydrology and Water Quality) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

The Buildout No Project Alternative would be required to comply with all applicable hydrology and water quality regulations. The Project site is not located within a dam or tsunami inundation area. The Buildout No Project Alternative would be required to prepare a Stormwater Pollution Prevention Plan in accordance Regional Water Quality Control Board requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Operational water quality management plans would also be required, as applicable. However, under the Buildout No Project Alternative, the development of up to 1,110 residences and a golf course would result in a substantial water demand. Water service in the region consists exclusively of groundwater wells and most rely on the Jacumba Community Services District (JCSD) or private groundwater wells. The Project site is within the Jacumba Valley Groundwater Basin (Basin), DWR Basin No. 7-47 (DWR 2016; Figure 3.1.4-4), and the Jacumba Valley alluvial aquifer. DWR has designated the Basin as very low priority (DWR 2019). Based on calculations provided in the Groundwater Resources Investigation Report (Appendix J), current groundwater in storage within the Jacumba Valley alluvial aquifer is estimated to be 9,005 acre-feet. A detailed water demand estimate prepared for the Jacumba Valley Ranch EIR (Table No. 3 Groundwater Use) estimated that 828 acre-feet per year would be required for project components including golf course irrigation (TRS Consultants 1999). For comparison, the total estimated groundwater extraction for the 40-year lifetime of the Proposed Project is 1,673 acre-feet or about two years of water demand required for the Buildout No Project Alternative. Thus, the Buildout No Project Alternative could result in a water demand that would exceed the threshold of 50% reduction in groundwater storage during prolonged dry periods. Impacts to groundwater could be potentially significant under the buildout scenario. The Proposed Project's impacts to groundwater in storage would be less than significant (see Section 2.7, Hydrology and Water Quality). Therefore, the Buildout No Project Alternatives impacts to groundwater are anticipated to be greater than the Project.

In addition, under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed with a multi-use development that would include occupied structures. This alternative would result in a substantial increase in impervious surfaces above the 643 acres of development for the Proposed Project (with only 1.9 acres of impervious

surfaces). With an increase in impervious surfaces, the amount of surface runoff on the site would increase and potentially impair or redirect drainage patterns and increase flood flows to a much larger extent. It is anticipated that this alternative may require substantially more mitigation measures than what is required for the Proposed Project, which only required a fencing and layout plan for break-away fencing (**M-HDY-1**). In addition, the Buildout No Project Alternative includes up to 1,100 residential units and other facilities, while the Proposed Project would be unmanned operation (except for routine O&M). Under the buildout scenario, this alternative is anticipated to generate 3,165 residents, which would increase the residents in the area from 561 to 3,725 residents (SANDAG 2016). This increase in residents would increase potential sources for pollution to surface runoff and would potentially cause new impacts to water quality in the area. Thus, the impacts related to potential drainage patterns and flood flows (**Impacts HYD-1**) and other water quality impacts would be increased by the Buildout No Project Alternative.

Mineral Resources

No Development No Project Alternative

The No Development No Project Alternative would not involve the construction or operation of any facilities and the Project site would remain in its existing condition. Thus, the No Development No Project Alternative would avoid the Proposed Project's significant and unavoidable impacts associated with the permanent loss of availability of known mineral resources that are minable, processable and marketable (**Impact MR-1**). This impact occurs under the Proposed Project because a portion of the biological open space easements (188 acres) required as mitigation for biological resource impacts, and the 3.2-acre switchyard would result in the permanent loss of availability of a known mineral resource. No feasible mitigation exists to reduce impacts to below a level of significance; therefore, impacts to mineral resources would remain significant and unavoidable under the Proposed Project (see Section 2.8, Mineral Resources). The No Development No Project Alternative would entirely avoid this impact considering no facilities would be developed on the Project site and no impacts to biological resources requiring habitat preservation would occur. Thus, the impact to mineral resources identified for the Proposed Project (see Section 2.8, Mineral Resources) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres of the Project site would be developed, which is greater than the development footprint of the Proposed Project (643 acres). The buildout scenario would include a multi-use development that would include permanent development such as 1,100 residential units and an 18-hole golf course.

Under the buildout scenario, 1,000 acres of the Project site would be developed and the Project would result in the permanent loss of availability of any underlying mineral resources. In addition, it is likely that on-site biological open space easements would be provided which would further increase the loss of availability of any underlying mineral resources. In comparison, the Proposed Project would result in the permanent loss of availability of mineral resources within 188 acres of the biological open space easement and the 3.2-acre switchyard. Thus, the permanent loss of a known mineral resources under the Buildout No Project Alternative is anticipated to be higher than the loss caused by the Proposed Project (**Impact-MR-1**). Therefore, impacts related to mineral resources would be increased by the Buildout No Project Alternative. The impact would remain significant and unavoidable.

Noise

No Development No Project Alternative

No noise would be generated by the No Build No Project Alterative, as the site would remain in its existing conditions, and no construction or operations would occur. As a result, the No Development No Project Alternative would avoid all impacts related to noise associated with the Proposed Project. This includes avoidance of the operational panel cleaning noise (**Impacts NOI-1 and NOI-2**) and the construction-related noise (**Impact NOI-3**). These operational and construction-related noise impacts would be ultimately reduced to below a level of significance by the Proposed Project via **M-NOI-1** (requires an updated Acoustical Analysis Report be submitted to ensure that the final design, layout and specification of major noise-producing stationary equipment will yield noise levels that are compliant with County noise standards), **M-NOI-2** (requires a PV Panel Washing Plan to ensure the noise from mobile PV panel washing equipment operating in proximity to adjacent property lines would not exceed County standards), and **M-NOI-3** (requires the submittal of a Construction Noise Management Plan to ensure that noise generation from construction activities are aligned with the assumptions and evaluation parameters used in the 2020 Acoustical Analysis Report, prior to work commencing). Per the above, all noise impacts identified for the Proposed Project (see Section 2.9, Noise and Vibration) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres would be developed, which is greater than the Proposed Project development footprint (643 acres). Therefore, construction would involve more grading and more construction activities than the Proposed Project. It is anticipated that construction activities would be located adjacent to the existing Jacumba Hot Springs residential properties, as well as future residential uses associated with the buildout scenario. Thus, it is expected that the construction noise impacts of the

Buildout No Project Alternative would be potentially greater than the significant construction noise impact of the Project (**Impact NOI-2**). Similar to the Project, it is expected that construction noise mitigation (similar to **M-NOI-3**) could be implemented to reduce this impact to below a level of significance.

In addition, the buildout scenario would result in noise-sensitive residential land uses on the Project site, as well as potentially noise-generating uses such as the wastewater treatment plant and uses that include heating, ventilation, air condition (HVAC) equipment in proximity to noise-sensitive uses. Thus, this alternative has the potential to result in stationary noise that would exceed the County's property line noise limits identified in Section 36.404 of the County Noise Ordinance. Relative to the Project, both the Project and the Buildout No Project Alternative would result in potential exceedance of the County Noise Ordinance (**Impact NOI-1**) during operations. Similar to the Project, it is expected that noise mitigation measures such as submitting a predictive operations noise analysis for stationary equipment (**M-NOI-1**) and mobile equipment (**M-NOI-2**) that analyzes noise-generating equipment could be implemented to reduce these potential operational noise impacts to below a level of significance.

The Buildout No Project Alternative would include residences and potentially a school within two miles of the Jacumba Airport. As indicated in the Airport Land Use Compatibility Plan (Airport Land Use Commission [ALUC] 2020), the Jacumba Airport does not generate noise above 60 decibels. As such, the Buildout No Project Alternative development would not be expected to expose noise sensitive land uses to significant airport noise. No significant airport land use noise impacts would occur under either the Project or the Buildout No Project Alternative.

Development under the buildout scenario would add a significant amount of traffic to local roadways where traffic levels are currently relatively low. All other factors being equal, it requires a doubling of traffic volumes to cause a 3 dB increase (i.e., 3 dB = 10*LOG[2]). The SANDAG Transportation Forecast Information Center (TFIC) Series 13 forecasts that Old Highway 80 would have a volume of 800 average weekday traffic (AWT) east of Campo Street and approximately 2,000 AWT per day west Campo Street as of 2020. Carrizo Gorge was also forecast to have an 800 AWT in 2020 (SANDAG 2019). These local roadways provide access from Jacumba Hot Springs to the I-8 as well as to other local communities such as Boulevard and Campo. Under the buildout scenario, up to 1,100 residential units are anticipated. With the addition of approximately 1,110 residents at 10 trips per residence and an 18-hole golf course at 40 trips per hole, the buildout scenario would generate a minimum of 11,820 trips (SANDAG 2002). The build out scenario is also anticipated to generate 3,165 residents, which would increase the residents in the area from 561 to 3,725 residents (SANDAG 2016). As such, it is expected that the Buildout No Project Alternative would double traffic on these local roadways. Considering residential and other noise sensitive land uses such as passive parks are located adjacent to these roadways, it is expected that the Buildout No Project Alternative would result

in significant mobile source noise impacts. If it was not feasible to implement noise reduction measures, such as a sound wall, due to right-of-way or other constraints, then this impact could be significant and unavoidable. Thus, the mobile source impacts of the Buildout No Project Alternative would be greater than the Proposed Project.

Paleontological Resources

No Development No Project Alternative

Under the No Development No Project Alternative, the paleontological resources on the Project site would not be disturbed. Therefore, no impacts to paleontological resources would occur under this alternative. When compared to the Proposed Project, the no development No Project Alternative would avoid all impacts to paleontological resources. Specifically, the Proposed Project would require over 2,500 cubic yards of grading in areas of "high" and "moderate" paleontological resource and would therefore result in a potentially significant impact (**Impact PR-1**) to paleontological resources. The Proposed Project would reduce this potential impact by implementing mitigation measure **M-PR-1** that includes a Paleontological Resources Impact Mitigation Program (PRIMP) with monitoring. While the Proposed Project would ultimately reduce paleontological resource impacts to below a level of significance, the No Development No Project Alternative would completely avoid all paleontological resource impacts identified for the Project (see Section 2.10, Paleontological Resources).

Buildout No Project Alternative

Under the Buildout No Project Alternative, it is anticipated that approximately 1,000 acres would be developed, which is an increase of 257 acres compared to the Proposed Project. As a result, more grading could occur within "high" and "moderate" paleontological resource areas relative to the Project. Thus, the impacts related to potentially significant paleontological resources (**Impact PR-1**) would be increased under the Buildout No Project Alternative. Similar to the Proposed Project, it is expected that mitigation (similar to **M-PR-1**) would be feasible to implement to reduce these potential paleontological resource impacts to below a level of significance.

Tribal Cultural Resources

No Development No Project Alternative

The No Development No Project Alternative would result in no changes to the existing conditions. Therefore, no impacts to tribal cultural resources would occur under this alternative. When compared to the Proposed Project, the no development scenario would avoid all impacts to tribal cultural resources. This includes avoidance of **Impact TCR-1** related to the Project's development activities which could affect tribal cultural resources within 50 feet of the Project Area

of Determined Impact (ADI) or within resource-specific, predetermined buffers, and has the potential to affect undiscovered tribal cultural resources, including human remains and archaeological resources that may qualify as tribal cultural resources. The Proposed Project would mitigate these impacts to below a level of significance with implementation of mitigation measures **M-TCR-1** (temporary fencing) and **M-TCR-2** (archaeological and tribal monitoring). While these impacts would be reduced to below a level of significance with implementation of mitigation measures, the No Development No Project Alternative would completely avoid impacts to tribal cultural resources identified for the Project (see Section 2.11, Tribal Cultural Resources).

Buildout No Project Alternative

The Buildout No Project Alternative is anticipated to develop approximately 1,000 acres, which is 257 acres more than the Proposed Project. With more ground disturbance in proximity to areas identified as tribal cultural resources, the potential impact to tribal cultural resources would be greater. Thus, impacts related to tribal cultural resources (**Impact TCR-1**) would be greater relative to the Proposed Project. Similar to the Project, it is expected that mitigation (similar to **M-TCR-1** to **M-TCR-2**) would be feasible to implement to reduce these potential tribal cultural resource impacts to below a level of significance.

Wildfire

No Development No Project Alternative

The majority of the Project site is located within a High Fire Hazard Severity Zone (FHSZ), with a western portion within a Moderate FHSZ and a small area located within a Very High FHSZ (CAL FIRE 2007a), as detailed in Section 2.12, Wildfire. Existing conditions would remain under the No Development No Project Alternative, thus this alternative would not have any construction or operational activities that would increase wildfire risks. The No Development No Project Alternative would avoid the Project's significant direct and cumulative wildfire impacts related to operational-related wildfire risk (**Impact WF-1** and **WF-CU-1**), construction-related wildfire risk (**Impact WF-2** and **WF-CU-2**) and the installation or maintenance of associated infrastructure that may exacerbate fire risk during construction and operation (**Impact WF-3**). While these impacts would be reduced to below a level of significance with the implementation of mitigation measures **M-WF-1** (fire hazard reduction measures in a site-specific Fire Protection Plan), **M-WF-2** (site-specific CFPP), and **M-WF-3** (Fire Protection and Mitigation Agreement that would provide funds used to support fire agency capabilities), the No Development No Project Alternative would entirely avoid these impacts. As discussed above, all wildfire impacts identified for the Proposed Project (see Section 2.12, Wildfire) would be avoided under the No Development No Project Alternative.

Buildout No Project Alternative

Under the Buildout No Project Alternative, approximately 1,000 acres would be developed for a multi-use development. It is anticipated that the buildout scenario would result in more construction fire risks due to the increased area of disturbance and likely longer construction period. In regard to operations, the buildout scenario would add up to 1,100 residences and approximately 3,165 residents. This increase in the number of residents and homes would result in a greater potential risk to impact lives and property. Thus, the impacts related to potential operational and construction-related fire risk (**Impacts WF-1 and WF-2**) would be increased under the Buildout No Project Alternative. In addition, due to the increased amount of infrastructure that would be required for the construction and operation under the buildout scenario, the fire risk during construction and operation would be exacerbated under this alternative (**Impact WF-3**). Similar to the Proposed Project, the Buildout No Project Alternative would implement the fire hazard reduction measures of a project-specific Fire Protection Plan (FPP) (**M-WF-1**), as well as the risk reduction and daily fire prevention measures in a Construction FPP (CFPP) (**M-WF-2**). Also, similar to the Proposed Project, future development of the Project site would be required to participate in a Fire Protection and Mitigation Agreement (**M-WF-3**) to ensure the development provided sufficient fire protection services and facilities, or paid its fair share. Also, the Buildout No Development Alternative would result in residential development within an area at risk from wildfires and would result in the increased of exposure of people to air quality pollutants from wildfires. As such, wildfire impacts of the Buildout No Project Alternative would be greater than the impacts of the Proposed Project (see Section 2.12, Wildfire).

Other Resource Topics

Due to the substantial difference between the buildout scenario and the Proposed Project, additional details regarding each of the other resource topics is provided below for the Buildout No Project Alternative.

Agriculture and Forestry Resources

Based on the LARA Model, the Project site does not include important agricultural resources (see Section 3.1.1, Agricultural Resources). Therefore, similar to the Proposed Project, the Buildout No Project Alternative would have a less than significant impact to agricultural resources.

Energy

The Buildout No Project Alternative would result in energy use during construction and operations. However, it is not anticipated that the residential buildings would result in a wasteful or inefficient use of electricity considering compliance with Title 24 would be required. During operations, it is expected that the Buildout No Project Alternative would increase gasoline fuel consumption relative to the Project because the buildout scenario would add 1,110 residences

and the distance from existing services and employment centers. With the addition of approximately 1,110 residents at 10 trips per residence and an 18-hole golf course at 40 trips per hole, the buildout scenario would generate a minimum of 11,820 trips per day (SANDAG 2002). The Buildout No Project Alternative would generate 3,165 residents, which would increase the residents in the area from 561 to 3,725 (SANDAG 2016). Overall, screening maps based on SANDAG 2012 data indicate the Project site is within a census tract of more than 125 percent of the regional residential and employee vehicle miles traveled mean (City of Chula Vista 2020a, 2020b). With the substantial increase in trips and those trips lengths being over 125 percent of the regional mean, this increase in energy usage would be relatively inefficient within the region. Thus, the Buildout No Project Alternative would result in a potentially significant impact related to Energy, while the Proposed Project would result in a less than significant impact to energy (see Section 3.1.2, Energy). Thus, the Buildout No Project Alternative would have a greater energy impact compared to the Proposed Project.

Greenhouse Gas Emissions

The estimated total GHG emissions during the 13-month construction period of the Proposed Project would be approximately 5,764 MT CO2e. Estimated Proposed Project-generated construction emissions amortized over the Proposed Project life of 35 years would be approximately 165 MT CO2e per year. The estimated total GHG emissions during decommissioning would be approximately 2,405 MT CO2e. Estimated Proposed Project-generated decommissioning emissions amortized over the Proposed Project life of 35 years would be approximately 69 MT CO2e per year. However, the Proposed Project is also expected to produce 211,159 megawatt hours of electricity per year, providing a renewable energy source to achieve the RPS of 60% by 2030 and 100% by 2045. This renewable energy would offset 423,254 MT CO2 from 2022 through 2044, reducing GHG emissions generated by fossil-fuel power plants during that time frame. After subtracting avoided GHG emissions from the Project's GHG emissions, the Proposed Project would avoid approximately 296,744 MT CO2 e over its lifetime. These GHG emissions are anticipated to be lower than the GHG emissions generated from construction of this alternative because the buildout scenario would generate GHG emissions from the construction of 1,100 residential units, other facilities and an 18-hole golf course.

The Buildout No Project Alternative is anticipated to result in substantially greater Vehicle Miles Traveled (VMT) annually, based on approximately 1,100 residential units, as compared to the Proposed Project, which would result in an average daily trip rate of 12 and 315,360 annual VMT. Thus, the GHG emissions from the Buildout No Project alternative would be far more than the emissions generated by the Proposed Project. The buildout scenario would also generate GHG emissions from the addition of 1,100 residential units, an 18-hole golf course, and other uses. The Buildout No Project Alternative would not assist with obtaining the RPS goals. This alternative also would not provide residences where there are mobility choices and would not

focus growth in an urbanized area. Given the information discussed under Energy above, it is expected that the mobile source emissions generated by the Buildout No Project Alternative would be above the regional mean due to its location in a rural area away from services and employment areas. Thus, the Buildout No Project Alternative would result in potentially significant GHG emission impacts. The Proposed Project would result in less than significant impacts (see Section 3.1.3, GHG Emissions). Thus, the greenhouse gas emission impacts under the Buildout No Project Alternative would be greater than the Proposed Project.

Land Use and Planning

The Buildout No Project Alternative assumes compliance with the applicable land use and planning documents. Thus, the Buildout No Project Alternative would have a less than significant impact related to land use and planning, similar to the Proposed Project (see Section 3.1.4, Land Use and Planning).

Parks and Recreation

The Buildout No Project Alternative would include the construction of 1,110 residential units that would generate a demand for parks and recreation. As this alternative is assumed to comply with the applicable land use plans and such plans indicate supporting recreational uses would be provided, it is assumed that adequate park and recreation would be provided to support the additional park demand generated by the Buildout No Project Alternative development. Thus, similar to the Proposed Project (see Section 3.1.5, Parks and Recreation), the Buildout No Project Alternative's impacts related to parks and recreation would be less than significant.

Population and Housing

The Buildout No Project Alternative development is anticipated to include up to 1,100 residential units. No occupied housing currently exists on the Project site that would be displaced by development. The Buildout scenario would not result in unplanned growth for the area. The Buildout No Project Alternative would result in less than significant impacts related to population and housing similar to the Proposed Project (see Section 3.2, Effects Found Not to be Significant in Initial Study).

Public Services

The Buildout No Project Alternative would generate a significant demand for public services considering it would include 1,110 residential units and other supporting uses. The existing public service infrastructure would likely require improvements in order to provide adequate public services to the buildout No Project Alternative. The Buildout No Project Alternative would be required to ensure adequate public services would be provided for the proposed

development. As such, public services impacts would be less than significant similar to the Proposed Project (see Section 3.1.6, Public Services).

Transportation

The operation of the Proposed Project is conservatively estimated to generate 20 daily trips. Therefore, utilizing the guidance provided by the County of San Diego Transportation Study Guidelines (TSG), adopted in June 2020, the operation of the Proposed Project would not generate a significant number of trips and thereby would not cause a substantial amount of VMT. Therefore, the operation of the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be less than significant.

The Buildout No Project Alternative would generate substantially more VMT during operations as compared to the Proposed Project. Under the buildout scenario, up to 1,100 residences would be constructed. VMT tends to increase as land use density increases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations. Transportation impacts under the Buildout No Project Alternative would be substantially greater and would not be less than significant.

Utilities and Service Systems

The Buildout No Project Alternative would generate increased demand for utilities and service systems, including wastewater treatment, water, stormwater, electrical, and solid waste. With the development of 1,110 residences and a golf course would result in a substantial water demand. Water service in the region consists exclusively of groundwater wells and most rely on the Jacumba Community Services District (JCSD) or private groundwater wells. The Project site is within the Jacumba Valley Groundwater Basin (Basin), and the Jacumba Valley alluvial aquifer. Thus, impacts to water facilities could be potentially significant under the buildout scenario. The Proposed Project's impacts to groundwater in storage would be less than significant. Therefore, the Buildout No Project Alternative's impacts to groundwater are anticipated to be greater than the Project. In addition, the Proposed Project would not require wastewater treatment, potable water, or operational solid water services, and the impacts were determined to be less than significant (Section 3.1.8, Utilities and Service Systems). The Buildout No Project Alternative would have substantially greater potential impacts on utilities and services systems compared to the Proposed Project.

4.4 Analysis of the Community Buffer Alternative

4.4.1 Community Buffer Alternative Description and Setting

The Community Buffer Alternative, as shown in Figure 4-1, would include a 300-foot buffer adjacent to private properties north of Old Highway 80 in the Jacumba Hot Springs community.

This buffer area is intended to specifically provide a visual buffer between the proposed solar facility and the private properties, as well as a noise buffer from residential uses during construction and operations. The 15.4-acre buffer area would remain in its current undeveloped condition.

The inclusion of the 15.4-acre buffer would result in 17,496 fewer PV modules installed. Overall, the Community Buffer Alternative would include 282,504 PV modules instead of the Proposed Project's 300,000 PV modules. This reduction in PV modules would reduce energy generated by approximately 7.7 MW relative to the Proposed Project. With this reduction, the Community Buffer Alternative would generate 82.3 MW compared to the Proposed Project's generation of 90 MW. The battery energy storage system, switchyard, overhead and underground lines and other project components would be the same as the Proposed Project. The length of construction may be slightly reduced under this Alternative, but the daily construction would remain the same as the Proposed Project.

4.4.2 Comparison of the Effects of Community Buffer Alternative to the Proposed Project

Aesthetics

Under the Community Buffer Alternative, the visual impacts would be the same as described for the Proposed Project with the exception of the western buffer area. No construction would occur within this 300-foot wide buffer area. This would specifically affect Key View 6 which is located within the Jacumba Hot Springs community. The location from which Key View 6 was taken is shown on EIR Figure 2.1-8a. The existing condition of Key View 6 is shown in EIR Figure 2.1-14 and looks to the east with a view of fallow agricultural land with hills and mountains in the distance. EIR Figure 2.1-14 also includes a visual simulation of the Proposed Project. The simulation shows slatted fencing, landscaping, and the tops of the solar panels in the foreground. The fallow agricultural area is not visible and only the uppermost elevation of distant mountains are visible.

Under the Community Buffer Alternative, the fencing, landscaping, and solar panels would be set back 300 feet further from the adjacent properties. The 300-foot buffer area would remain in its existing condition. Thus, the foreground view would remain undisturbed and this would provide a visual buffer between the community and the solar facility.

Similar to the Proposed Project, the Community Buffer Alternative would include **M-AE-1 – M-AE-3** (softer colors for project components), **M-AE-5** (landscaping buffers) and **M-AE-6** (slatted screening fencing). Note that **M-AE-4** would not apply, as it included a smaller residential buffer area than included in the Community Buffer Alternative and would be moot under this alternative. Although the 300-foot buffer would lessen visual impacts to adjacent

properties north of Old Highway 80, the Community Buffer Alternative would result in a significant impact to visual quality and the character. Thus, **Impacts AE-1** and **AE-2** would be lessened under the Community Buffer Alternative, but not to below a level of significance since the impacts to visual character change would still occur on the remaining portion of the site.

The Community Buffer Alternative would not avoid or substantially lessen the panoramic view impacts of the Project along I-8 (**Impact AE-3**), Old Highway 80 (**Impact AE-4**), Jacumba Community Park (**Impact AE-5**), State Parks lands (Anza-Borrego Desert State Park Lands and Carrizo Gorge Wilderness) to the west of the Project (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), or Table Mountain (**Impact AE-9**). The Community Buffer Alternative would result in significant impacts similar to the Proposed Project (see Section 2.1, Aesthetics).

Overall, the Community Buffer Alternative would lessen aesthetic **Impacts AE-1 and AE-2**, but these impacts would remain significant and unavoidable. **Impacts AE-CU-1, AE-CU-2, AE-3, AE-4 AE-5, AE-6**, **AE-5**, **AE-6** and **AE-7** would be the same under the Community Buffer Alternative as the Project, and would remain significant and unavoidable.

Air Quality

The Community Buffer Alternative would include less construction activities than the Proposed Project, which would reduce air quality emissions during construction. The construction diesel exhaust emissions from the Proposed Project was determined to result in a cancer risk on site above the 1 in 1 million threshold without application of T-BACT (**Impact AQ-1**). The Community Buffer Alternative would provide a 300-foot buffer from residential uses, which would result in additional area for the diesel particulate matter to settle and would reduce diesel particulate matter reaching residential receivers in the Jacumba Hot Springs community. None-the-less, workers would still be subject to elevated diesel particulate matter levels. The slight reduction of the construction area by about 15.4 acres (2%) under the Community Buffer Alternative would reduce impacts to construction workers negligibly. Given that the Project cancer risk from construction exhaust was 2.93 in a million and was well over the 1 in a million County Guidelines threshold for the Proposed Project, the provision of a 300-foot buffer north of Old Highway 80 would not reduce this impact to below a level of significance. Overall, the Community Buffer Alternative would reduce the cancer risk relative to the Project, but the impact would remain significant. Similar to the Proposed Project, the Community Buffer Alternative could implement **M-AQ-1** to reduce this TAC impact to below a level of significance.

The Proposed Project construction emissions of NO_x, PM_{10}, and $PM_{2.5}$ would exceed the daily emissions threshold of significance (**Impact AQ-CU-1**). The Community Buffer Alternative would reduce the overall construction area by approximately 15.4 acres. The duration of construction may

be slightly reduced under this Community Buffer Alternative relative to the Proposed Project, but the per day activities are expected to be similar to the Project. Thus, it is expected that the Community Buffer Alternative impacts related to daily criteria pollutant emissions would be similar to the Project and would exceed the daily emissions threshold of significance for NO_x, PM_{10}, and $PM_{2.5}$. Similar to the Project, the Community Buffer Alterative could implement **M-AQ-1** and **M-AQ-2** to reduce **Impact AQ-CU-1** to below a level of significance.

Biological Resources

The Community Buffer Alternative would avoid a 15.4-acre area along the western Project boundary, north of Old Highway 80. This buffer area contains 3.29 acres of desert saltbrush scrub and 10.7 acres of fallow agriculture. The remaining impacts are to disturbed or developed lands which do not require mitigation. The County of San Diego guidelines state that desert saltbrush scrub must be mitigated at a 2:1 ration (6.78 acres) while fallow agriculture requires mitigation at a 0.5:1 ratio (5.35 acres). Therefore, total mitigation requirements (**M-BI-3**) under the Community Buffer alternative would be reduced by 12.13 acres. The avoidance of desert saltbrush scrub would reduce permanent direct impacts to sensitive vegetation communities (**Impact BI-V-2**). As shown on EIR Figure 2.3-7, Impacts to Biological Resources, the Community Buffer Alternative would also reduce permanent direct impacts to special status wildlife which may utilize these vegetation communities (e.g., Lawrence's Goldfinch, Vaux's swift, and tri-colored blackbird) (**Impact BI-W-2**). Also, refer to Table 2.3-3, Permanent Impacts to Special-Status Wildlife Species Present within the Project Area or with High Potential to Occur, for these species known to occur or with high potential to occur within these habitat types. The area featuring fallow agriculture also provides biological value as raptor foraging, and the avoidance of that area would reduce impacts to foraging habitat (**Impact BI-W-2**). All other impacts of the Community Buffer Alternative would be similar to the Proposed Project, including special status plants (**Impacts BI-SP-1** to **BI-SP-4**), other special status wildlife (**Impacts BI-W-1** and **BI-W-2, BI-W-5, BI-W-6**), nesting birds (**Impacts BI-W-3**), bats (**Impacts BI-W-4**), wildlife movement (**Impacts BI-WLC-1** to **WLC-3**), core wildlife area (**Impacts BI-WLC-2**), burrowing owls (**Impact W-2**), other riparian habitat and sensitive vegetation communities (**Impacts BI-V-1** to **BI-V-4**), and jurisdictional resources (**Impacts BI-JAR-1** to **BI-JAR-3**). These impacts would be similar to the Project considering the habitat avoided by the Community Buffer Alternative is primarily fallow agriculture and would not preserve a wildlife core or linkages, and doesn't include jurisdictional waters. The Community Buffer Alternative could implement mitigation measures **M-BI-1** to **M-BI-12** that include biological monitoring; habitat preservation; construction-related indirect or temporary avoidance measures; resource management plan; nesting bird and bat surveys; bat roost avoidance; prevention of invasive plant species; O&M guidelines; and noise reduction measures to reduce impacts to below a level of significance. Overall, the Community Buffer Alternative would

lessen impacts to biological resources, however, the impacts would remain potentially significant but could be reduced to less than significant with implementation of mitigation measures, similar to the Project (see Section 2.3, Biological Resources).

Cultural Resources

Under Community Buffer Alternative, the impact area would be reduced by 15.4-acres along the western boundary adjacent to the community of Jacumba Hot Springs. The Community Buffer Alternative would slightly reduce potential impacts to undiscovered cultural resources and undiscovered human remains considering the impact area would be reduced, but the reduction would not be considered substantial considering this Alternative would impact 627.7 acres, which is 98% of development footprint of Project. Thus, impacts to undiscovered cultural resources (**Impact CR-1**) and undiscovered human remains (**Impact CR-2**) of the Community Buffer Alternative would be similar to the Project, and would be potentially significant.

The Community Buffer Alternative would avoid impacts to two isolates (P-37-038627 and P-37-038626). Isolates are by definition not significant. Overall, the Community Buffer Alternative would directly impact 28 archaeological sites, similar to the Project. Thus, this alternative would have similar impacts to County important sites as the Project.

The Community Buffer Alternative could implement mitigation measures **M-CR-1** through **M-CR-4** that require temporary fencing, archaeological monitoring, a Cultural Resources Treatment Agreement and Preservation Plan, and Long-term Preservation of Resources to reduce **Impacts CR-1** to **CR-4** to below a level of significance, similar to the Project (see Section 2.4, Cultural Resources).

Geology, Soils, and Seismicity

The Community Buffer Alternative would reduce the impact area by 15.4 acres along the southwestern boundary of the Project site adjacent to the Jacumba Hot Springs community. As the impact area would be reduced, the Community Buffer Alternative would slightly reduce the Project's significant geologic impact related to potential static settlement, liquefaction, possible lateral spread and expansive soils during construction and operation (**Impacts GEO-1** and **GEO-2**). However, given the Community Buffer Alternative reduction would be only 15.4 acres of the 643-acre development area proposed by the Project (2%), the impact reduction would not be substantial and the geologic impact would be similar to the Proposed Project. These impacts could be reduced to below a level of significance by **M-GEO-1** that requires a final site-specific geotechnical report that demonstrates compliance with the California Building Code requirements similar to the Project (see Section 2.5, Geology, Soils and Seismicity).

Hazards and Hazardous Waste

The Community Buffer Alternative would reduce the impact area by 15.4 acres along the western boundary of the Project site adjacent to the Jacumba Hot Springs community. While potential wildfire hazard impacts would be slightly reduced by maintaining a 300-foot buffer between development and adjacent residential uses within the community of Jacumba Hot Springs, the Community Buffer Alternative would also have potentially significant hazard impacts similar to that of the Proposed Project. Potential impacts related to operational-related wildfire hazards (**Impact HAZ-1**), and construction-related wildfire hazards (**Impact HAZ-2**) would occur under this Alternative. Similar to the Project, the development under this alternative would be required to implement the design and fire protection measures in a project-specific FPP (**M-WF-1**), as well as the risk reduction and daily fire prevention measures in a project-specific CFPP (**M-WF-2**). Also similar to the Project, the development under this alternative would be required to participate in a Fire Protection and Mitigation Agreement (**M-WF-3**) to ensure the development paid its fair share toward providing fire protection services and facilities. Nonetheless, the Community Buffer Alternative would result in development within an area at risk from wildfire hazards. In addition, the Community Buffer Alternative would slightly reduce the Project's significant cumulative impacts to interference with emergency response and wildland fire hazards (**Impacts HAZ-CU-1** and **HAZ-CU-2**). These impacts could be reduced below a level of significance with mitigation such as **M-WF-1, M-WF-2** and **M-WF-3** similar to the Proposed Project. Thus, the wildfire hazard impacts of the Community Buffer Alternative would be similar but slightly less than that of the Proposed Project (see Section 2.6, Hazards and Hazardous Materials).

Hydrology and Water Quality

The Community Buffer Alternative would reduce the impact area by 15.4 acres along the western boundary of the Project site adjacent to the Jacumba Hot Spring community. It is anticipated that the Community Buffer alternative would have similar impacts to the Proposed Project's potentially significant hydrology and water quality impacts associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence during construction and operation (**Impact HYD-1**). This impact would be reduced to below a level of significance with implementation of mitigation measure **M-HYD-1** that requires a perimeter fencing and layout plan that avoids the blockage and/or redirection of storm flows (see Section 2.7, Hydrology and Water Quality).

Mineral Resources

The Proposed Project would result in a significant and unavoidable impact to mineral resources (**Impact MR-1**). This impact is a result of a portion of the biological open space easement

(which will total up to 435 acres) overlying 188 acres of mineral resources. The mitigation is for impacts to biological resources (see Section 2.8, Mineral Resources). The Community Buffer Alternative would avoid a 15.4-acre area along the western Project boundary, north of Old Highway 80. This buffer area contains 3.29 acres of desert saltbrush scrub and 10.7 acres of fallow agriculture. The County of San Diego guidelines state that desert saltbrush scrub must be mitigated at a 2:1 ratio (6.78 acres) while fallow agriculture requires mitigation at a 0.5:1 ratio (5.35 acres). Therefore, under the Community Buffer alternative, the total mitigation requirement for habitat would be reduced by 12.13 acres to 422.87 acres of potential biological open space easements. Using the most conservative assumption, this reduction in required open space easements would reduce the alternative's impact to 175.87 acres of mineral resources. This reduction in biological open space easement requirements would reduce the amount of permanent loss of availability of mineral resources, as compared to the Proposed Project. However, the value of mineral resources that would be permanently unavailable would still exceed the County's minimum value threshold. As no feasible mitigation exists to reduce impacts to below a level of significance, impacts to mineral resources would remain significant and unavoidable under this alternative.

Noise

The Community Buffer Alternative would avoid construction and operation activities within 300 feet of adjacent private properties in the Jacumba Hot Springs community. As noise attenuates over distance, this buffer would reduce noise impacts to adjacent properties. Specifically, this would reduce potential significant Project impacts associated with operational stationary equipment noise (**Impact NOI-1**), operational panel cleaning noise (**Impact NOI-2**) and the construction-related noise (**Impact NOI-3**). While these noise impacts would be reduced under the Community Buffer Alternative, they would remain potentially significant. As detailed in the Acoustical Analysis Report (Appendix M), the operational panel cleaning noise within 450 feet of residential uses would lead to potential operational noise impacts. The Community Buffer would ensure the stationary source equipment would be located a minimum of 300-foot buffer from the community; however, other areas would not be avoided and a potential stationary equipment noise impact (**Impact NOI-1**) could continue to occur. As such, the impact would be reduced but not to below a level of significance. As the proposed buffer under the Community Buffer Alternative would be 300 feet only, this impact would remain potentially significant. Similarly, construction noise (**Impact NOI-3**) would be reduced, but would also likely remain potentially significant. These noise impacts could be reduced to less than significant through implementation of mitigation measure **M-NOI-1** (requires an updated Acoustical Analysis Report to ensure noise-producing stationary equipment would be compliant with County noise standards), (**M-NOI-2** (PV Panel Washing Plan to ensure the noise from mobile PV panel washing equipment operating would not exceed County standards), and **M-NOI-3** (Construction

Noise Management Plan to ensure that noise generation from construction activities are aligned with the assumptions and evaluation parameters used in the 2020 Acoustical Analysis Report), similar to the Proposed Project (see Section 2.9, Noise and Vibration).

Paleontological Resources

The Community Buffer Alternative would slightly reduce the area of disturbance by 15.4 acres compared to the Proposed Project. This approximately 2% reduction in graded area would not substantially reduce the paleontological resource impact relative to the Project. The Community Buffer Alternative would require substantially over 2,500 cubic yards of grading in areas of "high" and "moderate" paleontological resource and would therefore result in a potentially significant impact to paleontological resources (**Impact PR-1**) similar to the Project. This potential significant impact could be reduced to less than significant by implementing mitigation measure **M-PR-1** (Paleontological Resources Impact Mitigation Program (PRIMP) with monitoring), similar to the Proposed Project (see Section 2.10, Paleontological Resources).

Tribal Cultural Resources

When compared to the Proposed Project, Community Buffer Alternative would reduce grading impacts by 15.4 acres. This reduction in grading would reduce the potential impact to TCRs relative to the Project. However, the Community Buffer Alternative's approximately 2% reduction in graded area would not substantially reduce the potential tribal cultural resource impact relative to the Project. The Community Buffer Alternative would continue to result in potentially significant impacts to TCRs within 50 feet of the Project ADI or within resource-specific, predetermined buffers, and has the potential to affect undiscovered TCRs, including human remains and archaeological resources that may qualify as TCRs (**Impact TCR-1**). Thus, the Community Buffer Alternative would have similar tribal cultural resource impacts as the Project. As with the Proposed Project, the Community Buffer Alternative could mitigate these impacts to below a level of significance via **M-TCR-1** and **M-TCR-2** that require temporary fencing, and archaeological and tribal monitoring.

Wildfire

The majority of the Project site is located within a High FHSZ, with a western portion within a Moderate FHSZ and a small area as a Very High FHSZ (CAL FIRE 2007a), as detailed in Section 2.12, Wildfire. While potential wildfire impacts would be slightly reduced by maintaining a 300-foot buffer between development and adjacent residential uses within the community of Jacumba Hot Springs, the Community Buffer Alternative would also have potentially significant wildfire impacts similar to that of the Proposed Project. Potential impacts related to direct and cumulative operational-related wildfire risk (**Impact WF-1 and WF-CU-1**), construction-related wildfire risk (**Impact WF-2 and WF-CU-2**) and the installation or maintenance of associated infrastructure that may

exacerbate fire risk during construction and operation (**Impact WF-3**) would occur under this Alternative. Similar to the Project, the development under this alternative would be required to implement design and fire protection measures from a project-specific FPP (**M-WF-1**), as well as the risk reduction and daily fire prevention measures in a CFPP (**M-WF-2**). Also similar to the Project, the development under this alternative would be required to participate in a Fire Protection and Mitigation Agreement (**M-WF-3**) to ensure the development paid it fair share toward providing fire protection services and facilities. None-the-less, the Community Buffer Alternative would result in development within an area at risk from wildfires. Thus, the wildfire impacts of the Community Buffer Alternative would be similar but slightly less than that of the Proposed Project (see Section 3.12, Wildfire).

Other Resource Topics

Under the Community Buffer Alternative, impacts related to agricultural resources, energy, GHG emissions, land use and planning, parks and recreation, population and housing, public services, transportation, utilities and service systems would be less than significant and would be similar to the Proposed Project.

4.4.3 Summary of the Community Buffer Alternative Analysis

The Community Buffer Alternative would include a 300-foot buffer from adjacent private properties in the community of Jacumba Hot Springs, north of Old Highway 80. This buffer would reduce the area of impact by 15.4 acres compared with the Proposed Project. This alternative would reduce impacts to aesthetics **(Impacts AE-1, AE-2, AE-CU-1 and AE-CU-2**), air quality (**Impact AQ-1**), biological resources (**Impacts BI-V-2,** and **BI-W-2**), hydrology and water quality (**Impact HDY-1**), mineral resources (**Impact MR-1**) and noise (**Impacts NOI-1, NOI-2 and NOI-3**). Although these impacts would be lessened, they would remain potentially significant under the Community Buffer Alternative. All of the impacts listed above, except for **Impacts AE-1**, **AE-2, AE-CU-1, AE-CU-2** and **MR-1**, could be reduced to less than significant with implementation of mitigation measures. **Impacts AE-1**, **AE-2, AE-CU-1, AE-CU-2** and **MR-1** would remain significant and unavoidable, similar to the Project. The provision of a 300-foot buffer adjacent to Jacumba Hot Springs would not have a substantial effect to the remaining significant impacts of the Proposed Project, including cultural resources, geology, hazards and hazardous materials, hydrology and water quality, paleontological resources, and tribal cultural resources. Similar to the Project, with implementation of mitigation measure these impacts would be reduced to less than significant.

The Community Buffer Alternative would generally meet all project objectives, although not to the degree that the Proposed Project would. This alternative would generate 7.7 MW less than the Project, and therefore, it would not achieve Project objectives 1, 2 or 3, 5 or 7 to the extent of the Proposed Project.

4.5 Analysis of the Reduced Project Alternative

4.5.1 Reduced Project Description and Setting

The Reduced Project Alternative would have a reduced impact area relative to the Proposed Project. As shown in Figure 4-2, Reduced Project Alternative Site Plan, this alternative would not develop the portion of the Project site to the north of the SDG&E easement, which transects the Project site. The intent of this alternative is to reduce visual impacts to motorists traveling on the I-8 freeway and reduce the permanent loss of availability of mineral resources due to the biological open space easements required as mitigation. This alternative would also lessen other impacts as discussed below. Under the Reduce Project Alternative, the development footprint would be a total of 501 acres, which is a reduction of 142 acres compared to the Proposed Project. The decreased development footprint would reduce the number of PV modules that could be installed. This alternative would install 250,428 PV modules, which is 49,572 modules less than the Proposed Project. This reduction in PV modules would reduce the amount of energy generated by this alternative. The Reduced Project Alternative would generate 68 MW compared to the Proposed Project's generation of 90 MW, which is a reduction of 22 MW. The capacity of the battery energy storage system, including number of battery containers, would also likely be reduced under this alternative. The switchyard, substation, overhead and underground lines and other project components to the south of the transmission lines would be the same as the Proposed Project. The length of construction would be reduced under this Alternative, but the daily construction would remain the same as the Proposed Project.

4.5.2 Comparison of the Effects of Reduced Project Alternative to the Proposed Project

Aesthetics

Under the Reduced Project Alternative, no construction would occur in the area between the SDG&E easement and I-8. This area to be avoided totals approximately 142 acres. This reduction represents a reduction of 22% of the Proposed Project development footprint, which would substantially reduce the scale and acreage of the solar facility. Thus, the impacts to visual character and quality would be lessened. Nonetheless, the Reduced Project Alternative would continue to result in a potential significant impact to visual quality and the character. Thus, **Impacts AE-1** and **AE-2** would be lessened but would remain potentially significant.

The visual impacts of the Reduced Project Alternative from Key Views 3, 4, 5, and 6 (see Figure 2.1.8A for location of key views) would be the same view as the Project since the distant views of the northern area of the Project site is either not visible or would be blocked by slatted fencing and PV panels (see Figures 2.1-11 through 2.1-14). Thus, **Impact AE-4** (from Old Highway 80)

and **Impact AE-5** (from Jacumba Community Park) would be the same as the Project and would be potentially significant.

The Reduced Project Alternative reduction of the development footprint by 142 acres in the northern portion of the Project site would reduce impacts to Key Views 1, 2, 7, 8 and 9 (see EIR Figure 2.1-8A for locations of these key views). These visual impacts from this alternative from these key views are discussed below.

The change in Key View relative to the Project would be the greatest from Key View 1 from I-8, as the Project's PV modules in the northern area are a prominent feature in that view. I-8 is an eligible state scenic highway, and the Reduced Project Alternative was specifically designed to reduce the visual impacts as viewed from I-8. The Reduced Project Alternative would eliminate all the PV modules, battery storage containers, and fencing in the motorists' I-8 foreground view. This Reduced Project Alternative development reduction would substantially reduce **Impact AE-3** relative to the Project, as it would provide a substantial visual buffer and would retain the area as open unencumbered land in the foreground. However, the distant view from I-8 under this alternative would still include a dark mass of PV modules over a substantial area (501 acres). Thus, the Reduced Project Alternative would result in a potentially significant impact to the I-8 view similar to the Project, this impact would be significant and unavoidable.

Key View 2 provides a view from the northeast looking towards the Project site for motorists along Carrizo Gorge Road (Figure 2.1-10). This view includes the solar facility in the midground. Due to the topography and angle of the view, the development of the Reduced Project Alternative would not be prominent relative to the mountains and other features visible. This roadway is also not designated as scenic. Similar to the Project, the Reduced Project Alternative would have a less than significant impact to views along this Carrizo Gorge Road.

Key View 7 represents the view from State Park Lands (Figure 2.1-15) to the northwest of the Project site. Although this key view does not include the northern area of the site where a reduction in development would occur under the Reduced Project Alternative, visual impacts from the State Park Lands looking east or northeast would be reduced by this alternative. From locations within State Park Lands to the north of Key View 7, views primarily consist of the northern area of the site and the elimination of development in that area would substantially reduce prominence of the development and the associated the visual impacts. Thus, the Reduced Project Alternative would substantially reduce impacts to views from State Park Lands (**Impact AE-6**) relative to the Project. However, considering the view impacts from certain State Park Land locations such as Key View 7 would remain, the Reduced Project Alternative impact to State Park Lands would remain significant. This impact would remain significant and unavoidable, similar to the Project.

Round Mountain is located adjacent to the northern area of the Project site. The eastern portion of Round Mountain is within the Project site, the western portion is federal land managed by the Bureau of Land Management. As such, the Reduced Project Alternative reduction of development within the northern area would reduce the visual impact of the development relative to the Project. Thus, the Reduced Project Alternative would substantially reduce impacts to views from Round Mountain (**Impact AE-7**) relative to the Project. However, this impact would remain significant and unavoidable, similar to the Proposed Project.

The Airport Mesa viewpoint is located to the southeast of the Project site and is represented by Figure 2.1-16. From this elevated viewpoint, the northern area of the Project is visible over the topographic features located adjacent to the site. The reduction of development in the northern area of the site would reduce the impact to this view relative to the Project considering the expanse of dark PV modules would be noticeably reduced from this vantage point. Thus, the Reduced Project Alternative would substantially reduce impacts to views from Airport Mesa (**Impact AE-8**) relative to the Project. However, under the Reduced Project Alternative, the impact to the Airport Mesa views would remain significant and unavoidable, similar to the Project.

The Table Mountain viewpoint is located to the northeast of the Project site and is represented by Figure 2.1-17. From this elevated viewpoint, the northern area of the Project is visible but is partially obscured from topography. None-the-less, the reduction of development in the northern area of the site would still reduce the impact to this view relative to the Project considering the dark PV modules would be noticeably reduced from this vantage point. Thus, the Reduced Project Alternative would substantially reduce impacts to views from Table Mountain (**Impact AE-9**) relative to the Project. However, under the Reduced Project Alternative impact to the Table Mountain views would remain significant and unavoidable, similar to the Project.

In summary, the Reduced Project Alternative would lessen aesthetic **Impacts AE-1, AE-2, AE-3, AE-6, AE-7, AE-8,** and **AE-9** but these impacts would remain potentially significant. **Impacts AE-CU-1, AE-CU-2, AE-4,** and **AE-5** would be the same under the Reduced Project Alternative as the Project. With the implementation of **M-AE-1 - M-AE-6, t**he Reduced Project Alternative would include softer colors for buildings, landscaping buffers, buffers from the community, and a slatted screening fence. Similar to the Proposed Project, the impacts from light and glare would remain less significant under this alternative.

Air Quality

The Reduced Project Alternative would require less construction activities than the Proposed Project, which would reduce air quality emissions during construction. The construction diesel exhaust emissions from the Proposed Project was determined to result in a cancer risk on site above the 1 in 1 million threshold without application of T-BACT (**Impact AQ-1**). The reduction

of the development footprint by about 142 acres (22%) under the Reduced Project Alternative would reduce diesel emissions, as the construction efforts would be reduced. Given that the Project cancer risk from construction exhaust was 2.93 in a million and was well over the 1 in a million County Guidelines threshold for the Proposed Project, this reduction in the development footprint would not reduce this impact to below a level of significance. Overall, the Reduced Project Alternative would reduce the cancer risk relative to the Project, but the impact would remain potentially significant. The Reduced Project Alternative could implement **M-AQ-1** to reduce this TAC impact to less than significant, similar to the Project.

Proposed Project emissions of NO_x, PM_{10}, and $PM_{2.5}$ would exceed the daily emissions threshold of significance (**Impact AQ-CU-1**). The Reduced Project Alternative would reduce the development footprint by 142 acres. While this reduction would reduce overall emissions, the criteria pollutant emission thresholds are based on a daily emission rate. The duration of construction may be slightly reduced under this Reduced Project Alternative relative to the Proposed Project, but the per day activities are expected to be similar to the Project. Thus, it is expected that the Reduced Project Alternative's impacts related to daily criteria pollutant emissions would be similar to the Project and would exceed the daily emissions threshold of significance for NO_x, PM_{10}, and $PM_{2.5}$. The Reduced Project Alterative could implement **M-AQ-1** and **M-AQ-2** to reduce **Impact AQ-CUM-1** to less than significant, similar to the Project (see Section 2.2, Air Quality).

Biological Resources

The Reduced Project Alternative would include a reduction in impact area of 141.81 acres when compared to the Proposed Project. Of that 141.8 acres, disturbed habitat and developed lands account for 16.8 acres; neither of which require mitigation per the County of San Diego guidelines. The remaining 125 acres includes 32 acres of desert saltbrush scrub, 39.6 acres of Sonoran mixed woody and succulent scrub and 53.4 acres of fallow agriculture, all of which require mitigation. Desert saltbrush scrub requires mitigation at a 2:1 ratio (64 acres). Sonoran mixed woody and succulent scrub require a 1:1 mitigation ratio (39.6 acres) and fallow agriculture is mitigated at a 0.5:1 ration (26.7 acres). Therefore, total mitigation requirements (**M-BI-3**) under the Reduced Project Alternative would be reduced by 130.3 acres. This avoidance would reduce permanent direct impacts to sensitive vegetation communities (**Impact BI-V-2**), however, the impact would remain potentially significant under the Reduced Project Alternative.

The Reduced Project Alternative would also reduce permanent direct impacts to loggerhead shrike, California horned lark, San Diegan tiger whiptail, mule deer, brewer's sparrow, and San Diego desert woodrat that are considered special status wildlife (**Impacts BI-W-2**). The avoidance of this area would also reduce impacts to raptor foraging (**Impact BI-W-2**). Areas containing pygmy lotus and sticky geraea, which are special-status plants, would also be avoided under the Reduced Project Alternative (**Impact BI-SP-2**). Considering the substantial reduction

in the development footprint and that the avoided area would be located adjacent to primarily undeveloped areas, the Reduced Project Alterative would lessen indirect impacts to special status plants (**Impacts BI-SP-1, BI-SP-3,** and **BI-SP-4)**, special status wildlife **(Impacts BI-WI-1, BI-W-2, BI-W-5,** and **BI-W-6)**, sensitive vegetation communities (**Impacts BI-V-1, BI-V-3,** and **BI-V-4**) and jurisdictional resources (**Impacts BI-JAR-1** to **BI-JAR-3**) during construction and operations. In addition, a greater wildlife core and east-west linkage area would not be developed and **Impacts BI-WLC-1** through **BI-WLC-3** would be reduced.

All other direct impacts of the Reduced Project Alternative would be similar to the Proposed Project, including potential impacts to the State-listed tricolored blackbird (**Impact BI-W-2**), other special status plants (**Impacts BI-SP-1** to **BI-SP-4**), other special status wildlife (**Impacts BI-W-1** and **BI-W-2, BI-W-5, BI-W-6**), nesting birds (**Impacts BI-W-3**), bats (**Impacts BI-W-4**), and burrowing owls (**Impact W-2**).

Overall, the Reduced Project Alternative would substantially reduce biological resource impacts relative to the Project, but the impacts would remain potentially significant. The Reduced Project Alternative could implement mitigation measures **M-BI-1** through **M-BI-12** that include biological monitoring; habitat preservation; construction-related indirect or temporary avoidance measures; resource management plan; nesting bird and bat surveys; bat roost avoidance; prevention of invasive plant species; O&M guidelines; and noise reduction measures to reduce impacts to less than significant, similar to the Project (see Section 2.3, Biological Resources). .

Cultural Resources

Under the Reduced Project Alternative, the impact area would be reduced by 142-acres in the northern area of the Project site. The Reduced Project Alternative would reduce potential impacts to undiscovered cultural resources and undiscovered human remains considering the impact area would be reduced. Given this alternative would reduce impacts by 142 acres, or 22 percent relative to the project, this reduction in potential impacts to undiscovered cultural resources would be substantial. Thus, the Reduced Project Alternative's impacts to undiscovered cultural resources (**Impact CR-1**) and undiscovered human remains (**Impact CR-3**) would be less than the Project. None-the-less, these impacts would remain potentially significant.

The Reduced Project Alternative would avoid impacts to CA-SDI-7054, CA-SDI-11675, CA-SDI-11676, CA-SDI-11684, CA-SDI-19070, CA-SDI-19904 to CA-SDI-19910, and CA-SDI-22733 as well as P-37-38609, P-37-038610, P-37-038611, P-37-038612, P-37-038613, P-37-038614, P-37-038615, P-37-038616, and P-37-038624. Overall, the Reduced Project Alternative would directly impact 15 archaeological sites, which is 13 less than the Proposed Project. Thus, this alternative would have substantially less impacts to County important sites than the

Proposed Project. Nonetheless, the impacts to the 15 County-important archaeological sites would be potentially significant.

The Reduced Project Alternative could implement mitigation measures **M-CR-1** through **M-CR-4** that require temporary fencing, archaeological monitoring, Cultural Resources Treatment Agreement and Preservation Plan, and Long-term Preservation of Resources to reduce **Impacts CR-1** to **CR-4** to less than significant, similar to the Project (see Section 2.4, Cultural Resources).

Geology, Soils, and Seismicity

The Reduced Project Alternative would reduce the impact area by 142 acres in the northern area of the Project site. As the impact area would be reduced substantially by 22% , the Reduced Project Alternative would substantially reduce the Project's significant geologic impacts related to potential static settlement, liquefaction, possible lateral spread and expansive soils during construction and operation (**Impacts GEO-1** and **GEO-2**). However, the Reduced Project Alternative's geologic impacts would remain potentially significant. These impacts could be reduced through implementation of mitigation measure **M-GEO-1** (final site-specific geotechnical report that demonstrate compliance with the California Building Code requirements) to less than significant, similar to the Project (see Section 2.5, Geology, Soils and Seismicity).

Hazards and Hazardous Waste

While potential wildfire hazard impacts would be reduced because the development footprint would be reduced by 142 acres and the construction period would be reduced, this alternative would continue to have potentially significant wildfire hazard impacts similar to that of the Proposed Project. Potential impacts related to operational-related wildfire hazards (**Impact HAZ-1**) and construction-related wildfire hazards (**Impact HAZ-2)** would still occur under this Alternative. The Reduced Project Alternative would be required to implement the design and fire protection measures in a project-specific FPP (**M-WF-1**), as well as the risk reduction and daily fire prevention measures in a CFPP (**M-WF-2**). Also, similar to the Proposed Project, the development under this alternative would be required to participate in a Fire Protection and Mitigation Agreement (**M-WF-3**) to ensure the development paid its fair share toward providing fire protection services and facilities. Thus, hazards and hazardous materials impacts due to the Reduced Project Alternative would be less than significant with implementation of mitigation, similar to the Proposed Project. In addition, the Reduced Project Alternative would slightly reduce the Project's significant cumulative impacts to interference with emergency response and wildland fire hazards (**Impacts HAZ-CU-1** and **HAZ-CU-2**). These impacts could be reduced below a level of significance with mitigation such as **M-WF-1, M-WF-2** and **M-WF-3** similar to the Proposed Project. Thus, the wildfire hazard impacts of the Reduced Project Alternative would be similar but slightly less than that of the Proposed Project (see Section 2.6, Hazards and Hazardous Materials).

Hydrology and Water Quality

The Reduced Project Alternative would reduce the impact area by 142 acres. Similar to the Proposed Project, potentially significant hydrology and water quality impacts associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence would occur (**Impact HYD-1**). This impact would be reduced to below a level of significance with implementation of mitigation measure **M-HYD-1** that requires a perimeter fencing and layout plan that avoids the blockage and/or redirection of storm flows (see Section 2.7, Hydrology and Water Quality).

Mineral Resources

The Proposed Project would result in a significant and unavoidable impact to mineral resources (**Impact MR-1**). This impact is a result of the biological open space easement (188 acres) which is required as mitigation for impacts to biological resources (see Section 2.8, Mineral Resources). The Reduced Project Alternative would have a reduced impact area relative to the Proposed Project, as this alternative would not develop the portion of the Project site to the north of the SDG&E easement. Under the Reduced Project Alternative, the development footprint would be a total of 501 acres, which is a reduction of impact area of 141.81 acres when compared to the Proposed Project. Of that 141.8 acres, disturbed habitat and developed lands account for 16.8 acres; neither of which require mitigation per the County of San Diego guidelines. The remaining 125 acres includes 32 acres of desert saltbrush scrub, 39.6 acres of Sonoran mixed woody and succulent scrub and 53.4 acres of fallow agriculture, all of which require mitigation. Desert saltbrush scrub requires mitigation at a 2:1 ratio (64 acres). Sonoran mixed woody and succulent scrub require a 1:1 mitigation ratio (39.6 acres) and fallow agriculture is mitigated at a 0.5:1 ration (26.7 acres). Therefore, total mitigation requirements for habitat preservation under the Reduced Project Alternative would be reduced by 130.3 acres. Therefore, the total open space easement mitigation requirement for this alternative would be 304.7 acres. For purposes of this analysis, it is conservatively assumed that the 130.3 acres of land that would not be placed in a biological open space easement would be located within the valley portion of the Project site and overlies the area of the valley that contains mineral resources (i.e., it is assumed that this alternative would reduce the impacts to mineral resources to the maximum extent possible). However, notably, this will likely not be the case as the valley portion of the Project site to be preserved by the open space easements contains significant biological value and acts as a wildlife corridor.

This reduction in biological open space easement requirements would reduce the amount of permanent loss of availability of mineral resources, as compared to the Proposed Project. It is conservatively estimated that the 130.3 acres of land that would not be placed in a biological open space easement under this alternative would have underlying mineral resources. Thus, under this alternative 57.7 acres of biological open space easements would have underlying mineral resources.

The estimated acreage of biological open easement with underlying mineral resources under this alternative is approximately 31% of the acreage of mineral resources loss due to biological open space easements (188 acres) for the Proposed Project. Assuming the same price of $20.00 per ton, a density of 0.055 tons per cubic foot and a waste factor of approximately 40 percent, the value of material would be roughly $66,985,418 which would exceed the threshold ($12,500,000) for the County's definition of a significant impact. Thus, the value of the mineral resources that would be permanently unavailable as a result of the Reduce Project Alternative would still exceed the County's minimum value threshold. As no feasible mitigation exists to reduce impacts to below a level of significance, impacts to mineral resources caused by the Reduced Project Alternative would remain significant and unavoidable under this alternative.

Noise

The Reduced Project Alternative would reduce the development footprint in the northern portion of the site by 142 acres; however, the development footprint would be the same as the Project adjacent to the community of Jacumba Hot Springs. Thus, the construction and operational noise impacts under the Reduced Project Alternative would be the same as the Project, including potential significant impacts associated with operational panel cleaning noise (**Impact NOI-1 and NOI-2**) and construction-related noise (**Impact NOI-3**). The Reduced Project Alternative could implement mitigation measures **M-NOI-1** (requires an updated Acoustical Analysis Report to ensure noise-producing stationary equipment would be compliant with County noise standards), **M-NOI-2** (PV Panel Washing Plan), and **M-NOI-3** (Construction Noise Management Plan) to reduce these impacts to less than significant, similar to the Project (see Section 2.9, Noise and Vibration).

Paleontological Resources

The Reduced Project Alternative would reduce the impact area by 142 acres, which would reduce the potential impacts to paleontological resources as a result of grading. As shown on Figure 2.7-1, Project Site Paleontological Resource Potential, the avoidance of the northern area would reduce impacts to areas designated as moderate to low sensitivity for paleontological resources. Considering a reduction would occur to the moderate sensitivity area, the Reduced Project Alternative reduction would reduce the paleontological resource impact relative to the Project (**Impact PR-1**). Nonetheless, the Reduced Project Alternative would require substantially over 2,500 cubic yards of grading in areas of "high" paleontological resource and would therefore result in a potentially significant impact to paleontological resources. The Reduced Project Alternative could implement mitigation measure **M-PR-1** (Paleontological Resources Impact Mitigation Program (PRIMP) with monitoring) to reduce the impact to less than significant, similar to the Project (see Section 2.10, Paleontological Resources).

Tribal Cultural Resources

The Reduced Project Alternative would reduce grading by 142 acres compared to the Project. This reduction in grading would reduce the potential impact to Tribal Cultural Resources (**Impact TCR-1**) relative to the Proposed Project. None-the-less, the Reduced Project Alternative would result in potentially significant impacts to Tribal Cultural Resources within 50 feet of the Project ADI or within resource-specific, predetermined buffers, and the alternative has the potential to affect undiscovered TCRs, including human remains. The Reduced Project Alternative could implement mitigation measures **M-TCR-1** (temporary fencing), **M-TCR-2** (archaeological and tribal monitoring) and **M-TCR-3** (long-term preservation of resources) to reduce the impacts to less than significant, similar to the Proposed Project (see Section 2.11, Tribal Cultural Resources).

Wildfire

The majority of the Project site is located within a FHSZ, with a western portion within a Moderate FHSZ and a small area as a Very High FHSZ (CAL FIRE 2007a). While potential wildfire impacts would be reduced because the development footprint would be reduced by 142 acres, this alternative would have potentially significant wildfire impacts similar to that of the Proposed Project. Potential impacts related to operational-related wildfire risk (**Impact WF-1**), construction-related wildfire risk (**Impact WF-2**) and the installation or maintenance of associated infrastructure that may exacerbate fire risk during construction and operation (**Impact WF-3**) would still occur under this Alternative. The Reduced Project Alternative would be required to implement the design and fire protection measures in a project-specific FPP (**M-WF-1**), as well as the risk reduction and daily fire prevention measures of a project-specific CFPP (**M-WF-2**), similar to the Proposed Project. Also similar to the Project, the development under this alternative would be required to participate in a Fire Protection and Mitigation Agreement (**M-WF-3**) to ensure the development paid it fair share toward providing fire protection services and facilities. Thus, wildfire impacts due to the Reduced Project Alternative would be less than significant, with implementation of mitigation, similar to the Proposed Project (see Section 2.12, Wildfire).

Other Resource Topics

The Reduced Project Alternative's impacts related to agricultural resources, energy, GHG emissions, land use and planning, parks and recreation, population and housing, public services, transportation, and utilities and service systems would be less than significant, similar to the Proposed Project.

4.5.3 Summary of the Reduced Project Alternative Analysis

The Reduced Project Alternative would avoid the area to the north of the SDG&E easement. The reduction of the development footprint by 142 acres would reduce impacts to aesthetics **(Impacts AE-1, AE-2, AE-3,** and **AE-6 through AE-9**), air quality (**Impact AQ-1**), biological resources (**BI-V-2, BI-W-2, BI-SP-2, BI-W-1, BI-W-2, BI-W-5, BI-W-6, BI-V-1, BI-V-3, BI-V-4, BI-JAR-1, BI-JAR-2, BI-JAR-3, BI-WLC-1 BI-WLC-2**, and **BI-WLC-3**), cultural resources (**Impacts CR-1** and **CR-2**), geology (**GEO-1** and **GEO-2**), hazards and hazardous materials (**Impacts HAZ-1** and **HAZ-2**), hydrology and water quality (**Impact HYD-1**), mineral resources (**Impact MR-1**), paleontological resources (**Impact PR-1**), tribal cultural resources (**Impact TCR-1**), and wildfire (**Impacts WF-1, WF-2 and WF-3**). These impacts could be reduced to less than significant with implementation of mitigation measures, except Impacts **AE-4, AE-5**, and **MR-1** which would remain significant and unavoidable.

This alternative would generally meet all project objectives, although not to the degree that the Proposed Project would. The Reduced Project Alternative would result in approximately 22% less renewable energy generation and, therefore, it would not achieve Project objectives 1, 2 or 3, 5 or 7 to the extent of the Proposed Project.

4.6 Summary of Alternatives

A summary of impacts of the alternatives compared to the Proposed Project by resource topic is included in Table 4-1, pursuant to CEQA Guidelines Section 15126.6(D).

4.7 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(a) states that an EIR shall describe a range of reasonable alternatives. As evaluated in Chapter 2 of this EIR, the significant impacts of the Proposed Project include the following: aesthetics; air quality; biological resources; cultural resources; geology, soils, and seismicity; hazards and hazardous materials; hydrology and water quality; mineral resources; noise; paleontological resources; tribal cultural resources; and wildfire. The No Development No Project Alternative would avoid impacts to all of these topic areas, and therefore would be the environmentally superior alternative. However, the No Development No Project Alternative does not meet any of the project objectives.

Additionally, CEQA Guidelines Section 15126.6(e)(2) states that if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. The Reduced Project Alternative would be the environmentally superior alternative, as it would substantially reduce the severity of aesthetic impacts (**Impacts AE-1, AE-2, AE-3, and AE-6 to AE-9**), air quality (**Impact AQ-1**), as well as all

significant biological, cultural, geologic, hazards and hazardous materials, hydrology and water quality, mineral resources, paleontological, and tribal cultural resource impacts (Table 4-1).

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Table 4-1
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
Impact AE-1: Impact to Jacumba existing visual character and/or quality	SU	▼	=	▼	▼
Impact AE-2: Impact to visual character of Jacumba Hot Springs	SU	▼	▼	▼	▼
Impact AE-3: I-8 Long distance view changes to this eligible state scenic highway viewpoint due to proposed project	SU	▼	▼	=	▼
Impact AE-4: Old Highway 80 – Long distance view blockage and character change from this County scenic highway system viewpoint due to proposed solar and fencing	SU	▼	▲	=	=
Impact AE-5: Jacumba Community Park – Long distance view blockage and character change from this County Park due to proposed solar and fencing	SU	▼	▲	=	=
Impact AE-6: Anza-Borrego Desert State Park Lands and Carrizo Gorge Wilderness - Long distance view changes from State Parks lands due to proposed solar	SU	▼	▼	=	▼
Impact AE-7: Round Mountain – Character change and view interruption from this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼
Impact AE-8: Airport Mesa - Long distance view changes at this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼
Impact AE-9: Table Mountain area – Long distance view changes at this recreational resource viewpoint due to proposed solar	SU	▼	▼	=	▼

Table 4-1
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
Impact AE-10: Glare impact to roadways from proposed project	LS	▼	▲	=	▼
Impact AE-CU-1 **Cumulative** Impact on valued visual character or image of neighborhoods, communities, or localized areas.	SU	▼	=	▼	▼
Impact AE-CU-2 Cumulative impacts to panoramic vista available from elevated vantage point in the Airport Mesa and Table Mountain Recreational Management Zones.	SU	▼	▼	=	▼
Impact AQ-1: Construction-related cancer risk from diesel exhaust	SM	▼	▲	▼	▼
Impact AQ-CUM-1: Construction-related emissions of No_x, PM_{10} and $PM_{2.5}$	SM	▼	▲	=	=
Impact BI-SP-1: Temporary direct impact to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-2: Permanent direct impact to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-3: Construction-related temporary indirect impacts to special-status plants	SM	▼	▲	=	▼
Impact BI-SP-4: Operational permanent indirect impacts to special-status plants	SM	▼	▲	=	▼
Impact BI-W-1: Temporary direct impact to special-status wildlife	SM	▼	▲	=	▼
Impact BI-W-2: Permanent direct impact to special-status wildlife (including tricolored blackbird, burrowing owl and raptor foraging habitat)	SM	▼	▲	▼	▼

Table 4-1
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
Impact BI-W-3: Permanent direct impact to special-status wildlife (sensitive bird nesting)	SM	▼	▲	=	=
Impact BI-W-4: Permanent direct impact to Special-status wildlife (bats)	SM	▼	▲	=	=
Impact BI-W-5: Construction-related temporary indirect impacts to special-status wildlife (including sensitive bird nesting)	SM	▼	▲	=	▼
Impact BI-W-6: Operational permanent indirect impacts to special-status wildlife	SM	▼	▲	=	▼
Impact BI-WLC-1: Temporary direct impact to wildlife movement	SM	▼	▲	=	▼
Impact BI-WLC-2: Permanent direct impact to wildlife movement (Core wildlife area)	SM	▼	▲	=	▼
Impact BI-WLC-3: Temporary indirect impact to wildlife movement	SM	▼	▲	=	▼
Impact BI-V-1: Temporary direct riparian habitat or sensitive vegetation communities	LS	▼	▲	=	▼
Impact BI-V-2: Permanent direct riparian habitat or sensitive vegetation communities	SM	▼	▲	▼	▼
Impact BI-V-4: Permanent indirect riparian habitat or sensitive vegetation communities	SM	▼	▲	=	▼
Impact BI-JAR-1: Temporary direct Jurisdictional resources	SM	▼	▲	=	▼
Impact BI-JAR-2: Temporary indirect Jurisdictional resources	LS	=	▲	=	▼
Impact BI-JAR-3: Temporary indirect impact to jurisdictional resources	LS	▲	▲	▲	▼

Table 4-1
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
Impact CR-1: Construction and Decommissioning-related impacts to undiscovered cultural resources on-site or known cultural resources within 50 feet of the Project ADI	SM	▼	▲	=	▼
Impact CUL-2 Construction-related impacts to undiscovered human remains	SM	▼	▲	=	▼
Impact GEO-1: Ground failure due to liquefaction, seismically induced settlements, and/or lateral ground spread that could result in the collapse of a structure	SM	▼	▲	=	▼
Impact GEO-2: Expansive soils have potential to impact development	SM	▼	▲	=	▼
Impact HAZ-1: Operational-related impacts that could exacerbate wildfire risks and thereby expose project occupants to risk of loss, injury or death involving wildland fires	SM	▼	▲	=	▼
Impact HAZ-2: Construction-related impacts exposing project occupants to potential risk of loss, injury or death involving wildland fires	SM	▼	▲	=	▼
Impact HAZ-CU-1 Cumulative impacts to interference with emergency response	SM	▼	▲	=	▼
Impact HAZ-CU-2 Cumulative impacts to Wildland Fire Hazards	SM	▼	▲	=	▼

Table 4-1
Summary of Alternatives to the Proposed Project

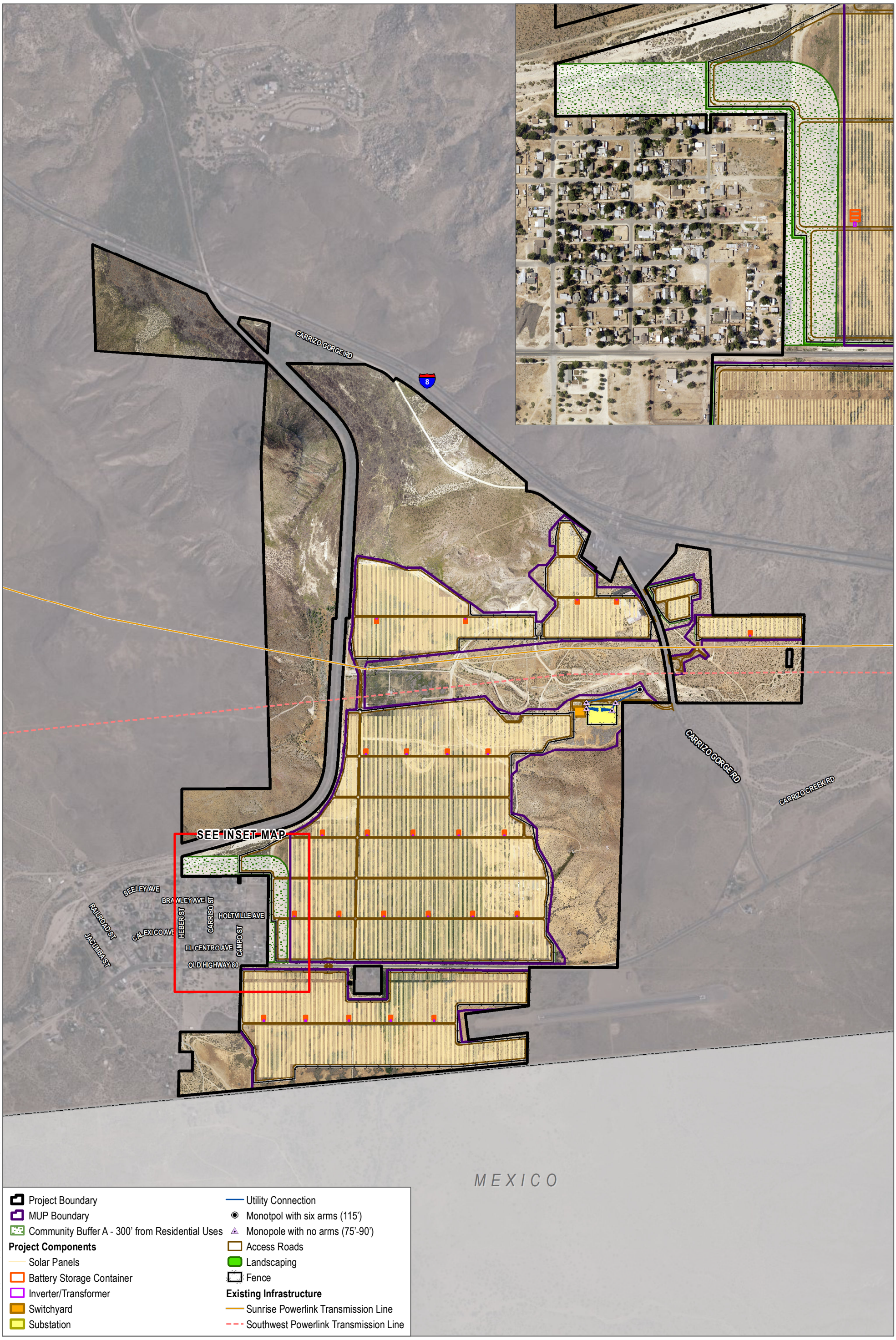
Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
Impact HYD-1: Impacts resulting from implementation of the Proposed Project associated with potential alteration of drainage patterns and flood hazards due to the perimeter fence, during construction and operation	SM	▼	▲	=	=
Impact MR-1 The Proposed Project is an interim use and would not result in the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000. However, MM BI-3, Habitat Preservation, a mitigation measure implemented to reduce the Proposed Project's impacts to biological resources, will cause a potentially significant impact with respect to the permanent loss of availability of a known mineral resource that is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and is valued at more than $12,500,000.	SU	▼	▲	▼	▼
Impact NOI-1: Operational stationary equipment noise	SM	▼	▲	▼	=
Impact NOI-2: Operational Mobile Equipment noise	SM	▼	▲	▼	=
Impact NOI-3: Construction-related noise	LS	▼	▲	▼	=
Impact PR-1: Construction-related impact to	SM	▼	▲	=	▼

Table 4-1
Summary of Alternatives to the Proposed Project

Issue Areas	Proposed Project	Alternatives			
		No Project			
		No Development	*Buildout*	*Community Buffer*	*Reduced Project*
paleontological resources					
Impact TCR-1: Construction-related impacts to tribal cultural resources	SM	▼	▲	=	▼
Impact WF-1 Operational-related impacts to wildfire risk	SM	▼	▲	=	▼
Impact WF-2 Construction-related impacts to wildfire risk	SM	▼	▲	=	▼
Impact WF-3 Infrastructure contribution to increased wildfire risk	SM	▼	▲	=	▼
Impact WF-CU-1 Cumulative Impact to Emergency Response and emergency evacuation plan	SM	▼	▲	=	▼
Impact WF-CU-2 Cumulative Impact to wildfire risk	SM	▼	▲	=	▼
Impact WF-CU-3 Cumulative Infrastructure Contribution to Increased Wildfire Risk	SM	▼	▲	=	▼

▲ Alternative is likely to result in greater impacts to issue when compared to Proposed Project.
= Alternative is likely to result in similar impacts to issue when compared to Proposed Project.
▼ Alternative is likely to result in reduced impacts to issue when compared to Proposed Project.

LS = less than significant without mitigation; SM = less than significant with mitigation measures; SU = potentially significant and unavoidable impact.



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 4-1

Community Buffer Alternative

JVR Energy Park Project

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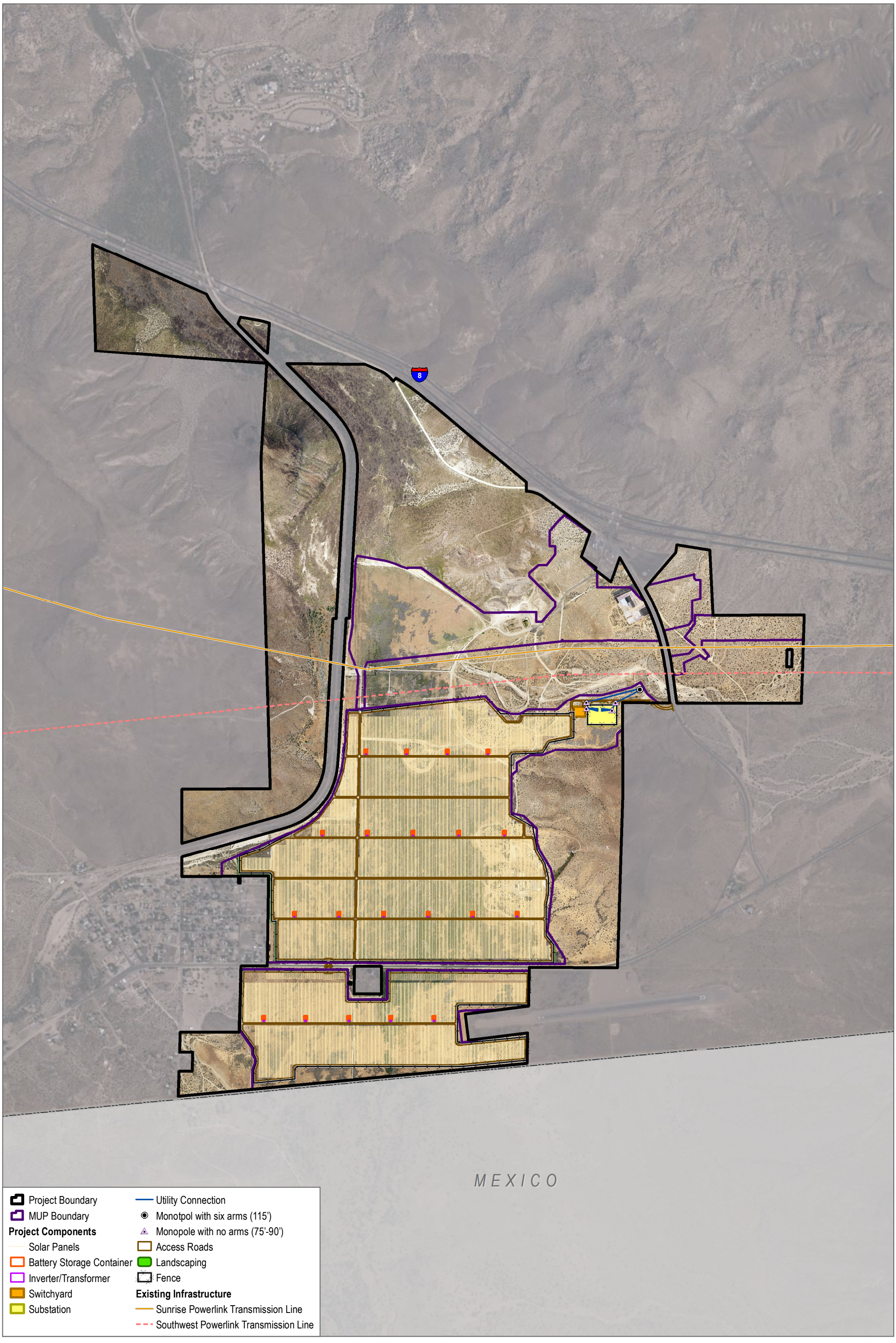

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 4-2

Reduced Project Alternative

JVR Energy Park Project

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CHAPTER 5 MITIGATION MEASURES

This chapter provides a consolidated listing of all mitigation measures for the Proposed Project. The mitigation measures are listed by environmental topic.

AESTHETICS

M-AE-1 Inverter enclosures shall be a non-reflective color. If the enclosures are not manufactured as non-reflective, the enclosures shall be painted a non-reflective color.

M-AE-2 Energy storage containers shall be a non-reflective color. If the containers are not manufactured as non-reflective, the containers shall be painted a non-reflective color.

M-AE-3 All new transmission line conductors shall be non-reflective in design to reduce conductor visibility and visual contrast.

M-AE-4 A minimum set-back of 75 feet from residential property lines to solar panels shall be provided along the western Project boundary. This setback shall be provided where the western Project boundary parallels residential property lines in Jacumba Hot Springs. Setbacks shall be provided pursuant to Section 4800, Setback Regulations, of the County's Zoning Ordinance and shown on Project Plot Plans.

M-AE-5 Landscaping shall be installed to provide visual screening of the solar facility. The proposed rows of landscaping will be approximately 15 feet wide and will include drought tolerant trees (approximately 18 feet tall 10 years after planting) with native and/or drought tolerant shrubs and ground covers incorporated in between the fence line and the existing road and utility easements. As identified on the Project Conceptual Landscape Plan, landscaping shall be installed and shall run parallel to segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of the solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facility adjacent to the community of Jacumba Hot Springs. The applicant shall prepare the Landscape Plans using the Landscape Documentation Package and pay all applicable review fees. Prior to approval of any plan, issuance of any permit, and prior to use of the premises in reliance of this permit, the Landscape Documentation Package shall be prepared and approved. Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the landscaping shall be installed. The applicant shall submit to the [PDS LA, PCC], a Landscape Certificate of Completion from the project California licensed

Landscape Architect, Architect, or Civil Engineer, that all landscaping has been installed as shown on the approved Landscape Documentation Package. The applicant shall prepare the Landscape Certificate of Completion using the Landscape Certificate of Completion Checklist. Prior to project construction, the project applicant shall submit a conceptual landscape plan detailing the planting materials and sizes and location of landscaping shall be prepared and provided to the County for review and approval. Landscaping shall be planted and maintained accordingly to ensure continued screening of proposed solar panels by the Applicant and/or Project operator over the operational life of the Project.

M-AE-6 As identified on the Project Plot Plans, tan-colored slats shall be installed along specific segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facilities adjacent to the community of Jacumba Hot Springs. Slats shall be maintained accordingly over the operational life of the Project. Slats shall be replaced as needed to ensure a unified and orderly appearance and to provide continued screening of Project components.

AIR QUALITY

M-AQ-1 Prior to the County of San Diego's (County's) approval of any construction or decommissioning-related permits, the Proposed Project applicant or its designee shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions:

a. Heavy-duty diesel-powered construction equipment shall be equipped with Tier 4 Final or better diesel engines for engines 75 horsepower or greater. The County shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.
b. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions.
c. All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.
d. When construction equipment units that are less than 50 horsepower are employed, that equipment shall be electrical or natural gas-powered, where available.

M-AQ-2 Prior to the County of San Diego's (County's) approval of any grading permits and during Proposed Project construction and decommissioning, a Fugitive Dust

Control Plan shall be prepared demonstrating compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 and County Code Section 87.428 (Grading Ordinance), to the satisfaction of the County. The Project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM_{10} emissions as part of the Fugitive Dust Control Plan. All measures shall be designated on Grading and Improvement Plans.

a. Prior to construction activities, the Project applicant shall employ a construction relations officer who shall address community concerns regarding on-site construction activity. The Project applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations and noted on Grading and Improvement Plans.
b. Grading areas shall be watered, or another SDAPCD-approved dust control non-toxic agent shall be used, at least three times daily, to minimize fugitive dust only where chemical stabilizers are not used.
c. All permanent roads and the paved access roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. Foundations shall be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earth-moving operations.
d. Grading areas shall be stabilized as quickly as possible to minimize fugitive dust.
e. Wheel washers, grates, rock, or road washers shall be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads.
f. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.
g. Haul trucks shall be covered or at least 2 feet of freeboard shall be maintained to reduce blow-off during hauling.
h. A 15-mile-per-hour speed limit on unpaved surfaces shall be enforced.
i. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.

BIOLOGICAL RESOURCES

M-BI-1 Biological Monitoring.

(a) In order to prevent inadvertent disturbance to sensitive resource areas outside the approved area of impact, a County of San Diego (County)-approved biologist (Project Biologist) shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*. The contract provided to the County shall include an agreement that this will be completed, and a memorandum of understanding between the biological consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the County *Biological Report Format and Requirement Guidelines*, the Project Biologist shall also perform the following duties:
   a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
   b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading and clarifying that the Project Biologist has the authority to halt work that could harm or harass a protected species.
   c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.
   d. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
   e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.
   f. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts on biological resources that are intended to be protected and preserved.
   g. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earthmoving activities. If brush-clearing and earth-moving activities take place within

the bird breeding season, flushing shall not occur in an area identified as having an active nest and thus resulting in a potential take of a species.

h. Verify that grading plans include a stormwater pollution prevention plan (SWPPP) (if required pursuant to provisions of the State Water Resources Control Board 2009-0009-DWQ Construction General Permit, or equivalent applying the standards set forth in the County of San Diego Stormwater Standards Manual) to address hydrology impacts; see **M-BI-7**.
i. Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that temporarily impacted areas are revegetated as soon as possible.
j. Periodically monitor the construction site to verify that artificial security light fixtures are directed away from open space and are shielded.
k. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas are provided on a daily basis during vegetation clearing, grubbing and grading. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles shall be covered at night to prevent wildlife from burrowing in. The edges of the sheeting shall be weighted down with sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area at the end of the day) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.
l. Except as stated otherwise herein, biological monitoring is daily during vegetation clearing, grubbing and grading. Once the PV field construction commences, the monitoring shall be weekly.

2. The cost of the monitoring shall be added to the grading bonds or bonded separately with the County Planning & Development Services (PDS).

   Documentation: The Applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to the PDS. Additionally, the cost amount of the monitoring work shall be added to the grading bond cost estimate.

   Timing: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits.

   Monitoring: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate should be

forwarded to the Project manager, for inclusion in the grading bond cost estimate, and grading bonds. The DPW/PDS shall add the cost of the monitoring to the grading bond costs.

(b) In order to ensure that the biological monitoring occurred during the grading phase of the Project, a final biological monitoring report shall be prepared. The Project Biologist shall prepare the final biological monitoring report. The report shall substantiate the supervision of the grading activities, and confirm that grading or construction activities did not impact any additional areas or any other sensitive biological resources. The report shall conform to the County *Report Format Guidelines for Biological Resources*, and include the following items:

a. Photos of the fencing or temporary flagging that was installed during the trenching, grading, or clearing activities

b. Monitoring logs showing the date and time that the monitor was on site

c. Photos of the site after the grading and clearing activities.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform the applicant to release the bond back to the Applicant.

(c) Compliance with this measure shall be required during decommissioning activities.

M-BI-2 **Temporary Construction Fencing.** Prior to issuance of permits, including clearing, grubbing, grading, and/or construction permits, the project applicant or its designee shall install fencing wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the Project Biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on plans. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence to the satisfaction of the Director of the San Diego County Department of Planning and Development

Services (or his/her designee) that work was conducted as authorized under the approved permits and associated plans.

M-BI-3 **Habitat Preservation.** In order to mitigate for impacts to loss of sensitive vegetation communities, plant and wildlife species habitat, special status plant species, burrowing owl occupied habitat, and wildlife movement, the applicant shall provide an on-site biological open space easement.

(a) In order to protect sensitive biological resources, pursuant to the Resource Protection Ordinance (RPO) and California Environmental Quality Act, a biological open space easement will be granted over up to 435.00 acres of sensitive vegetation communities, special-status plant species, and habitat for special-status species. The project is estimated to impact sensitive vegetation communities that require mitigation as summarized in the following table.

Vegetation Community/Land Cover	Ratio	Permanent Direct Impacts (Acres)	Required Mitigation (Acres)	Biological Open Space Easement (Acres)
*Desert saltbush scrub	2:1	50.39	100.78	4.69
*Desert sink scrub	3:1	—	—	12.43
*Disturbed freshwater marsh	3:1	—	—	0.08
*Mesquite bosque	3:1	2.64	7.92	126.12
*Sonoran mixed woody scrub	1:1	—	—	139.33
*Sonoran mixed woody and succulent scrub	1:1	72.85	72.85	132.05
*Tamarisk scrub	3:1	1.11	3.33	—
*Non-wetland waters of the United States/state	1:1	—	—	0.78
Fallow agriculture[1]	0.5:1	467.63	233.82	9.35
Disturbed habitat	N/A	27.27	—	10.17
Urban/developed	N/A	21.24	—	<0.01
Total	**—**	**643.13**	**418.70**	**435.00**

Note: An asterisk (*) marks land cover types for which the County of San Diego (2010a) requires mitigation.
[1] The fallow agriculture is considered raptor foraging habitat mitigated at a 0.5:1 mitigation ratio.

This biological open space easement shall mitigate for project impacts to sensitive vegetation communities and habitat for wildlife species, thereby preserving compensatory habitat that provides equal or greater benefit to plant and wildlife species. This biological open space easement will be granted to the County of San Diego (County). Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. This easement is for the protection of biological resources and prohibits all of

the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. The only exceptions to this prohibition are (1) vegetation clearing by hand, by written order of the fire authority for reduction of an identified fire hazard; (2) activities conducted pursuant to an approved revegetation or resource management plan; (3) vector control by written order of the County; and (4) construction, use, and maintenance of approved multi-use, non-motorized trails. No trails have been approved as part of this Project and would require subsequent environmental review and approval by PDS. Permanent signage indicating the area is a biological open space will be required and will be installed by the developer.

Documentation: The applicant shall prepare the draft plats and legal descriptions of the easements, then submit them for preparation and recordation with the DGS, and concurrence with PDS, and pay all applicable fees associated with preparation of the documents.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: The DGS shall prepare and approve the easement documents and send them to PDS for pre-approval. The PDS shall pre-approve the language and estimated location of the easements before they are released to the applicant for signature and subsequent recordation. Upon Recordation of the easements, DGS shall forward a copy of the recorded documents to PDS for satisfaction of the condition.

(b) **Special-Status Plants.** Mitigation shall be provided for one pygmy lotus (County List A) and 21 sticky geraea individuals (County List B). County List A plant species will be mitigated at a 3:1 ratio, and County List B species will be mitigated at a 1:1 mitigation ratio. Mitigation for these plants shall be achieved through a combination of (1) salvaging the plants located in proposed impact areas and replanting in suitable mitigation lands, and (2) establishment of additional plants to meet the mitigation requirements. The Resource Management Plan (RMP) for the biological open space easement shall include

the required measures to ensure viability of the transplanted and established individuals. The RMP (see M-BI-4) will include the locations of the plant restoration. The RMP will be the basis for monitoring and mitigation activities for the entire biological open space, including locations of plant mitigation.

Documentation: The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: A RMP Annual Report will be submitted to the County along with the submittal fee to cover County staff review time.

(c) **Burrowing owl occupied habitat**. Based on mitigation ratios provided in Table 1 of the Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County (Attachment A, County of San Diego 2010b), the project is required to provide 1:1 mitigation ratio for impacts to occupied burrowing owl habitat. Impacts to burrowing owl habitat will be mitigated by dedicating 22 acres of suitable burrowing owl habitat as an on-site biological open space easement. This acreage is included in the overall up to 435-acre biological open space easement. This area is comprised of open, relatively flat habitat which contains similar vegetation communities as the impacted habitat. This biological open space easement shall mitigate for project impacts to occupied burrowing owl habitat. Refer to M-BI-3(a) which describes the biological open space easement requirements.

(d) **Wildlife Corridor Access.** The project shall provide a 50 to 100 foot opening in the perimeter fence north of the SDG&E easement to allow for wildlife moving within the easement corridor or north of the easement to move in and out of the easement. The opening in the fence will allow wildlife traveling along the fence line to find a break in the fencing leading them into the larger wildlife corridor. This opening in the fence shall be provided and maintained for the life of the project.

Documentation: The fencing on the construction plans shall show an opening in the perimeter fencing as described above. The applicant shall install the project fencing or walls as indicated above and provide site photos and a statement from a California Registered Engineer, or licensed surveyor that the fencing has been installed to provide the required opening.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance of this permit the easements shall be recorded.

Monitoring: The *[PDS, PCC]* shall review the photos and statement for compliance with this condition.

M-BI-4 **Resource Management Plan (RMP).** In order to provide for the long-term management of the proposed on-site biological open space, an RMP will be prepared and implemented. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of Planning & Development Services as follows:

1. The plan will be prepared and approved pursuant to the most current version of the County of San Diego (County) Biological Report Format and Content Requirements.
2. The habitat land to be managed will be owned by a land conservancy or equivalent.
3. Open space easements will be dedicated to the County in perpetuity, unless conveyed to another public agency subject to approval by the Director of PDS.
4. A resource manager will be selected and approved, with evidence provided demonstrating acceptance of this responsibility.
5. The RMP funding mechanism to fund annual costs for basic stewardship shall be identified and approved by the County. The RMP funding mechanism will be identified and adequate to fund annual costs for implementation; typically determined by a Property Analysis Record as a non-wasting endowment.
6. A contract between the applicant and County will be executed for the implementation of the RMP.

Documentation: The applicant shall prepare an RMP and submit it to PDS and pay all applicable review fees.

Timing: Prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the RMP shall be approved.

Monitoring: The PDS shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.

M-BI-5 This mitigation measure serves to avoid take of birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during the nesting season (M-

BI-5(a)) and take avoidance for burrowing owls during the breeding and non-breeding season (M-BI-5(b).

(a) Nesting Bird Survey. To avoid any direct impacts on raptors and/or any migratory birds protected under the Migratory Bird Treaty Act and California Fish and Game Code, removal of habitat that supports active nests on the proposed area of disturbance shall occur outside the nesting season for these species (which is January 15 through August 31, annually). If construction work must occur during the avian breeding season (January 15 to August 31, annually), the applicant shall:

1. Work with the County, CDFW and the USFWS to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds.
    a. The applicant(s) will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following:
    b. Nest survey protocols describing the nest survey methodologies
    c. A management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks
    d. A monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFSW and CDFW to monitor the applicant's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513
    e. A schedule for the submittal (usually weekly) of the NML
    f. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks
    g. A detailed explanation of how the buffer widths were determined.
    h. All measures the applicant will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting.
2. Conduct preconstruction nesting bird surveys within 72 hours of construction-related activities; conduct preconstruction survey sweeps immediately prior to ground-disturbing activities; and implement appropriate avoidance measures for identified nesting birds in the

NBMMRP. Resurvey, if construction activities are halted for ten consecutive days.

3. To determine presence of nesting birds that the project activities may affect, surveys shall be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols shall include a detailed description of methodologies utilized by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols shall include but are not limited to the size of the project area being surveyed, method of search, and behavior that indicates active nests.
4. Each nest identified in the project area shall be included in the NML. The NMLs should be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs shall include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs shall provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs shall allow for tracking the success and failure of the buffers and would provide data on the adequacy of the buffers for certain species.
5. The applicant(s) will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths shall be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths shall consider the following factors:
    a. Nesting chronologies
    b. Geographic location
    c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
    d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the ground-nesting birds flush the nests)
    e. Visibility of disturbance
    f. Duration and timing of disturbance

g. Influence of other environmental factors

h. Species' site-specific level of habituation to the disturbance.

6. Application of the standard buffer widths shall avoid the potential for project-related nest abandonment and failure of fledging and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened. This measure does not apply to nests that are started on construction equipment or panels or supporting structures.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then the PDS shall inform DPW to release the bond back to the applicant.

(b) Burrowing Owl Take Avoidance Surveys. Take avoidance surveys are intended to detect the presence of burrowing owls on a project site at a fixed period in time and inform necessary take avoidance actions. Take avoidance surveys may detect changes in owl presence such as colonizing owls that have recently moved onto the site, migrating owls, resident burrowing owls changing burrow use, or young of the year that are still present and have not dispersed (CDFG 2012). Surveys must be completed no less than 14 days prior to the initiating ground disturbance activities.

1. If burrowing owls are detected during the breeding season (February 1 through August 1) surveys, a Burrowing Owl Management Plan will need to be written and approved by the County and the California Department of Fish and Wildlife before construction continues. The Plan shall include, at a minimum: 1) measures to protect burrowing owls during grading; 2) description of passive or active burrowing relocation during the non-breeding season; and 3) description of BMPs to implement during construction (e.g., ensure that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms). Table 6-2,

Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls, provides the CDFW-recommended restricted activity dates and setback distances around occupied burrowing owl nests for varying levels of disturbance (CDFG 2012).

2. If construction activities occur during the non-breeding season for burrowing owl (1 September – 31 January), a biologist shall conduct a take avoidance survey, following the methods described in the Burrowing Owl Staff Report (CDFG 2012). The take avoidance survey(s) can be conducted between 14 days and 24 hours prior to initiating ground disturbance activities; however, time lapses between project activities may require subsequent surveys within 24 hours prior to ground disturbance. If any burrowing owls are found during these surveys, avoidance and minimization measures must be implemented.

The following avoidance and minimization measures shall be implemented:

a. Avoid working within 50 meters (160 feet) from the occupied burrow during the non-breeding season;

b. Avoid direct destruction of occupied burrows during the non-breeding season until the burrowing owl has vacated the burrow (determined through monitoring of the burrow);

If these measures cannot be implemented, the applicant shall obtain written approval of an accepted plan (written or verbal) from the County and the California Department of Fish and Wildlife before construction continues. The plan shall include 1) identification of artificial burrow sites, 2) passive relocation methods, 3) monitoring and management of the artificial burrow site, and 4) reporting.

Documentation: The Project Biologist shall prepare the final survey report and/or Burrowing Owl Management Plan and submit it to the PDS for review and approval.

Timing: Prior to final grading release, or use of the premises in reliance of this permit, the final survey report and/or Burrowing Owl Management Plan shall be approved.

Monitoring: The PDS shall review the final survey report and/or Burrowing Owl Management Plan for compliance with this condition

and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished.

(c) In order to avoid impacts to nesting birds and burrowing owls during decommissioning the Project operator shall be required to implement the measures outlined in subsections (a) and (b) prior to undertaking decommissioning activities.

M-BI-6 **Bat Surveys and Roost Avoidance or Exclusion.** To determine whether there is an active maternity roost within the buildings and other structures to be demolished, a bat biologist shall conduct surveys prior to demolition of the buildings or any other areas that provide suitable roosting habitat for bats. If a potential maternity roost is present, the following measures shall be implemented to reduce the potential impact on special-status bat species to a less than significant level:

a. **Maternity Roosting Season Avoidance.** All demolition activities, or bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August to reduce any potentially significant impact to maternity roosting bats. If the maternity roosting season cannot be avoided, then roost exclusion can occur outside the maternity roosting season (September through February) to exclude bats from the demolition area prior to the start of demolition during the maternity roosting season. Items b and c below will be required to ensure no impacts occur to roosting bats during the exclusion process.

b. **Replacement Roost Installation.** If there is a potential or known maternity roost within a structure to be demolished, a replacement roost installation shall occur outside of the maternity roosting season within the biological open space easement. At least one month prior to the exclusion of bats from the roost(s), the project applicant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in an area that is close to suitable foraging habitat as determined by a biologist who specializes in bats in consultation with County staff. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours daily) to allow the bat boxes to reach an optimum internal temperature (approximately 90°F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on a

20-foot-tall steel pole. Should the bat boxes be required, maintenance of the boxes will be included in the RMP to ensure long-term use/functionality.

c. **Roost Exclusion.** Roost exclusion must only occur September through February to increase the potential to exclude all bats from roosts and minimize the potential for a significant impact to occur by avoiding the maternity roosting season. Approximately one month after bat boxes have been installed, exclusion of the existing roost within the buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/egress locations on the buildings will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (e.g., poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top of the roost location and sealed and passing 2 feet below the bottom of the primary exit point. The exclusion devices will be installed at night to increase the potential that bats will have already left the roost and are less likely to return. Exclusion devices will be left in place for one week to ensure that any remaining bats in the roost(s) are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor whether bat activity has decreased during the exclusion period. Periodic monitoring should also be conducted during the exclusion period to observe whether any bats are still emerging from additional areas within the impact footprint, and an active monitoring survey should be conducted on the final night of exclusion to ensure that no bats are emerging from the buildings and determine whether exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule. The exclusion devices may remain in place until the start of demolition activities. If any bats are found roosting in any proposed demolition areas prior to demolition, additional exclusion will be required and follow the same methodology described in this mitigation measure. This will occur until all bats are excluded.

d. **Survey Report**. Following completion of the survey the bat biologist will complete a survey report which records the findings. If active roosts are observed, and the maternity roosting season cannot be avoided, and bats must be removed, the report will also document the replacement roost installation and roost exclusion.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform the applicant that the requirement is complete and the bond amount can be relinquished.

M-BI-7 **Biological Monitoring of Stormwater Pollution Prevention Plan (SWPPP) Implementation.** During construction monitoring, the Project Biologist shall verify the following are implemented:

a. No planting or seeding of invasive plant species on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region.
b. Dust-control fencing is in place and intact if fencing is required.
c. Construction activity is located outside of jurisdictional waters of the United States/state except as authorized by applicable law and permit(s), including permits and authorizations approved by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board.
d. Silt-settling basins installed during the construction process are located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes. Design of drainage facilities shall incorporate long-term control of pollutants and stormwater flow to minimize pollution and hydrologic changes.
e. Temporary structures, staging, and storage areas for construction equipment and/or materials are located outside of jurisdictional waters, including wetlands and riparian areas.
f. No material stockpiles, debris, bark, slash sawdust, rubbish, cement, concrete or washing thereof, oil, or petroleum products are stored where they may be washed by rainfall or runoff into jurisdictional waters of the United States/state.
g. When construction operations are completed, excess materials or debris have been removed from the work area.
h. No equipment maintenance is performed within or near jurisdictional waters of the United States/state where petroleum products or other pollutants from the equipment may enter these areas.
i. Fully covered trash receptacles that are animal-proof and weather-proof are installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Littering is prohibited and removal of trash from construction areas daily is required. All

food-related trash and garbage are removed from construction sites on a daily basis.

j. There are no pets on or adjacent to construction sites.

k. Speed limits in and around all construction areas are enforced so that vehicles do not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site, or 10 miles per hour during the night.

M-BI-8 **Prevention of Chemical Pollutants**. Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego (County) agriculture commissioner. The application of herbicides shall be in compliance with all federal and state laws and regulations under the prescription of a licensed Pest Control Adviser with at least 2-years' experience and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the Pest Control Adviser, the County agriculture commissioner, and the California Invasive Plant Council, with the goal of controlling populations before they start producing seeds.

During project operation, all areas that use chemicals that are potentially toxic or impactive to sensitive habitats or plants shall incorporate best management practices (e.g., avoid applications during or before rain events and avoid placing materials close to sensitive habitats) on site to reduce impacts caused by the application and/or drainage of such materials within the development footprint. In addition, use of rodenticides shall not be allowed. Weed treatment shall occur at least once per year throughout the life of the project.

M-BI-9 **Prevention of Invasive Plant Species.** A County of San Diego-approved plant list shall be used for areas immediately adjacent to open space. A hydroseed mix that incorporates native species, is appropriate to the area, and is free from invasive species shall be used for landscaped areas adjacent to the biological open space. The San Diego County Planning & Development Services landscape architect shall require that all final landscape plans comply with the following: no invasive plant species, as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with these requirements.

M-BI-10 **Operations and Maintenance Signage**. Signage shall be posted at all entrances to the facility stating that operations and maintenance personnel shall be prohibited from the following:

- Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species
- Smoking
- Traveling (either on foot or in a vehicle) outside of the solar facility undisturbed portions of the Project site
- No pets
- No Littering
- No persons not conducing operations and maintenance activities shall remain at the facility after daylight hours or exceed normal nighttime operational noise or lighting

M-BI-11 **Noise Reduction.** Construction-related activities that are excessively noisy (e.g., clearing, grading, or grubbing) adjacent to breeding/nesting areas shall incorporate noise-reduction measures (described below) or be curtailed during the breeding/nesting season of sensitive bird species.

1. Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer.
2. Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements.
3. Usage of truck engine exhaust compression braking systems shall be limited to emergencies.
4. Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and Cal OSHA's safety requirements are not violated. These settings shall be retained for the duration of construction activities.
5. Vehicle horns shall be used only when absolutely necessary, as specified in the contractor's specifications.
6. Radios and other noise-generating "personal equipment" shall be prohibited

If construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) occur during the period of January 15 through August 31, a

County of San Diego-approved biologist shall conduct preconstruction surveys in suitable nesting habitat adjacent to the construction area to determine the location of any active nests in the area (see **M-BI-5**).

CULTURAL RESOURCES

M-CR-1 **Temporary Fencing.** To prevent inadvertent disturbance of archaeological sites within the avoidance areas and to the unimpacted portions of the site outside of the ADI, temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements:

1. Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect from inadvertent disturbance archaeological sites or portions of sites (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910) adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances and shall remain for the duration of earth-disturbing activities
   - Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI (CA-SDI-11682, and CA-SDI-20985).
   - The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.
   - Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to M-CR-2.
   - A signed and stamped statement from a California Registered Engineer, or licensed surveyor shall be submitted to Planning & Development Services for approval. The statement shall identify that temporary fencing has been installed in all required locations where grading or clearing is within 50 feet of an archaeological site outside of the Project ADI.

M-CR-2 **Archaeological Monitoring.** To mitigate for potential impacts to undiscovered, buried archaeological resources within the Project ADI and to mitigate the additional impacts to known archaeological resources, an archaeological monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining

Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements:

- Pre-Construction
  - The applicant shall contract with a County-approved archaeologist to perform archaeological monitoring. The project archaeologist shall contract with a Kumeyaay monitor to conduct Native American monitoring for the Proposed Project.
  - Pre-construction meeting to be attended by the Project Archaeologist and Kumeyaay Native American monitor(s) to explain the monitoring requirements.
- Construction
  - Temporary Fencing. Temporary orange construction fencing shall be installed around unimpacted portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910 and along the MUP boundaries where cultural resources (CA-SDI-11682, and CA-SDI-20985, and CA-SDI-21757) are within 50 feet of the Project ADI. An archaeological monitor and Kumeyaay Native American monitor shall be present to assure proper placement of construction fencing and to prevent impacts to cultural resources.
  - Monitoring. Both the archaeological and Kumeyaay Native American monitor(s) are to be on site during earth disturbing activities. The frequency and location of monitoring of native soils will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s). Both the archaeological and Kumeyaay Native American monitor(s) shall evaluate fill soils to ensure that they are negative for cultural resources
  - If cultural resources are identified:
    - Both the archaeological and Kumeyaay Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
    - The archaeological monitor shall contact the Project Archaeologist.
    - The Project Archaeologist shall contact the County Archaeologist.
    - The Project Archaeologist in consultation with the County Archaeologist and Kumeyaay Native American monitor(s) shall determine the significance of discovered resources.
    - Construction activities will be allowed to resume after the County Archaeologist has concurred with the significance evaluation.

- Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the archaeological monitor, the Kumeyaay Native American monitor(s) may collect the cultural material for transfer to a Tribal curation facility or repatriation program.
- If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s) and approved by the County Archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources of Sacred Sites; the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).

o Human Remains.

- The Property Owner or their representative shall contact the County Coroner and the County Planning & Development Services (PDS) Staff Archaeologist.
- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. Should the human remains need to be taken offsite for evaluation, they shall be accompanied by a Kumeyaay Native American monitor.
- If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the Property Owner or their representative in order to determine proper treatment and disposition of the remains.
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- Public Resources Code §5097.98, CEQA §15064.5 and Health & Safety Code §7050.5 shall be followed in the event that human remains are discovered.

- Rough Grading
  - Upon completion of Rough Grading, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring

report shall be provided to any culturally affiliated tribe who requests a copy.

- Final Grading
  - A final report shall be prepared substantiating that earth-disturbing activities are completed and whether cultural resources were encountered. A copy of the final report shall be submitted to the South Coastal Information Center, and any culturally affiliated tribe who requests a copy.
  - Cultural Material Conveyance
    - The final report shall include evidence that all prehistoric materials have been curated at a San Diego curation facility or Tribal curation facility that meets federal standards per 36 CFR Part 79, or alternatively have been repatriated to a culturally affiliated tribe.
    - The final report shall include evidence that all historic materials have been curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79.

M-CR-3 **Cultural Resources Treatment Agreement** and **Preservation Plan**

Prior to the approval of any plan or issuance of any permit, and prior to use of the premises in reliance on this permit, the Cultural Resources Treatment Agreement and Preservation Plan shall be submitted to County of San Diego Director of Planning & Development Services for review and approval. The Plan shall be prepared by the Project archaeologist and the Kumeyaay Native American Monitor and shall include but not be limited to the following:

- Parties entering into the agreement and contact information.
- Responsibilities of the Property Owner or their representative, Principal Investigator, archaeological monitors, Kumeyaay Native American monitors, and the Tribe.
- Requirements of the Archaeological Monitoring Program including unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural materials (both in the field and lab settings), and onsite storage of cultural materials, as necessary and if required.
- Treatment of identified Native American cultural materials.
- Treatment of Native American human remains and associated grave goods.
- Requirements for Temporary Fencing for 10 sites that partially intersect or are within 50 feet of the Project ADI (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11682, CA-SDI-11686, and CA-SDI-19910, and CA-SDI-20985).

- Confidentiality of cultural information including location and data.
- Negotiation of disagreements should they arise during the implementation of the Agreement and Preservation Plan.
- Regulations that apply to cultural resources that have been identified or may be identified during project construction.

M-CR-4 Long-Term Preservation of Resources

All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 11 potentially significant sites (or portions thereof) that are adjacent to the Project ADI. These include the eight sites that were fully or partially tested because they intersect the Project ADI and the three sites that were not evaluated because they are outside of the Project ADI but require protection because they are within 50 feet of the Project ADI. Temporary fencing shall be installed during decommissioning activities to delineate the ADI. Temporary fencing requirements are provided in **M-CR-1**

GEOLOGY, SOILS AND SEISMICITY

M-GEO-1 Prior to the issuance of a building permit, the Project applicant shall retain a California Certified Engineering Geologist to perform a detailed site-specific subsurface report or preliminary geotechnical investigation, consistent with the California Building Code. The California Building Code (which incorporates the International Building Code) is contained in the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code, and includes design and construction requirements related to life safety and structural safety. The geotechnical study shall include subsurface investigation, laboratory testing, and additional deep explorations using borings of 60 feet or more and/or cone penetrometer tests across the alluviated portions of the Proposed Project site to further define the alluvium profile and quantitatively address the potential for soil liquefaction and lateral spreading across the site. The subsurface geotechnical study shall also include recommendations for the proposed construction and grading such as remedial grading, ground improvement techniques, special foundation design, and other recommendations to ensure that construction of the project does not result in substantial liquefaction, subsidence, or seismic-related ground failure due to lateral spread. In addition, the Proposed Project shall

implement any necessary measures required to comply with existing building codes and regulations.

HYDROLOGY AND WATER QUALITY

M-HYD-1 Prior to approval of final design plans, the applicant shall demonstrate to the satisfaction of the County DPW Flood Control through hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that the design features for the perimeter fencing avoids the blockage and/or redirection of storm flows resulting from the accumulation of debris and/or detritus at wash crossings. This can be accomplished through a number of means such as a) use of breakaway fencing perpendicular to flood flows, b) use of fencing that spans washes (without posts) above the anticipated peak flow depth, c) or an alternative design measure that would avoid accumulations of detritus at perimeter fence wash crossings, subject to County approval.

DOCUMENTATION: The applicant shall show the proposed fencing design or alternative design measure on the Final Grading Plans. The associated Drainage Study shall contain hydrologic and hydraulic analyses, acceptable to DPW Flood Control and performed by a California licensed engineer in accordance with standard engineering practice, that model the proposed fencing and/or design measures and demonstrate that the fencing will not cause alteration of drainage patterns and/or flood hazards from pre-project conditions. The Drainage Study shall be in compliance with the County Hydrology Manual and the County Hydraulic Design Manual.

TIMING: Prior to the approval of any grading and/or improvement plans and issuance of Grading or Construction Permits, the Drainage Study and Plans shall be approved.

MONITORING: The County DPW Flood Control shall review and approve the hydrologic and hydraulic analyses contained in the Drainage Study and the final fencing design and layout to ensure the flood flow is fully mitigated to pre-project conditions.

NOISE

M-NOI-1 The Proposed Project would comply with the County's Noise Ordinance §36.404 based upon the current proposed layout of the Proposed Project and the anticipated

major noise producing operating stationary equipment (Equipment) deployed for the Proposed Project. The Equipment modeled in the Acoustical Analysis Report (AAR) prepared for the EIR was selected as representative technology at the time the 2020 AAR was prepared. The Project applicant may propose to use different Equipment than what was used to perform the noise modeling in the AAR or propose a change in the Equipment layout. If different Equipment is selected and/or the layout of Equipment is changed subsequent to Project approval, the applicant will be required to submit a revised AAR, and a revised site plan if needed, as follows:

a. The Project applicant shall retain a County Approved CEQA Noise Consultant to prepare a new predictive operations noise analysis in accordance with the County's Noise Report Format and Content requirement
b. Any proposed Equipment selections, equipment duty cycles, Project layout alterations, and/or the addition, modification, reduction of the preceding equipment noise limits and measures may be approved, if they are demonstrated to comply with applicable outdoor hourly L_{eq} noise limits per Section 36.404(a) of the County's Noise Ordinance at the property line.
c. The above identified measures shall take place prior to approval of any building plans for the Proposed Project. Any alterations or modifications proposed and approved pursuant to this procedure shall be included in the proposed Project design plans.

M-NOI-2 **PV Panel Washing Protocol**: To ensure noise from mobile operating equipment associated with regular cleansing of Project PV panel surfaces complies with daytime County noise standards, the following shall be implemented:

a. As part of the Project operations and maintenance program, the Applicant shall prepare a PV Panel Washing Plan (PVPWP) that addresses the usage of self-propelled or towed washing systems during the expected quarterly (or other frequency as reasonably anticipated annually) PV panel washing. The PVPWP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating PV panel washing equipment and vehicle noise sufficiently proximate to the property on which the noise is produced or at any location on a property that is receiving the noise. The PVPWP shall be submitted to County Planning & Development Services (PDS) a minimum of 30 days prior to the first PV panel washing. The County shall review the PVPWP to ensure compliance with the County Noise Ordinance prior to any panel washing.

A subsequent plan shall be submitted to County PDS if there are any anticipated changes to the panel washing in the future. The subsequent Plan shall be submitted to the County 30 days prior to any new PV panel washing procedures occur. Components of the PVPWP shall include the following:

- Affected property owners shall be notified in writing two weeks prior to PV panel washing activity within 500 feet of their property boundaries.
- Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA Leq at 16 feet over a full hour; and its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins S80, RR or similar County-classified Noise Zone 1 property**:**
  within 150 feet – not permitted;
  150 to 250 feet – up to five minutes within any hour;
  250 to 300 feet – up to fifteen minutes within any hour;
  300 to 450 feet – up to thirty minutes within any hour; and,
  beyond 450 feet – no restriction.
- Noise emission from a self-propelled PV panel washer (Mazaka, MultiOne, or comparable) must not exceed 83 dBA Leq at 16 feet over a full hour; and its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property:
  within 100 feet – not permitted;
  100 to 150 feet – up to five minutes within any hour;
  150 to 200 feet – up to fifteen minutes within any hour;
  200 to 250 feet – up to thirty minutes within any hour; and,
  beyond 250 feet – no restriction.
- Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA Leq at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins S80, RR or similar County-classified Noise Zone 1 property:
  within 50 feet – not permitted;
  50 to 75 feet – up to five minutes within any hour;

75 to 100 feet – up to fifteen minutes within any hour;
100 to 125 feet – up to forty-five minutes within any hour; and,
beyond 125 feet – no restriction.

- Noise emission from a pick-up truck (or ATV) and its towed IPC Eagle wash station (or comparable equipment) must not exceed 74 dBA Leq at 9 feet over a full hour; and, its operation must be restricted to daytime operation at the specified distance between it and a position along the property line that adjoins C44 or similar County-classified Noise Zone 3 property:

  within 25 feet – not permitted;
  25 to 40 feet – up to five minutes within any hour;
  40 to 60 feet – up to fifteen minutes within any hour;
  60 to 75 feet – up to thirty minutes within any hour; and,
  beyond 75 feet – no restriction.

- Visual guides (flags, reflectors, or other markers) shall clearly delineate distances or zones of operation allowed for either of the afore-mentioned PV panel washing systems (self-propelled or towed).

b. Operators of the PV panel washing equipment shall be informed of the PVPWP as part of customary on-site Project training and awareness of County noise standard compliance to avoid potential noise impacts to the Jacumba Hot Springs community

M-NOI-3 **Construction Noise Management Plan**: Prior to construction and decommissioning, the Applicant shall prepare a construction noise management plan (CNMP) which establishes construction activity restrictions in order to reliably achieve compliance with the County's 8-hour 75 dBA Leq standard at the Project property lines adjoining existing occupied properties (defined by Section 36.402.m as "property on which there is a building for which a certificate of occupancy has been issued"). The CNMP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating construction equipment and vehicle noise sufficiently proximate to these property lines of occupied properties. The CNMP shall be submitted to County Planning & Development Services (PDS) thirty (30) days prior to any land disturbance. Components of the CNMP shall include the following:

a. Affected property owners shall be notified in writing two weeks prior to construction activity within 500 feet of their property boundaries.

b. In order to comply with the County Noise Ordinance (Section 36.409 – Construction Equipment), the acoustical usage factors (AUF) of heavy construction equipment used on the Project site shall be comparable to those listed on Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide Table 1, reference L_{max} values at 50 feet shall be the lower of either the "Spec. 721.560" or "Actual Measured" values from the same RCNM User's Guide Table 1, and duration of heavy equipment operating for construction shall comply with the following limitations by activity, for the specified distance between the indicated heavy equipment operations and a position along the property line of an occupied parcel:

- Perimeter fence installation – up to two flatbed trucks and a front end loader:
  within 15 feet – not permitted;
  15 to 25 feet – no more than twenty minutes per 8-hour period;
  25 to 50 feet – no more than one hour per 8-hour period;
  50 to 75 feet – no more than 4 hours per 8-hour period; and,
  beyond 75 feet – no restriction.
- Site preparation (clearing) – water truck and tractor (mowing attachment):
  within 20 feet – not permitted;
  20 to 25 feet – no more than twenty minutes per 8-hour period;
  25 to 50 feet – no more than thirty minutes per 8-hour period;
  50 to 75 feet – no more than 2 hours per 8-hour period;
  75 to 100 feet – no more than 4 hours per 8-hour period; and,
  beyond 100 feet – no restriction.
- Site preparation (earth-moving) – bulldozer, water truck, and scraper:
  within 25 feet – not permitted;
  25 to 50 feet – no more than twenty minutes per 8-hour period;
  50 to 75 feet – no more than one hour per 8-hour period;
  75 to 100 feet – no more than three hours per 8-hour period;
  100 to 125 feet – no more than six hours per 8-hour period; and,
  beyond 125 feet – no restriction.
- Site preparation (grading) – flatbed truck, grader, water truck, and sheepsfoot roller:
  within 25 feet – not permitted;
  25 to 50 feet – no more than twenty minutes per 8-hour period;
  50 to 75 feet – no more than one hour per 8-hour period;
  75 to 100 feet – no more than three hours per 8-hour period;
  100 to 125 feet – no more than six hours per 8-hour period; and,
  beyond 125 feet – no restriction.

- Underground work (trenching) – excavator, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift):
  within 25 feet – not permitted;
  25 to 50 feet – no more than twenty minutes per 8-hour period;
  50 to 75 feet – no more than 1.5 hours per 8-hour period;
  75 to 100 feet – no more than 3 hours per 8-hour period; and,
  beyond 100 feet – no restriction.
- Underground work (back-filling) – Aussie padder, sheepsfoot roller, water truck, 5kW generator, and gradall (4x4 forklift):
  within 25 feet – not permitted;
  25 to 50 feet – no more than twenty minutes per 8-hour period;
  50 to 75 feet – no more than 1.5 hours per 8-hour period;
  75 to 100 feet – no more than 3 hours per 8-hour period; and,
  beyond 100 feet – no restriction.
- System installation – gradall (4x4 forklift), crane, ATV, vibratory pile driver (RGT Model RG21T or comparable), pick-up truck, and 5kW generator:
  within 25 feet – not permitted;
  25 to 50 feet – no more than twenty minutes per 8-hour period;
  50 to 75 feet – no more than 1.5 hours per 8-hour period;
  75 to 100 feet – no more than 4 hours per 8-hour period; and,
  beyond 100 feet – no restriction.

All construction equipment operations shall incorporate all recommended noise reducing measures such as, but not limited to, limiting construction equipment operations, installation of temporary noise barriers, and implementation of the recommendations within the CNMP to demonstrate compliance with the County Code Noise Ordinance, Sections 36.408 and 36.409.

Concurrent construction activities may occur so long as next closest construction activity to the same studied property line position is at least four times its "no restriction" distance away. By way of example, if earth-moving was occurring near a fixed point on the potentially affected property line, the next-closest set of earth-moving equipment performing like work, or perhaps an overlapping and comparable scheduled activity (e.g., grading), would be permitted if no closer than 500 feet (= 4 x 125') from the same receptor point.

c. If distance buffers or duration limits cannot be maintained, then the Project Applicant or its contractor will implement on-site temporary sound abatement

measures, such as a field-erected noise barrier (e.g., sound blankets) of sufficient height and horizontal extent, or the placement of storage containers and other similarly solid sound-occluding structures, to ensure construction activity noise at the Project property line complies with County standards.

d. The CNMP will also include direction for the Project applicant or its contractor(s) to implement the following:
   - Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer;
   - Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements;
   - Usage of truck engine exhaust compression braking systems shall be limited to emergencies;
   - Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and Cal OSHA's safety requirements are not violated;
   - Vehicle horns shall be used only when necessary, as specified in the contractor's specifications; and,
   - Radios and other noise-generating "personal equipment" shall be prohibited

PALEONTOLOGICAL RESOURCES

M-PR-1 Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist, subject to the review and approval of the County. The paleontologist shall prepare a Paleontological Resources Monitoring Program (PRMP) for the project. The PRMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (2010). The qualified paleontologist shall attend the preconstruction meeting and the paleontological monitor shall be on-site during rough grading and other significant ground-disturbing activities in previously undisturbed geological units with moderate to high paleontological resource sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be contained with temporary orange construction fencing and shall include a 50-foot radius buffer. Once documentation and collection of the find is completed, the paleontological monitor shall remove the temporary orange construction fencing and grading will be allowed to recommence in the area of the find. Upon completion of the paleontological monitoring program, the qualified paleontologist shall prepare a final monitoring report

documenting the results of the monitoring program. This report shall include a description of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

TRIBAL CULTURAL RESOURCES

M-TCR-1 **Temporary Fencing.** To prevent inadvertent disturbance of tribal cultural resources (TCRs) within the avoidance areas (land outside of the Project ADI), temporary fencing shall be installed where resources are located within 50 feet of the Project ADI. The temporary fencing shall include the following requirements:

- Prior to the commencement of any grading and/or clearing in association with the grading and/or improvement plan, temporary construction fencing shall be placed to protect archaeological sites or portions of sites adjacent to the Project ADI during earth-disturbing activities. Temporary fencing shall be installed prior to the pre-construction meeting and any clearing, grubbing, trenching, grading, or land disturbances; remain for the duration of earth-disturbing activities; and include the following:
  - Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 50 feet of any archaeological site outside of the Project ADI.
  - The placement of such fencing shall be approved by the County. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.
  - Installation of temporary fencing shall require the presence of monitor(s) (Archaeological & Native American) pursuant to M-CR-2.

M-TCR-2 **Archaeological and Tribal Monitoring.** To mitigate for potential impacts to undiscovered, buried tribal cultural resources (TCRs) within the Project ADI, an archaeological and tribal monitoring program and potential data recovery program shall be implemented pursuant to the County of San Diego's (County's) Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources and the California Environmental Quality Act (CEQA) and shall include the following requirements:

a. Pre-Construction
   - The project developer shall contract with a County-approved archaeologist to perform archaeological monitoring. The Project archaeologist shall contract with a Kumeyaay Native American monitor(s) to conduct Native American monitoring for the Project.

- The pre-construction meeting shall be attended by the Project archaeologist and the Kumeyaay Native American monitor(s) to explain the monitoring requirements.

b. Construction
   - Monitoring
     - Both the Project archaeologist and Kumeyaay Native American monitor(s) are to be on site during all earth-disturbing activities. The frequency and location of monitoring of native soils shall be determined by the Project archaeologist and the Kumeyaay Native American monitor. Both the Project Archaeologist and Kumeyaay Native American monitor(s) will evaluate fill soils to ensure that they are negative for cultural resources
   - Inadvertent Discoveries
     - Both the Project archaeologist and the Kumeyaay Native American monitor have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
     - The Project archaeologist shall contact the County archaeologist.
     - The Project archaeologist, in consultation with the County archaeologist and the Kumeyaay Native American monitor, shall determine the significance of discovered resources and whether they constitute a TCR.
     - Construction activities shall be allowed to resume after the County archaeologist has agreed with the significance evaluation.
     - Isolates and non-significant deposits shall be minimally documented in the field. If the isolates and non-significant deposits are not collected by the Project archaeologist, the Kumeyaay Native American monitor may collect the cultural material for transfer to a tribal curation facility or repatriation program.
     - If cultural resources are determined to be significant, a research design and data recovery program shall be prepared by the Project archaeologist in consultation with the Kumeyaay Native American monitor and approved by the County archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources or sacred sites, to cap identified sacred sites or unique cultural resources and to place development over the cap if avoidance is infeasible; and to perform data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).

c. Human Remains
   - The property owner or their representative shall contact the County coroner and the County Planning & Development Services staff archaeologist.

- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County coroner has made the necessary findings as to origin. Should the human remains need to be taken offsite for evaluation, they shall be accompanied by a Kumeyaay Native American monitor.
- If the remains are determined to be of Native American origin, the most likely descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the property owner or their representative to determine proper treatment and disposition of the remains.
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by California Public Resources Code, Section 5097.98, has been conducted.
- California Public Resources Code, Section 5097.98; CEQA Guidelines, Section 15064.5; and California Health and Safety Code, Section 7050.5, shall be followed in the event that human remains are discovered.

d. Rough Grading
   - Upon completion of rough grading, a monitoring report identifying whether resources were encountered shall be prepared. A copy of the monitoring report shall be provided to any culturally affiliated tribe that requests a copy.

e. Final Grading
   - A final report substantiating that native soil-disturbing activities are completed and whether cultural resources were encountered shall be prepared. A copy of the final report shall be submitted to the South Coastal Information Center (SCIC) and any culturally affiliated tribe that requests a copy.

f. Cultural Material Conveyance

   The final report shall include the following:
   - Evidence that all prehistoric materials have been curated at a San Diego curation facility or tribal curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations or alternatively have been repatriated to a culturally affiliated tribe.
   - Evidence that historic materials have been curated at a San Diego curation facility that meets federal standards according to Title 36, Part 79, of the Code of Federal Regulations.

M-TCR-3 **Long-Term Preservation of Resources.** All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing

activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 11 potentially significant cultural sites (or portions thereof) that are located within 50 feet of the Project ADI, including the eight sites that were fully or partially tested and the three that were not evaluated). Temporary fencing will be installed during decommissioning activities to delineate the ADI.

WILDFIRE

M-WF-1 Fire Protection Plan

Fire Protection Measures

The Project's Fire Protection Plan (FPP) provides customized measures that address the identified potential fire hazards on the site. The measures are independently established but will work together to result in reduced fire threat and heightened fire protection. The following measures identified in Section 7 of the FPP will be implemented:

- Fuel Modification throughout the solar facility site from boundaries inward, including beneath PV modules, around the collector substation and adjacent switchyard, with restrictions on plant species, heights, densities, and locations (Required measure).
- Provide a technical report indicating special precautions for firefighting response (included as Appendix G of the FPP) (Code-exceeding measure).
- Minimum 20-foot interior on-site inverter fore access driveways and a minimum improved 24-foot wide perimeter on-site driveways would be constructed (Required measure).
- Participation in a County Fire Protection and Mitigation Agreement, for funding firefighting and emergency medical resources of which the details will be determined in the Project Fire Protection and Mitigation Agreement (Required measure).
- Project funded annual fuel modification inspections to ensure compliance with this FPP (Code-exceeding requirement).

- Motion sensor illuminated (and/or reflective) signage at main entrance with inverter and electrical grid disconnect and isolation information and identification (Required measure).
- Training program for local fire agencies on the deenergizing process that is controlled by the California Independent System Operator (CAISO), as described in Section 5.2.3 of the FPP. (Required measure).
- Training program for local fire agencies including preparation of a technical training video with County input and customized for this facility that can be easily viewed by new firefighters who rotate through the local fire stations (Code-exceeding measure).
- Preparation of a construction fire prevention plan (CFPP) for this project to be implemented by all contractors working on this project (CFPP included as Appendix A of the FPP) (Code-exceeding measure).
- Portable carbon dioxide (CO2) fire extinguishers mounted at the inverters and medium voltage transformer units.
- Six (6) 10,000-gallon water tanks dedicated for firefighting purposes; one tank will be provided at each driveway entrance to the solar panel areas as defined by geographic isolation from other sections and one tank will be provided near the substation (Required measure).
- System contact information with local fire agencies/stations to assist responding firefighters during an emergency (Required measure).
- Committed on-going maintenance of all facility components for the life of the project (Required measure).
- Maintenance logs to be kept and made available upon request to SDCFA/CAL FIRE (Required measure).
- Consistent placarding and labeling of all components for fire safety/response (Required measure).

Defensible Space and Fuel Modification

The Project would provide defensible space by setting back all PV modules a minimum 30-feet from the solar facility's perimeter fence and modifying the fuels on-site by removing and grading them to a height of 6 inches, or, in the case of perimeter areas, drivable surfaces and vegetation free areas. The perimeter Fuel Modification Zone (FMZ) buffer will include at least 30 feet of modified fuels and will include the 30-foot wide perimeter fire access road, and cleared, contiguous

modified fuel areas from the perimeter fence to the outermost panel racks. This area seamlessly meets the modified fuel areas that occur throughout the site where fuels are maintained at a 6-inch height. Defensible space around all electrical equipment would be provided by an FMZ buffer of 100 feet surrounding the project collector substation pad area and 100 feet surrounding the adjacent switchyard.

The entire solar facility site would include modified fuels with fire access roadways and service roads compartmentalizing the low-growing (less than 6-inch) maintained areas beneath all PV modules, surrounding the collector substation pad area, and surrounding the adjacent switchyard.

Fuel modification requirements are detailed in the Project FPP.

M-WF-2 Construction Fire Protection Plan

Risk Reduction Measures

Risk Reduction Measures as identified in the Project Construction Fire Protection Plan (included as Appendix A to the Fire Protection Plan) will be implemented, as appropriate, during the construction phase of the Project to reduce the risk of ignitions. These measures will be enforced through the Site Safety Officer (SSO) and ongoing worker safety training:

- Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. This shall include all contractors and subcontractors if more than one.
- All internal combustion engines used at the Project site shall be equipped with spark arrestors that are in good working order.
- Once initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- The Project will be equipped with at least one and up to two water trucks each of 4,000- gallon capacity. Each truck will be equipped with 50 feet of 0.25-inch fast response hose with fog nozzles. Any hose size greater than 1.5 inches shall use National Hose (NH) couplings.
- During construction, the project site will have at a minimum two pick-up trucks outfitted with Type-6 Skid-Mounted Units, including fire pump, hose, and nozzle, that are staffed with personnel properly trained to use the equipment.

- A cache of shovels, McLeods, and Pulaskis shall be available at staging sites. The amount of equipment will be determined by consultation between SSO and SDCFA/CAL FIRE. Additionally, on-site pickup trucks will be equipped with first aid kits, fire extinguishers, and shovels. Contractor vehicles will be required to include the same basic equipment.
- Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials and provided with a gravel surface.
- A fire watch (i.e., person responsible for monitoring for ignitions) shall be provided during hot work and shall occur for up to one hour following completion of the hot work activities.
- Smoking will not be permitted on the site.
- Each Project construction site, if construction occurs simultaneously at various locations on the site, shall be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires.
- The on-site contractor or Project staff shall coordinate with SDCFA/CAL FIRE to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site.
- All on-site employees shall participate in fire prevention and response training exercises with the SDCFA/CAL FIRE.
- The Project shall implement ongoing fire patrols during the fire season as defined by local and state agencies. The SSO will be assigned as fire patrol to monitor work activities when an activity risk exists for fire compliance. The SSO shall verify proper tools and equipment are on site, assess any fire agency work restrictions, and serve as a lookout for fire starts, including staying behind (e.g., a fire watch) to make certain no residual fire exists. Fire watch may be performed by any site personnel. A SSO shall perform routine patrols of the Project site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project staff shall notify SDCFA/CAL FIRE of the name and contact information of the current SSO in the event of any change.
- Fires ignited on site shall be immediately reported via SDCFA and CAL FIRE.
- The engineering, procurement, and construction contracts for the Project shall clearly state the fire safety requirements that are the responsibility of any person who enters the site, as described in this CFPP.

Daily Fire Prevention Measures

To limit the risk of fires, all site staff, employees, and contractors shall take the following precautions during Project construction:

- Fire safety shall be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis.
- Smoking will not be permitted in the project site. Combustible materials shall be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation.
- Evacuation routes shall be maintained and free of obstructions. Unavoidable evacuation route blockages shall be coordinated such that a secondary route is identified and available.
- Disposal of combustible waste in accordance with all applicable laws and regulations shall be required.
- Use and storage of flammable materials in areas away from ignition sources shall be required.
- Proper storage of chemicals such that incompatible (i.e., chemically reactive) substances would be separated appropriately shall be required.
- Performance of hot work (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch shall be required. Fire watch may be any site personnel who would watch for accidental ignitions. Hot work permits are required and shall be reviewed and granted by the SSO for all hot work.
- Equipment shall be kept in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease.
- Ensuring that heating units are safeguarded shall be required.
- Immediate reporting of fuel or petroleum leaks. The site mechanic shall ensure that leaks are repaired immediately upon notification.
- Immediate repair and cleanup of flammable liquid leaks shall be required.
- Construction work areas shall be kept free of combustible materials.
- Extension cords shall not be relied on if wiring improvements are needed, and overloading of circuits with multiple pieces of equipment shall be prohibited.

- Turning off and unplugging electrical equipment when not in use.

Red Flag Warning Protocol

Red Flag Warnings are issued by the National Weather Service and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. To ensure compliance with Red Flag Warnings restrictions, the National Weather Service website shall be monitored at the site (http://www.srh.noaa.gov/ridge2/fire/briefing.php). During Red Flag Warnings, construction activities shall be limited and precautions may be taken onsite during periods of a Red Flag Warning, when conditions such as low humidity and high winds are present. Upon announcement of a Red Flag Warning, red flags shall be prominently displayed at the entrance gate and main office, indicating to employees and contractors that restrictions are in place. Additionally, any hot work, grading, or other work that could result in heat, flame, sparks, or may cause an ignition to vegetation shall be limited to low fire hazard, non-hot work, unless within an ignition resistant structure until the Red Flag Warning has been lifted. Areas may be evacuated where personnel may be exposed to higher risks. If vehicles are required to be used during Red Flag Warning conditions, vehicles shall remain only on designated access roads on the site.

M-WF-3 Fire Protection and Mitigation Agreement

As a condition to providing service and pursuant to the Safety Element of the General Plan, the applicant shall enter into a Fire Protection and Mitigation Agreement with the San Diego County Fire Authority prior to approval of a Major Use Permit to make a fair share contribution toward local emergency response capabilities. The funding shall be used by the SDCFA to mitigate risks of wildfires and to enhance fire suppression and emergency services capabilities for the Proposed Project and the southeast portion of CSA 135.

CHAPTER 6 OTHER CEQA CONSIDERATIONS

This chapter summarizes the information presented in Chapters 1, 2, and 3 of this Environmental Impact Report (EIR) to address the broader questions posed by the California Environmental Quality Act (CEQA) Guidelines, Section 15126.2. This chapter addresses significant impacts from the JVR Energy Park Project (Proposed Project) that cannot be mitigated to less than significant, significant, significant irreversible environmental changes, and growth-inducing impacts.

6.1 Significant Environmental Impacts of the Project That Cannot Be Mitigated to Less Than Significant

Table ES-1, Summary of Significant Effects (within the Executive Summary of this EIR), summarizes the results of the environmental analysis completed for the Proposed Project. Mitigation measures have been identified to reduce environmental impacts associated with aesthetics, air quality, biological resources, cultural resources, geotechnical, soil and seismicity, hazards and hazardous materials, hydrology and water quality, noise, paleontological resources, tribal cultural resources, and wildfire. These mitigation measures are included in Table ES-2. Mitigation measures would reduce potentially significant impacts to less than significant for all impacts except for aesthetics and mineral resources. Mitigation measures were considered in attempting to reduce impacts to below a level of significance for aesthetics, but the impacts listed below would remain significant and unavoidable. There are no feasible mitigation measures to reduce the impacts of mineral resources to less than significant. A detailed analysis of significant environmental effects, mitigation measures, and infeasible mitigation measures is provided throughout Chapter 2 of this EIR.

The following significant environmental impacts of the Project cannot be mitigated to less than significant:

- Aesthetics: Impacts AE-1, AE-2, AE-3, AE-4, AE-5, AE-6, AE-7, AE-8, AE-9, AE-CU-1, and AE-CU-2
- Mineral Resources: Impact MR-1

Aesthetics

Impact AE-1

Under Aesthetics Threshold 1, Existing Visual Character and/or Quality, the proposed theme and style of Proposed Project development (i.e., solar energy development) would not be consistent with the undeveloped, desert landscape and small-town character of Jacumba. The wide distribution of repeating rows of solar panels on the approximately 643-acre site would create noticeable horizontal scale and massing contrasts with adjacent areas of residential development.

In addition, the Proposed Project would install thousands of uniformly dark solar panels (and potentially light-colored inverters, battery energy storage system containers, and reflective transmission line conductor) to an area that consists mostly of earth tones, modest and lightly colored residential structures, and undeveloped lands. Thus, the color of proposed solar panels would not be consistent with the predominant colors displayed by features in the existing landscape. Solar panel contrasts would be further heightened by lightly colored inverters and battery energy storage system containers, and reflective transmission line conductor. Therefore, the characteristics of the Proposed Project would conflict with the established character of the Jacumba community, and would result in a **potentially significant** impact **(Impact AE-1).**

With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (non-reflective energy storage containers), **M-AE-3** (non-reflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since feasible mitigation measures have not been identified that would further reduce anticipated theme, style, size, scale, massing, and color contrasts resulting from the Proposed Project, **Impact AE-1** would remain **significant and unavoidable**.

Impact AE-2

Under Aesthetics Threshold 2, implementation of the Proposed Project and the transformation of the Project site to a solar energy facility would result in the removal of vegetation throughout the site. The introduction of visually prominent Proposed Project components, including approximately 300,000 solar panels, would substantially change the quality of existing views across the site. Further, the proposed solar facility would conflict with the small-town character of Jacumba and open, unencumbered characteristics of the Project site. The Proposed Project's anticipated visual change and effects to existing visual character would result in a **potentially significant impact (Impact AE-2)**.

With implementation of mitigation measures **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since feasible measures have not been identified to that would further reduce anticipated visual change and effects to existing visual character, **Impact AE-2** would remain **significant and unavoidable**.

Impacts AE-3, AE-4, AE-5, AE-6, AE-7, AE-8 and AE-9

Under Aesthetics Threshold 3, the Proposed Project would create visible contrast that would result in reduced visual quality from viewing locations in the surrounding area. In addition to notably reduced visual quality associated with the introduction of solar panels (and other Proposed Project components) as viewed from I-8, implementation of the Proposed Project would substantially obstruct a focal vista, Old Highway 80. Further, the distribution of 300,000 PV modules across the Project site and alteration

of the open, primarily undeveloped character of the Project site to a solar facility displaying repeating visual elements would create strong visual contrast. Following implementation of the Proposed Project, reduced intactness and unity (i.e., reduced visual quality) is anticipated in scenic views available from local recreational areas (e.g., Jacumba Community Park). State Park lands located to the immediate west of the Project site, and federal recreational areas, including Round Mountain and the Airport Mesa and Table Mountain RMZs, experience relatively low annual recreation use by the public (BLM 2020), but the visual change associated with the Proposed Project as experienced form these locations would be pronounced. In addition, the proximity of these recreational lands would heighten perceived form, line, and color contrast, and the Proposed Project would occupy a substantial portion of the visible landscape in available views.

Due to the wide distribution of solar panels within the 643-acre solar facility, the Proposed Project would substantially reduce the quality of existing views towards the solar facility (i.e., Threshold 3) from I-8 (**Impact AE-3**), Old Highway 80 (**Impact AE-4**), Jacumba Community Park (**Impact AE-5**), Anza-Borrego Desert State Park lands (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), and Table Mountain and the nearby mesa to the south (**Impact AE-9**). **Impacts AE-3 through AE-9** would be **potentially significant**.

With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (non-reflective energy storage containers), **M-AE-3** (non-reflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since feasible mitigation measures have not been identified that would further reduce impacts to panoramic or focal vistas, **Impacts AE-3 thru AE-9** would remain **significant and unavoidable**.

Impact AE-CU-1

The Proposed Project would not be consistent with the undeveloped, desert landscape and small town character of Jacumba. Cumulative projects in the area include existing and proposed electric substations, solar energy facilities, wind energy facilities, and transmission projects located within the Proposed Project viewshed and the greater surrounding area. Implementation of projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. For example, development of 30 wind turbines on approximately 2,226 acres proposed by the Torrey Wind project and 2,400 acres of wind development proposed under Campo Wind, in conjunction with the Proposed Project and others in the area, would dominate views in the Project region and result in prominent visual change within the largely undeveloped landscape. Therefore, the Proposed Project would result in a **cumulatively considerable impact (Impact AE-CU-1)** on the existing visual character and valued visual character or image of neighborhoods, communities, and localized areas.

With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (non-reflective energy storage containers), **M-AE-3** (non-reflective transmission line), impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-1** would remain **significant and unavoidable**.

Impact AE-CU-2

Views to the Project site are available from I-8; Old Highway 80; Carrizo Gorge Road; nearby recreation areas, including Jacumba Community Park and Anza-Borrego Desert SP; and federal recreational areas, including Round Mountain, Airport Mesa, and Table Mountain RMZs and the Jacumba Wilderness. Although proximity to the Proposed Project from these locations and the clarity of Proposed Project components would vary, each of the identified recreation areas are located in the Proposed Project viewshed. The existing Jacumba Solar, Energia Sierra Juarez transmission line, and East County Substation are located east of the Project site and visible from similar public roads and scenic corridors, and recreational areas; therefore, cumulative projects outside of the Proposed Project viewshed would also be experienced by similar receptors. Combined with the existing East County Substation and Jacumba Solar projects, the Proposed Project would result in a cumulatively considerable impact (**Impact AE-CU-2**) on the panoramic vista available from elevated vantage points in the Airport Mesa and Table Mountain RMZs.

With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (non-reflective energy storage containers), **M-AE-3** (non-reflective transmission line) , impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-2** would remain **significant and unavoidable**.

Mineral Resources

Impact MR-1

The Proposed Project components, with the exception of the switchyard, would be decommissioned at the end of the Project life. Therefore, the Proposed Project is considered to be an interim use and would not result in a permanent loss of mineral resources. In regard to the 3.2-acre switchyard, there would be a permanent loss in the availability of mineral resources, however, the estimated value of resources within the switchyard site itself does exceed the County's minimum threshold.

However, mitigation for the Proposed Project's impacts to biological resources would require habitat preservation. Biological open space easements would be placed over a portion of the Project site and would not be removed after the life of the Project. These open space easements overlie up to 188 acres of potential mineral resources. The value of material is estimated to be $216,081,994, which would exceed the threshold ($12,500,000) for the County's definition of a significant impact.

Therefore, the biological open space easements, required as mitigation for biological resource impacts, and the switchyard together would result in a **potentially significant impact** (**Impact MI-1**) under Guideline 1.

The County's Guidelines state that "the only mitigation and design factors appropriate would be to extract the resource and reclaim the site before project approval; to avoid the site, which would only be possible if the project site is large enough to accommodate avoidance and to also not be impacted by future mining of the resource; or to approve only land-uses that can be considered minor or temporary nature." Because the impact to the mineral resources on the Project site is caused by a portion of the Proposed Project's biological open space easements, these mitigation measures are considered infeasible. The biological open space easements are intended to preserve the biological integrity of the area in perpetuity as mitigation for the Proposed Project's biological impacts, as discussed further in Chapter 2.3, Biological Resources. The 188-acre portion of the easement contains high biological value with sensitive vegetation types and provides for wildlife habitat and movement. Extracting the resources underlying the open space easements prior to project approval would negate the primary purpose of the biological open space easements.

Other potential measures to mitigate the identified impact relate to policy decisions not under the control of the Proposed Project applicant. The most effective mitigation would be for the County to identify feasible mineral resource extraction areas to implement policies that would avoid resource sterilization (encroachment by development). Since no feasible mitigation exists to reduce impacts to below a level of significance, impacts to mineral resources (**Impact MR-1**) would remain **significant and unavoidable**.

6.2 Significant Irreversible Environmental Changes

Irreversible long-term environmental changes associated with the Project would include those potential significant impacts described in Sections 2.1 through 2.12, and environmental effects analyzed in Sections 3.1.1 through 3.1.7 of this EIR. Construction of the Proposed Project would require fossil fuels, a nonrenewable resource, to power construction vehicles. In exchange for using nonrenewable and non-retrievable resources, the Proposed Project would provide a source of clean, renewable energy. Over the approximately 35-year operational life of the Proposed Project, it would contribute incrementally to the reduction in demand for fossil-fuel-based electricity generation through the production of solar energy. Therefore, the incremental reduction in fossil fuels would result in a beneficial effect through the commitment of renewable resources.

6.3 Growth-Inducing Effects

The CEQA Guidelines (Section 15126.2(d)) identify a project as growth-inducing if it fosters economic or population growth, or the construction of additional housing, either directly or

indirectly, in the surrounding environment. Section 3.1.4, Land Use and Planning and the discussion of Population and Housing in Section 3.2 specifically address whether the Project would induce growth and/or impact populations and housing in the area. This section summarizes this discussion.

The Proposed Project would develop a utility-scale solar energy generation and storage facility that improves electrical reliability in San Diego County and other counties, and supplies California and the region with additional renewable energy supplies. During construction, the Proposed Project would employ a total of approximately 500 workers, with a daily maximum of 500 workers at the peak of construction. During decommissioning, approximately 250 workers would be employed. It is anticipated that workers from the San Diego region to the west or Imperial Valley to the east would construct and decommission the Proposed Project. Because of the presence of locally available workers in San Diego County and Imperial County, and because of the relatively short duration of construction (approximately 13 months) and decommissioning (approximately 10 months), workers are not expected to relocate to the area with their families.

During the operational phase, the Proposed Project would be an unstaffed facility that would be monitored remotely. No full-time personnel would work on site. Up to five workers would periodically be on site during operations for inspections, maintenance, and repair activities. The operational workers are likely to come from the San Diego region to the west and are also not anticipated to relocate to Jacumba Hot Springs or the Mountain Empire Subregion given their limited time at the site annually. Accordingly, the limited scale of the Proposed Project construction, operation and decommissioning would not affect the population base within the Project area.

The Proposed Project would not induce substantial unplanned population growth in the community of Jacumba Hot Springs or the Mountain Empire Subregion. The Proposed Project does not include a residential component such as a residential subdivision, mobile home park, or single-family residences that would cause permanent or temporary population increases, nor would it extend roads or infrastructure (e.g., water, sewer, etc.) into previously unserved areas. Additionally, the Proposed Project would not include any physical or regulatory changes that would remove a restriction to, or encourage population growth in the area, including, but not limited to, the following: large-scale residential development; accelerated conversion of homes to commercial or multifamily use; regulatory changes including General Plan Amendments encouraging population growth, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. The Project also does not propose a recreational component, such as a hotel, resort, campground, or other facility that would attract or accommodate an increase in visitors to the area that would indirectly cause temporary increases in population. Therefore, the Proposed Project would not result in a direct or indirect impacts to population and housing.

As discussed in Section 1.1, Project Objectives, the electricity generated by the Proposed Project would be fed directly into the regional electricity grid and would not serve or facilitate any growth of the local population directly. The Proposed Project is intended to support the state's transition to 100% renewable energy generation and to improve electrical reliability in San Diego County and other counties as a whole. Accordingly, the Proposed Project would supplement the region's energy supply and would not encourage housing growth or result in growth-inducing impacts in Jacumba Hot Springs or the Mountain Empire Subregion.

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