



Savira Renewables, LLC

Savira Solar Project

Draft Environmental Impact Report

SCH# 2025030499/Riverside County CEQ# CEQ250007

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ES-1 Introduction

Savira Renewables, LLC (Applicant), a wholly owned subsidiary of Clearway Energy Group LLC, proposes to construct the Savira Solar Project (Project), a utility-scale solar photovoltaic (PV) power-generation and energy storage facility, along with associated transmission infrastructure, to generate and deliver electrical power generated from a renewable energy source to the statewide electricity transmission grid.

The Project site is located on approximately 535 acres in eastern Riverside County, 8.5 miles east of the town of Desert Center, California. The Project would generate up to approximately 150 megawatts (MW) of renewable energy via arrays of solar PV panels and store up to approximately 250 MWs of energy via a battery energy storage system (BESS). Additional facilities would include an operations and maintenance (O&M) building, a 230-kilovolt (kV) project substation, an approximately 1.8-mile-long generation-interconnection (gen-tie) line, and access driveways. From the Project substation, the electrical power generated would be transmitted via a new high voltage 230 kV gen-tie line to be carried by an existing gen-tie line from the Arica/Victory Pass substation to the Southern California Edison (SCE) 230 kV Red Bluff substation, which would require some substation upgrades. The Project would include linear facility routes. The following linear facilities would be located on adjacent land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office within land allocated as a Development Focus Area (DFA) for solar, wind, and geothermal projects by the Desert Renewable Energy Conservation Plan (DRECP). The DRECP Final Environmental Impact Statement (EIS) was approved by a Record of Decision (ROD) signed on September 14, 2016.

- A new approximately 1.5-mile-long high voltage (230 kV) gen-tie line.
- Use of the existing 3-mile-long Arica/Victory Pass gen-tie line from the existing Arica/Victory Pass Substation to the existing SCE Red Bluff Substation.
- A new approximately 0.3-mile-long medium voltage (34.5 kV) collection line segment and associated access road.
- Use of approximately 4 miles of existing access roads.

The Project's gen-tie consists of approximately 1.8 miles of newly constructed line and use of approximately 3 miles of existing line; all but approximately 0.3 miles of the gen-tie would be on BLM land. The Project's collection line network would include an approximately 0.3 miles long segment on BLM land to connect the Project's non-contiguous private parcels. The access road would use approximately 4.0 miles of existing (i.e., already disturbed) BLM roads.

The commercial operation date (COD) for the Project is anticipated to be in 2028. The Project would operate for a minimum of 40 years. At the end of its useful life, the Project would be

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decommissioned and the land returned to its pre-Project conditions. A decommissioning bond would ensure that the Project would be properly decommissioned.

The Applicant is seeking a Conditional Use Permit (CUP) for a term of not less than 40 years (CUP240027) for the construction, operation, and decommissioning of the solar and battery facility and gen-tie line. Ancillary permits, including grading and construction permits, and certificates of occupancy are anticipated to be required from the County. These permits and approvals are local ministerial actions that would be issued following California Environmental Quality Act (CEQA) compliance and Project approval by the County.

ES-2 Project Objectives

The Applicant's purpose of the Proposed Project is to generate, store, and transmit renewable energy to the statewide wholesale electricity grid. The Applicant's identified Project objectives are as follows:

- Establish a renewable energy power-generation facility of a sufficient size and configuration to produce up to approximately 150 MW of electricity in a cost-competitive manner.
- Establish an energy storage system of sufficient size and configuration to store up to approximately 250 MW of electricity for at least four-hour discharge in a cost-competitive manner.
- Assist California load-serving entities in meeting their obligations under California's Renewable Portfolio Standard (RPS) Program and energy generation goals under the Clean Energy and Pollution Reduction Act of 2015 (Senate Bill 350) and the 100 Percent Clean Energy Act of 2018 (Senate Bill 100) as well as greenhouse gas (GHG) emissions reduction goals of the California Global Warming Solutions Act of 2006 (AB 32), as amended by Senate Bill 32 in 2016.
- Assist California load-serving entities in meeting their obligations under CPUC's Energy Storage Framework and Design Program.
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing battery energy storage capacity.
- Minimize environmental impacts and land disturbance associated with solar energy development by siting the facility on relatively flat, contiguous lands with high solar insolation, in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access.
- Conform with the Desert Renewable Energy Conservation Plan, including Conservation Management Actions, on BLM-administered land.
- Bring living-wage jobs and property tax revenue to Riverside County.

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- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.

ES-3 Public Involvement

ES-3.1 Notice of Preparation

In compliance with California Environmental Quality Act (CEQA) Guidelines Section 15082, a Notice of Preparation (NOP) was issued on March 24, 2025 (State Clearinghouse Number 2025030499). The NOP described the Project, its location, the environmental review process, potential environmental effects, and opportunities for public involvement. The NOP solicited input regarding the scope and content of the environmental information to be included in the Environmental Impact Report (EIR).

ES-3.2 CEQA Public Scoping

The public scoping period commenced on March 24, 2025, with the issuance of the NOP, which summarized the Project and requested comments from interested parties. Riverside County conducted a public scoping meeting in-person and virtually at the Riverside County Planning Department on March 31, 2025, to inform the public about the Project, provide information regarding the environmental review process; and gather public input regarding the scope and content of the Draft EIR. There were no attendees of the public that attended the scoping meeting in person or virtually. The public scoping period ended on April 22, 2025. In total, 5 different entities submitted written comment letters during the CEQA scoping period.

ES-3.3 Areas of Controversy/Public Scoping Issues

Concerns expressed by the public and agencies during the public scoping period were regarding these resource topics: Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Tribal Cultural Resources, permitting, solid waste management, mitigation measures, indirect and cumulative impacts, and alternatives. Public scoping comments are summarized in EIR Chapter 1, Introduction, Section 1.6, Scoping Comments, and in the individual resource topics addressed in Chapter 3, Environmental Analysis.

ES-4 Proposed Project

ES-4.1 Project Location

The Project site is located in Riverside County, north of Interstate 10 (I-10) and approximately 8.5 miles east of the town of Desert Center, California. The Project site consists of six parcels on

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private land (APNs: 811-231-001, 811-231-003, 811-231-004, 811-231-008, 811-190-004, 811-190-005), totaling approximately 535 acres.

Regional access to the Project site is provided from the Corn Springs exit off I-10. This exit leads to BLM open route DC 950 and then to open route DC 511. To reach the northern portion of the site, usage of BLM open route DC 505 is proposed. Project-related roads for direct access to the site would include a perimeter road and interior solar field access ways.

The land uses surrounding the Project site includes the existing Victory Pass Solar Project to the west, existing Arica Solar Project, and Palm nursery to the north, and undeveloped BLM land to the east that has been proposed for solar development. The I-10 corridor is immediately south of the Project, with existing transmission lines and undeveloped BLM land south of I-10. The Project site is also near to the existing Palen Solar Project and the existing Athos Solar Project. Surrounding nearby solar projects.

ES-4.2 Project Components

The Project would consist of three major components: a PV solar power and BESS (solar site), located on private lands; gen-tie line, access roads, and a collection line segment, located on BLM-administered lands; and SCE activities consisting of facility upgrades within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation.

Solar Site (Private Lands)

The Project consists of the following major components on approximately 535 acres of private lands, as described in greater detail in this section and illustrated in Figure 2-4.

- Solar array blocks
- Power Conditioning System: DC Collection System to AC Transformers
- Medium voltage (34.5kV) interior collection power lines
- Substation and associated equipment
- 250 MW battery energy storage system (BESS)
- Operation and maintenance (O&M) building
- Lighting and facility power
- Supervisory control and data acquisition system (SCADA) and Communications
- Meteorological Stations
- Interior access roads
- Fencing
- Wastewater facilities
- Detention basins

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Linear Facilities (BLM-administered Lands)

The Project would include linear facility routes components on adjacent BLM land, including:

- High Voltage (230 kV) Gen-tie Line and Grid Connection
- Medium Voltage (34.5 kV) Collection Line
- Site Access Roads

Potentially Shared Facilities

Clearway is in the process of permitting a solar PV facility, the Redonda Solar Project, on BLM lands adjacent to the Project. In the event that the Redonda Solar Project is permitted and constructed prior to the Project being constructed, the Project may share the substation, BESS yard, and O&M facility on the Redonda site. The Redonda substation, BESS yard, and O&M facility are being permitted by the BLM and by the CDFW and are not addressed in this EIR. If the Redonda Solar Project is not permitted and constructed, the Project would construct this infrastructure as described in Section 2.3.1.

The Redonda Solar Project substation, BESS, and O&M facility are not part of the whole of the action under CEQA or a connected action under NEPA because where a project located on private land may share facilities with a project located on federal land, but sharing of facilities is not required and either project could be developed with or without the other, the non-federal project is not part of the whole or the action or a connected action.

Southern California Edison Activities

Facility upgrades would be necessary for the Project to interconnect to SCE's existing Red Bluff substation. SCE activities would include telecommunication, metering, power system control, and reliability improvements at the existing Red Bluff Substation, existing Devers Substation, existing Arica/Victory Pass Substation, as well as equipment installation at the proposed Project Substation. The improvements would be limited to the existing substation footprint (or within the Project substation footprint).

ES-5 Alternatives

ES-5.1 Alternatives Development

Alternatives to the proposed Project were identified through the scoping process, informational public meetings, and preliminary studies.

ES-5.2 Alternatives Analyzed in Detail

This EIR includes detailed evaluations of a Reduced Footprint Alternative, the Private Linear Facilities Alternative, an Off-site Alternative, and a No Project Alternative as required under CEQA.

- **Alternative 1:** No Project Alternative. Under the No Project Alternative, the construction of a solar generating facility and associated infrastructure would not occur. This alternative discusses existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the Project was not approved and does not take place.
- **Alternative 2:** Reduced Footprint Alternative.
- **Alternative 3:** Private Linear Facilities Alternative
- **Alternative 4:** Off-site Alternative

ES-5.3 Alternatives Considered but Eliminated

CEQA requires an EIR to consider a reasonable range of alternatives to the Project that would feasibly attain most of the basic objectives of the Project. In addition, CEQA requires the consideration of how to avoid or substantially lessen any adverse effects of the proposed Project.

A number of potential alternatives to the proposed Project were identified. Some of these alternatives did not have the potential to meet the Project objectives, or the potential to avoid or minimize adverse environmental effects. Initial evaluation revealed that others are infeasible. The following alternative was considered but eliminated from further evaluation, for the reasons explained below:

- **Distributed Commercial and Industrial Rooftop Solar Alternative:**

ES-6 Environmental Impacts

Detailed descriptions of impacts of the Project are provided in Chapter 3, along with a discussion of cumulative impacts. The impact analysis in the EIR was prepared by topic area and presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. It is assumed that the mitigation measures identified to reduce impacts of the proposed Project would also be implemented for any alternative. A significant impact is defined under CEQA as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines § 15382). The categories of potential effects are provided below.

- **Direct Effects:** Effects caused by the proposed Project that occur at the same time and place as the proposed Project
- **Indirect Effects:** Effects caused by the proposed Project that occur later in time, or further in distance, but are still reasonably foreseeable

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- **Residual Impacts:** Impacts that still meet or exceed significance criteria after application of mitigation and, therefore, remain significant
- **Cumulative Impacts:** Impacts resulting from the proposed Project when combined with similar effects of other past, present, and reasonably foreseeable future projects, regardless of which agency or person undertakes such projects (cumulative impacts could result from individually insignificant but collectively significant actions taking place over time)
- **Short-Term Impacts:** Impacts expected to occur during construction or decommissioning that do not have lingering effects for an extended period after the activity is completed
- **Long-Term Impacts:** Impacts that would persist for an extended period of time

The significance of each impact is determined based on an analysis of the impact, compliance with any recommended mitigation measure, and the level of impact remaining compared to the applicable significance criteria relevant to a particular resource. Impacts are classified as one of the five categories listed below.

- **Significant and Unavoidable:** A substantial or potentially substantial adverse change from the environmental baseline that meets or exceeds significance criteria, where either no feasible mitigation can be implemented, or the impact remains significant after implementation of mitigation measures
- **Less than Significant with Mitigation:** A substantial or potentially substantial adverse change from the environmental baseline that can be avoided or reduced to below applicable significance thresholds
- **Less than Significant:** An adverse impact that does not meet or exceed the significance criteria of a particular environmental issue area and, therefore, does not require mitigation
- **Beneficial:** An impact that would result in an improvement to the physical environment relative to baseline conditions
- **No Impact:** A change associated with the Project that would not result in an impact to the physical environment relative to baseline conditions

ES-7 Alternatives Comparison and Environmentally Superior Alternative

The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the Project, but which may avoid or substantially lessen any of the significant impacts of the Project. The following alternatives are analyzed in detail in the EIR:

- **Alternative 1: No Project Alternative.**
- **Alternative 2: Reduced Footprint Alternative.**

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- **Alternative 3: Private Linear Facilities Alternative.**
- **Alternative 4: Off-site Alternative.**

Table ES-1, Summary of Comparison of Alternatives Impacts, provides a summary of the relative impacts and feasibility of each alternative, and Table ES-2, Summary of Project Impacts, provides a summary of the potential impacts of the Project.

ES-7.1 Alternatives Impact Summary

Table ES-1 Summary of Comparison of Alternatives Impacts

Alternatives	Description	Basis for Selection and Summary of Analysis
Project	The Project site is located on approximately 535 acres in eastern Riverside County. The Project would generate up to approximately 150 MW of renewable energy via arrays of solar PV panels and store up to approximately 250 MWs of energy via a BESS. Additional facilities would include an O&M building, a 230-kilovolt (kV) project substation, an approximately 1.8-mile-long generation-interconnection (gen-tie) line, and access driveways. The Project would include linear facility routes.	<ul style="list-style-type: none"> • N/A
Alternative 1: No Project Alternative	No development would occur on the Project site. The Project site would remain unchanged.	<ul style="list-style-type: none"> • Required by CEQA • Avoids need for CUP • Avoids the significant and unavoidable impact associated with aesthetics, cultural resources and tribal cultural resources impacts • Greater impacts to GHGs • Less impact in all remaining resources • Does not meet any of the Project objectives
Alternative 2: Reduced Footprint Alternative	The solar site would be reduced to eliminate the significant aesthetics impact experienced by passersby along the I-10. The Reduced Footprint Alternative would eliminate approximately 90 acres of land for the solar arrays and establish a 0.25-mile setback from the I-10, which is a larger set-back than the existing surrounding solar projects set-backs from I-10. Due to the increased distance between the viewer and the project, this setback would eliminate the significant visual impact because the solar panels while visible would not draw the attention of the casual viewer and the patchy vegetation would provide more cover for the alternative.	<ul style="list-style-type: none"> • Less impacts to aesthetics, air quality, biological resources, geology/soils and minerals, hydrology and water quality • Does not avoid the significant and unavoidable impact to aesthetics from KOP 2 and 7 • Requires CUP • The renewable energy generation capacity of the solar array field would be up to 25 MW less than the Project, reducing the benefits of the Project by reducing the Project's ability to meet all the Project objective associated with the production of up to approximately 150 MW of renewable energy.

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Alternatives	Description	Basis for Selection and Summary of Analysis
Alternative 3: Private Linear Facilities Alternative	All project components on BLM land, which includes the high voltage gen-tie line, medium voltage collection line segment, and access roads, would be removed and replaced with new facilities located solely on private, non-federal lands or within non-federal ROW. Except for the replacement of these BLM components, all aspects of this alternative would be the same as the Project.	<ul style="list-style-type: none"> • Increased impacts to agriculture, air quality, aesthetics, biological resources, cultural resources, geology and soils, hydrology and water quality, noise and tribal cultural resources due to increased disturbance associated with construction of the linear facilities • Similar impacts to the remaining resources • Would require approximately 1.4 miles of new road 30 feet wide, resulting in 5 acres of disturbance. Additional disturbance would potentially be required where the route would cross washes
Alternative 4: Off-site Alternative	Potential offsite alternatives were considered east of State Route (SR)-177/Rice Road. Very limited parcels, either on private or public lands are available in the area. In addition, because the Project is located east of SR-177, impacts of offsite development would likely be similar to the Project.	<ul style="list-style-type: none"> • Increased impacts to cultural resources, hydrology and water quality, land use and planning, and tribal cultural resources • Similar impacts to the remaining resources • Available areas within the DFAs under the DRECP LUPA; however, it may be impossible to meet the DRECP CMAs under this alternative which would require a land use plan amendment to the California Desert Conservation Area Plan.

ES-7.2 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines requires that an EIR identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, then the EIR must identify which of the other alternatives is environmentally superior.

The environmentally superior alternative for the Project would be the No Project Alternative. No substantially adverse and long-term impacts would occur to the environment under the No Project Alternative. The No Project Alternative would also avoid the impacts of the Project analyzed in Chapter 3. However, it is possible that if the Project is not approved, another solar project would be constructed that would have impacts similar to the Project.

In accordance with Section 15126.6 of the State CEQA Guidelines, the Reduced Footprint Alternative would be the Environmentally Superior Alternative since it would result in fewer impacts to aesthetics and biological resources compared to the Project due to the reduced size of the alternative, the slightly reduced workforce, and the shorter interconnection line. While the Reduce Footprint Alternative is Environmentally Superior, it would result in a reduction of 25 MW of renewable energy compared to the Proposed Project, which reduces its compliance with the most important project objectives (meeting State and federal renewable energy goals to counter climate change).

ES-7.3 Summary of Impacts and Mitigation Measures

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Table ES-2 Summary of Project Impacts

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
3.2 Aesthetics			
Impact Aesthetics-1: In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings?	Potentially significant	Mitigation Measure Air-2: Fugitive Dust Control Plan Mitigation Measure Bio-6 Vegetation Resources Management	Significant and Unavoidable
Impact Aesthetics-2: Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Less than significant	No mitigation required	Less than significant
Impact Aesthetics-3: Would the project have a substantial effect upon a scenic highway corridor within which it is located?	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Significant and Unavoidable (Cumulatively Considerable)	See Impact Aesthetics-1 above	Significant and Unavoidable (Cumulatively Considerable)
3.3 Agricultural and Forest Resources			
Impact AG-1: Would the project conflict with existing agricultural zoning, agricultural use, or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	Less than significant	No mitigation required	Less than significant
Impact AG-2: Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
3.4 Air Quality			
Impact AIR-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than significant	No mitigation required	Less than significant
Impact AIR-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Potentially significant	<p>Mitigation Measure Air-1: Control On-Site Off-Road Equipment Emissions</p> <p>The applicant, when entering construction contracts or when procuring off-road equipment or vehicles for on-site construction activities, shall ensure that only recent model year equipment or vehicles are obtained, as feasible. The following measures shall be included with contract or procurement specifications:</p> <ul style="list-style-type: none"> • All construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, with a rating of 50 hp or higher, shall meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b)(1), unless a good faith effort demonstrates that such engine is not available for a particular item of equipment. If a Tier 4 engine is not available for any off-road equipment larger than 50 hp, a Tier 3 engine shall be used or that equipment shall be equipped with retrofit controls to reduce exhaust emissions of NOx and DPM to no more than Tier 3 levels unless certified by the engine manufacturers that the use of such devices is not practical for specific engine types. • All diesel-fueled engines used in the construction of the facility shall have clearly visible tags 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>showing that the engine meets the standards of this measure.</p> <ul style="list-style-type: none"> • All equipment and trucks for construction activities shall be properly maintained and the engines tuned to the engine manufacturer's specifications. • All diesel heavy construction equipment shall not idle for more than five minutes. Vehicles that need to idle as part of their normal operation (such as concrete trucks) are exempted from this requirement. <p>Mitigation Measure Air-2: Fugitive Dust Control Plan</p> <p>The applicant, its contractor, or its subcontractor shall prepare and implement a Fugitive Dust Control Plan to address fugitive dust emissions during project construction, operation, maintenance, and decommissioning. The plan shall include measures to minimize fugitive dust emissions from the commencement of construction activities through operations, maintenance, and decommissioning. In the case where the contractor obtains permit coverage under SCAQMD Rule 403, that permit, and associated plan will be incorporated into the final Fugitive Dust Control Plan prepared by the applicant. During construction, the applicant, its contractor, and subcontractors shall take every reasonable precaution to prevent all airborne fugitive dust plumes from leaving the project site, to prevent visible particulate matter from being deposited upon public roadways and shall</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>adhere to the SCAQMD rules. The plan shall be subject to review and approval by the SCAQMD (Rule 403).</p> <p>The following measures shall be included within the Fugitive Dust Control Plan:</p> <ul style="list-style-type: none"> • Prior to commencing construction, the applicant, its contractor, or its subcontractor shall designate and retain for the duration of construction a Dust Control Supervisor. The Dust Control Supervisor shall have successfully completed the SCAQMD Rule 403 dust control compliance training class. The Dust Control Supervisor shall have full access to all areas of construction on the project site, gen-tie line, and other linear facilities and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions. • During construction, all unpaved roads, disturbed areas (e.g., areas of scraping, excavation, backfilling, grading, and compacting), and loose materials generated during construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent or watered two times daily or as frequently as necessary to minimize fugitive dust generation. Non-water-based soil stabilizers shall be as efficient as or more efficient for fugitive dust control than CARB-approved soil stabilizers and shall not increase any other environmental impacts, including loss of vegetation, adverse odors, or emissions of ozone precursor ROG or VOC. The proposed soil stabilizing products shall be listed in the Plan and 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>are subject to review and approval by Riverside County, BLM, and California Department of Fish and Wildlife (CDFW). Any soil stabilizers proposed shall be consistent with those recommended in the Stormwater Pollution Prevention Plan (SWPPP) and shall also be approved for use by the project's Restoration Specialist to ensure that the products would not impede restoration goals.</p> <ul style="list-style-type: none"> • The main access roads through the site shall be stabilized using soil binders, gravel, or equivalent methods, to provide a stabilized surface that is similar for the purposes of dust control to paving, that may or may not include a crushed rock (gravel or similar material with fines removed) top layer, prior to commencing construction. Delivery, laydown, and staging areas for construction or operations and maintenance supplies shall be paved or stabilized prior to taking initial deliveries. • Grading and earthwork activities, including vegetation removal, cut and fill movement, and soil compacting, shall be phased across the site to minimize the amount of exposed or disturbed areas on any single day. • No vehicle shall exceed 15 miles per hour on unpaved areas within the site, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions or conflict with other permit conditions. • Visible speed limit signs shall be posted at the construction site entrances. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways. • All unpaved exits from the construction site shall be graveled or treated to prevent track-out onto public roadways. No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. All track out from an active operation shall be removed immediately if it extends over 25 feet or if under 25 feet, at the end of each workday. • All paved roads within the construction site shall be swept daily or as needed (less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris. • At least the first 500 feet of any paved public roadway exiting the construction site or exiting other unpaved roads to access the construction site, or staging areas shall be swept as needed when dirt or runoff resulting from the construction activities is visible on the paved public roadway. <p>Consistent with SCAQMD Rule 403(g)(2), regarding exemptions, contingency control measures may be implemented during “high wind” conditions, when instantaneous wind speeds exceed 25 miles per hour. The contingency measures for high wind events shall include those measures set forth in Table 3 to Rule 403.</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Install a gravel apron to reduce mud/dirt track out from unpaved truck exit routes. • Construct three-sided enclosures for storage piles. <p>Mitigation Measure Air-3: Fugitive Dust Palliatives</p> <p>If dust palliatives are used in place of water for the project, the total amount of water needed during construction would be reduced. The applicant may opt to use such palliatives, as authorized by the County for the project. The soil binder/dust palliatives that are proposed for the project, and which have been previously allowed in the region are:</p> <ul style="list-style-type: none"> • Road Bond 1000 • For roads and heavy traffic areas: Soil Sement • For non-traffic areas on finer soils: Formulated Soil Binder FSB 1000 • For non-traffic areas on sandier/rockier soils: Plas-TEX Soil Stabilizer • Alternatives as approved by the County 	
Impact AIR-3: Would the project expose sensitive receptors located within 1 mile of the project site to substantial pollutant concentrations?	Less than significant	No mitigation required	Less than significant
Impact AIR-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Air -1 through Air-3	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
3.5 Biological Resources			
Impact BIO-1 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	Less than significant	No mitigation required	Less than significant
Impact BIO-2 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.1e)?	Potentially significant	<p>Mitigation Measure Bio-1: Biological Monitoring</p> <p>The Applicant shall assign at least one Designated Biologist as the primary point of contact for the County of Riverside and permitting agencies (e.g., Bureau of Land Management, California Department of Fish and Wildlife, and Regional Water Quality Control Board, as applicable) regarding biological resource compliance. The Designated Biologist shall have demonstrated expertise with the biological resources within the Project area, as well as hold a Memorandum of Understanding (MOU) with the County of Riverside. The Designated Biologist duties will vary during the construction, operation, maintenance, and future decommissioning of the Project. Additional Biological Monitor(s), trained and supervised by the Designated Biologist, may be necessary to fulfill compliance with Mitigation Measures and permit conditions. In general, the duties of the Designated Biologist shall include:</p> <ul style="list-style-type: none"> • Communication with representatives of lead and permitting agencies, as appropriate. • Conducting or oversee Worker Environmental Awareness Program. 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Conducting or overseeing pre-construction surveys, inspection, and monitoring duties as defined in all Mitigation Measures. • Halting any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources. • Clearly marking sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions. • During construction, preparing and submitting monthly compliance reports. During operations, prepare and submit annual compliance reports for the first three (3) years of operations. <p>Mitigation Measure Bio -2 Worker Environmental Awareness Program (WEAP)</p> <p>The Applicant shall conduct an education program for all persons employed or otherwise working in the Project area before performing any work on the Project site. The program shall consist of a presentation from the Designated Biologist or Biological Monitor(s) that includes a discussion of the biology and general behavior special-status species, information about the distribution and habitat, sensitivity of the special-status species to human activities, its legal protection, recovery efforts, penalties for violations. All construction crews and contractors shall be required to participate in WEAP training prior to starting work on the Project. Applicant shall prepare and distribute a</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>fact sheet handout containing this information for workers. WEAP training materials shall be provided in English and Spanish. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. At a minimum, the WEAP shall:</p> <p>Be developed by or in consultation with the Designated Biologist and consist of an onsite or training center presentation with supporting written material and electronic media, including photographs of protected species, available to all participants.</p> <ul style="list-style-type: none"> • Include a review of Mitigation Measure and permit requirements. • Include a review of the special-status species and other sensitive resources that may occur in the Project area, as well as the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. • Include desert tortoise specific training that includes detailed description of the desert tortoise, distribution and general behavior of the desert tortoise, sensitivity to human activities, regulatory status including prohibitions and penalties incurred for violation, mandatory conservation measures, and procedures if a desert tortoise is observed on-site. • Provide an explanation of the function of flagging that designates authorized work areas and specify the prohibition of construction activities. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Discuss general environmental and safety protocols such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures. • Discuss the federal, state, and local regulatory setting (e.g., Endangered Species Acts, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act) and the consequences of non-compliance. • Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas. • Provide contact information for the Designated Biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during Project-related activities. • Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines. A record of all personnel trained shall be maintained throughout the construction period. Along with their signature, each worker shall receive a sticker for their hard hat indicating they received the training. <p>Mitigation Measure Bio-3 Minimization of Impacts to Native Vegetation</p> <p>The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to natural, or native, vegetation:</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Prior to ground-disturbing activities, work areas (including, but not limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with construction fencing (e.g., the common orange vinyl material) or staking to clearly identify the limits of work. No paint or permanent discoloring agents shall be applied to rocks or vegetation (to indicate surveyor construction activity limits or for any other purpose). Fencing/staking shall remain in place for the duration of construction. • All disturbances, access roads, staging areas, vehicles, and equipment shall be confined to the fenced/flagged authorized work areas. • To the greatest extent practicable, construction activities shall minimize disturbance to soil and native vegetation. • Best management practices shall be implemented where applicable for prevention and control of soil erosion and to minimize the introduction and spread of invasive plant species. • Hazardous materials including motor oil, fuel, antifreeze, hydraulic fluid, and grease shall be contained, and spills or leaks shall be promptly corrected and cleaned up according to applicable regulations. • Vehicles and equipment shall be properly maintained to prevent spills or leaks and refueling shall not be conducted outside the authorized work areas or within 100 feet of avoided, sensitive aquatic resources. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> Upon completion of construction activities, all unused materials, equipment, staking and flagging, wattles, and refuse shall be removed and properly disposed of, including but not limited to wrapping material, cables, cords, wire, boxes, rope, broken equipment parts, twine, strapping, buckets, and metal or plastic containers. <p>Mitigation Measure Bio-4 Minimization of Impacts to Wildlife.</p> <p>The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to wildlife:</p> <ul style="list-style-type: none"> Wildlife avoidance: Wherever feasible, Project activities shall avoid interference with wildlife (including ground-dwelling species, birds, and bats) by allowing animals to egress from the work area on their own accord, prior to disturbance. Sensitive biological resources: Sensitive biological resource areas near all work activities shall be clearly communicated and/or marked (e.g., flagged or fenced off) in the field. Avoidance buffers shall be established and maintained by the Designated Biologist. Minimize traffic impacts: The Applicant shall specify and enforce maximum vehicle speed limits to minimize risk of wildlife collisions and fugitive dust. Vehicles shall not exceed a speed limit of 15 mph on unpaved roads in open habitat where wildlife may be affected. Dust suppression shall occur during all construction activities as needed. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Minimize lighting impacts: Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light toward surrounding wildlife habitat. New light sources shall be minimized, and lighting shall be designed (e.g., using downcast lights) to limit the lighted area to the minimum necessary. • Avoid use of toxic substances: Use of chemicals, fuels, lubricants, or biocides shall comply with all local, state, and federal regulations to minimize the possibility of contamination of habitat or primary or secondary poisoning of predators utilizing adjacent habitats. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be nontoxic to wildlife and plants. • Minimize noise and vibration impacts: The Applicant shall conform to noise requirements specified in the noise analysis of the Environmental Impact Report to minimize noise to off-site habitat. • Water: Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by Biological 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>Monitors to ensure they do not create longstanding ponded areas.</p> <ul style="list-style-type: none"> • Food and trash: No deliberate feeding of wildlife shall be allowed. Further, to avoid indeliberate feeding of wildlife, all food-related trash items, including wrappers, cans, bottles, and food scraps shall always be contained and properly disposed of in self-closing, sealable containers, with lids that latch to prevent wind and wildlife (e.g., ravens, coyotes) from opening the containers. All trash receptacles shall be regularly inspected, emptied, and removed from the Project site at a minimum once a week to prevent spillage and maintain sanitary conditions. • Firearms and dogs: All personnel and any other individuals associated with the Project shall be prohibited from bringing any firearms on the Project site, except those in the possession of authorized security personnel or local, state, or federal law enforcement officials. No pets shall be permitted on the Project site except dogs that may be used to aid in official and approved monitoring procedures/protocols or service dogs under Title II and Title III of the American with Disabilities Act. • Wildlife entrapment: All pipes, culverts, or similar structures with a diameter greater than 3 inches and less than 8 inches aboveground shall be inspected by the Designated Biologist or Biological Monitor(s) before the material is moved, buried, or capped. The Designated Biologist or Biological Monitor(s) shall inspect all 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>open holes and trenches a minimum of once a day and just prior to backfilling. Any open excavations greater than a 1-foot depth must be covered (e.g. with plywood or steel plates with the edges barricaded) or fit with earthen escape ramps or wooden planks at least every 150 feet to allow for wildlife egress if left open overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers an animal has become trapped, they shall halt activities and notify the Designated Biologist or Biological Monitor immediately.</p> <ul style="list-style-type: none"> • Dead or injured wildlife: Dead or injured special-status wildlife species shall be reported to the lead agencies and permitting agencies, as applicable, within 48 hours of detection. The Designated Biologist or Biological Monitor shall complete a Wildlife Incident Form and safely move the carcasses out of the road or work area and dispose of the animal. If an animal is entrapped, the Designated Biologist or Biological Monitor shall free the animal if possible, or work with construction crews to free it, in compliance with safety requirements, or work with applicable agencies to resolve the situation. Injured wildlife will be transported to an approved wildlife rehabilitation center. • Pest control: No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site or in support of any other Project activities. If rodent control must be conducted, 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>the use should be restricted to interiors of buildings and zinc phosphide should be used because of the lower risk of poisoning burrowing mammals.</p> <ul style="list-style-type: none"> • California Natural Diversity Database: All observations of special status species, alive or dead, shall be recorded and reported to the California Natural Diversity Database. <p>Mitigation Measure Bio-5 Integrated Weed Management Plan</p> <p>The Applicant shall prepare and implement an Integrated Weed Management Plan to minimize or prevent noxious, nonnative and invasive weeds from infesting the site or spreading into surrounding habitat. For Project components on BLM administered lands (i.e., gen-tie and access route), the Integrated Weed Management Plan must comply with BLM guidelines and be approved by the BLM. The Integrated Weed Management Plan shall identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds. All construction vehicles (e.g., trucks, trailers, machinery) shall be washed (either by water or pressurized air) off site before entering the Project area to limit the spread of weeds. All wattles or bales will be certified weed-free, non-</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>entrapment, and will be removed at the completion of activities. The Integrated Weed Management Plan shall identify herbicides that may be used for control or eradication and avoid herbicide use in or around any environmentally sensitive areas. The Integrated Weed Management Plan shall also include a reporting schedule to be implemented by the Designated Biologist.</p> <p>Mitigation Measure Bio-6 Vegetation Resources Management</p> <p>The Applicant shall undertake the following measures during construction to minimize impacts to vegetation resources:</p> <ul style="list-style-type: none"> • The Applicant shall assign a Vegetation Specialist to oversee and implement salvage and transplantation of plant species protected pursuant to BLM policy (conformance with DRECP Conservation and Management Action LUPA-BIO-7) and the California Desert Native Plants Act, as applicable, and implement revegetation of temporarily disturbed areas on the gen-tie and access route. On private lands under the jurisdiction of the County of Riverside, the Applicant shall obtain a permit from the County of Riverside pursuant to the California Desert Native Plants Act for the purposes of salvage or removal of protected species during construction if required. • Revegetation of temporarily disturbed areas shall occur within BLM administered lands (i.e., gen-tie and access road). Revegetation shall not be 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>implemented on private lands within the Project site (i.e., the solar facility site). The nature of revegetation will differ according to each site, its pre-disturbance condition, and the nature of the construction disturbance (e.g., drive and crush versus blading). Revegetation techniques may include soil contouring, replanting of succulents, placing vertical mulch as crushed, horizontal, or vertical mulch to reduce sun and wind exposure to the soil surface and facilitate plant germination. Areas may also be watered based on the guidance of the Vegetation Specialist.</p> <p>Mitigation Measure Bio-7 Special-Status Plant Species Mitigation.</p> <ul style="list-style-type: none"> • To reduce potentially significant impacts to special-status plant species, the Applicant shall implement one or a combination of the following strategies: • Off-site compensation: The Applicant shall provide compensation lands consisting of creosote bush scrub habitat and suitable special-status plant species habitat, if applicable, at a 1:1 ratio for occupied habitat affected by the Project. Occupied habitat acreage shall be calculated on the Project site based on including each special-status plant occurrence, if applicable, and a surrounding 100-foot buffer area. Off-site compensation lands would be considered suitable if in proximity to historical occurrence and suitable habitat is present. Off-site compensation lands shall be located within 5 miles of a historical occurrence and include creosote bush scrub. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none">Seed collection: Mitigation may include seed collection from the affected creosote bush population on the site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The costs associated with the long-term storage, seed bulking, and propagation of the seed may be the responsibility of the Applicant for up to five (5) years. Seed and/or germinated plants can be used for restoration within the Project site, off-site mitigation lands, or other conservation lands or nearby sites as approved by the County of Riverside and applicable permitting agencies. <p>Mitigation Measure Bio-8 Birds and Bats Conservation Strategy (BBCS)</p> <p>The Applicant shall implement the final BBCS to avoid or minimize take of migratory birds that may nest on the site or may be vulnerable to collision with the Project components. It describes the Project components, summarizes baseline data regarding birds and bats in the Project vicinity; assesses potential risks to those species that could result from Project construction, operation, and decommissioning; and describes conservation measures to be implemented in order to minimize those risks.</p> <p>Over the course of construction and O&M, fatality thresholds and future conservation measures may be subject to revision in coordination with CDFW as new information is obtained. The BBCS outlines an adaptive</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>management process to address such revisions to monitoring.</p> <p>Construction: As an Appendix to the BBCS, the Applicant shall prepare and implement a Nesting Bird Management Plan (NBMP), to include nest surveys, avoidance, and protection. The Project shall either avoid vegetation clearing during the nesting season or conduct pre-construction nest surveys of potential habitat and implement no-disturbance buffer areas around active nests. Pre-construction surveys for active nests shall be conducted by one or more biological monitors at the direction of the Lead Biologist. Nest surveys shall be conducted for all vegetation removal or ground disturbance activities throughout the nesting season, identified here as beginning January 1 for raptors and hummingbirds and February 1 for other species, and continuing through August 15. Nest surveys will be completed at each work site no more than 7 days prior to initiation of site preparation or construction activities. Nest surveys shall cover all work sites, including the solar site facility and gen-tie line alignment plus buffer areas of 1,200 feet for raptors and 250 feet for other species. If adjacent properties are not accessible to the biological monitors, the off-site nest surveys may be conducted with binoculars.</p> <p>At each active nest, the biological monitor shall establish and mark a buffer area surrounding the nest where construction activities that could disrupt nesting behavior will be excluded. The</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>BBCS may identify species-specific buffer distances or variable distances, depending on activity levels (e.g., driving past the nest to access work sites may be less disruptive than foundation construction). Alternately, buffer distances may be 1,200 feet for raptor nests and 250 feet for other species. The extent of nest protection will be based on proposed construction activities, species, human activities already underway when the nest is initiated (e.g., a house finch nest built in the eaves of an occupied structure would warrant less avoidance or protection than a loggerhead shrike nest build in native shrubland), topography, vegetation cover, and other factors. The avoidance and protection measures will remain in effect until the nest is no longer active.</p> <p>If for any reason a bird nest must be removed during the nesting season, the Applicant or its agent will notify the CDFW and retain written documentation of the correspondence. Nests will be removed only if they are inactive, or if an active nest presents a hazard.</p> <p>Operation and maintenance: The BBCS specifies monitoring and conservation measures to be implemented by the Applicant to document bird mortality or injury that may result from the operation of the Project, such as downed exhausted birds on the site that are unable to take flight or collision with Project components including gen-tie line collisions. The BBCS includes conservation measures and an adaptive</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>management framework to be implemented through design and operations to minimize bird and bat fatalities at the solar facilities and gen-tie line. Provisions for a potential O&M monitoring and reporting program for bird and bat fatalities are included, based on monitoring at other active projects in the vicinity.</p> <p>Mitigation Measure Bio-9 Desert Kit Fox and American Badger Relocation</p> <p>The Applicant shall implement the following measures to protect desert kit fox and American badger:</p> <ul style="list-style-type: none"> • Biological monitors shall perform pre-construction surveys for kit fox/badger dens in the Project disturbance area and a 100-foot (30-meter) buffer beyond the Project disturbance area, with landowner permission to access, within 30 days of initiation of construction activities. • All potential desert kit fox/badger dens identified during pre-construction surveys shall be monitored for a minimum of three consecutive nights (between August 1 and January 14) or five consecutive nights (between January 15 and July 31) to determine occupancy status. Occupancy monitoring shall be performed using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance(s). Each den shall be classified as inactive or active following the evaluation period. • If no tracks are observed in the tracking medium or no photos of the target species are captured 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>after the monitoring period, the den shall be classified as inactive.</p> <ul style="list-style-type: none"> • Inactive dens in the direct path of disturbance may be excavated by hand (by the biologists or under the supervision of a biological monitor) and backfilled to reduce the likelihood of reuse by badgers or kit fox. Dens not directly impacted by construction shall not be excavated. • If an active den is found outside the natal season (between August 1 and January 14), the den may be subject to passive relocation. Prior to any relocation of desert kit fox and American badger, the CDFW must be notified of the active den and methods proposed for relocation. Relocation may occur by progressively blocking the den with natural materials (e.g., rocks, dirt, sticks, or vegetation) or artificial, non-injurious materials placed in front of the entrance for a minimum of five consecutive nights to discourage continued use. Additional deterrents such as natural mixtures of aromatic organics (e.g., onions, garlic, essential oils), transistor radios, and ultrasonic emitters may be used. The use of one-way doors may be used. Installation of one-way doors shall take place in the afternoon while desert kit fox/badgers are inactive and deep within the den complex. After verification that passive relocation has been successful and the den has been unoccupied for a total of five consecutive nights, the den may be fully excavated. • If an active den is found during the natal season (January 15 and July 31), a 500-foot (150-meter) 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>no-disturbance buffer shall be established. All active dens found during the natal season shall be presumed natal and shall not be subject to passive relocation activities unless approval is obtained from the CDFW.</p> <ul style="list-style-type: none"> • Buffers may be reduced, expanded, or temporarily modified to allow certain low-impact activities (e.g., vehicle access) to occur as determined by the Designated Biologist to be feasible without adversely affecting the den. All modifications to the size of exclusion buffers or allowance of certain Project activities within the exclusion buffer shall be documented by the Designated Biologist. • Current guidelines from the CDFW regarding minimizing transmission of canine distemper virus shall be followed. <p>Mitigation Measure Bio-10 Desert Tortoise Protection.</p> <p>No desert tortoise may be handled or relocated without authorization from the CDFW and USFWS. The Applicant shall employ qualified desert tortoise biologist(s) for purposes of implementing desert tortoise protection measures identified below. The Designated Biologist noted in MM BIO-1 may also serve as qualified desert tortoise biologist if they meet the following qualifications. The desert tortoise biologist(s) qualifications shall be subject to review and approval by the applicable lead and permitting agencies. Qualifications shall include prior approval by CDFW as an Authorized Desert</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>Tortoise Biologist and/or at least two years of experience on trend plots or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by CDFW (e.g., Desert Tortoise Council tortoise training workshop) is required.</p> <p>The qualified desert tortoise biologist(s) shall be responsible for overseeing compliance with desert tortoise protective measures, conducting pre-construction surveys for all work areas, monitoring for evidence of tortoises in construction areas, checking under vehicles and equipment, inspecting excavations and other potential entrapments, and ensuring worker compliance with all desert tortoise protection measures. Any incident that is considered by the qualified desert tortoise biologist(s) to be in noncompliance with desert tortoise protective measures shall be documented.</p> <p>The qualified desert tortoise biologist(s) shall have the authority to halt any Project activity that is in violation of desert tortoise protective measures or that may result in take of a desert tortoise. The following incidents shall require immediate cessation of any Project activities: (1) location of a desert tortoise within 100 feet (30 m) of an active work area; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; and (4) operation of construction equipment or vehicles outside</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>authorized work areas. Work activities may resume once the Designated Biologist or qualified desert tortoise biologist(s) determines there is no threat to the desert tortoise and/or the tortoise has walked more than 100 feet (30 m) away from the work area. The Applicant shall be responsible for implementing the following requirements, under direction by the qualified desert tortoise biologist(s) where appropriate.</p> <ul style="list-style-type: none"> • Worker training: The Worker Environmental Awareness Program described in MM BIO-2 shall incorporate desert tortoise specific training. • Exclusion fencing: Prior to construction of the solar facility, the solar site shall be fully enclosed by temporary, or permanent desert tortoise exclusion fencing. All exclusion fencing shall adhere to USFWS design guidelines. To the extent feasible and permissible by County flood control design guidelines, permanent exclusion fence shall be integrated with the site security fence for maximum durability. The qualified desert tortoise biologist(s) shall monitor the installation of all fencing. Once installed, exclusion fencing shall be inspected at least monthly until construction completion and following all rain events, and corrective action taken if fence maintenance is needed. Exclusion fencing shall incorporate the installation of tortoise guards, or cattle guards, and/or gates at each road entry point. Gates shall always remain closed except when vehicles are entering or leaving the solar facility site. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>periods), the gate may be left open if a qualified desert tortoise biologist is present to monitor potential tortoise activity.</p> <ul style="list-style-type: none"> • Pre-construction surveys: Pre-construction surveys shall be performed prior to ground disturbance to ensure no desert tortoises are present within the direct disturbance area. Pre-construction surveys shall be conducted in unfenced Project areas no more than 7 days prior to ground disturbance. Clearance surveys shall also be conducted after the solar facility site has been fully enclosed by temporary, or permanent desert tortoise exclusion fencing. • Avoidance: Any potentially occupied burrows shall be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If a live tortoise or an occupied tortoise burrow is identified in the work area, all Projects activities that may result in take shall cease. The tortoise shall be allowed to leave on its own accord without handling or harassment. • Unfenced work areas: If a tortoise is observed on or near unfenced work areas, including access roads, vehicles shall stop to allow the tortoise to move off the road on its own. The ground beneath vehicles parked outside of cleared areas within desert tortoise exclusion fencing shall be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle shall not be moved until the desert 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>tortoise leaves of its own accord. Any work conducted in an area that is not fully enclosed by exclusion fencing must be monitored by a qualified desert tortoise biologist who shall stop work if a tortoise enters the work area. Work activities shall only proceed when the tortoise has moved away of its own accord and there is no threat of injury or death. Work sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions) shall be enclosed by temporary exclusion fence and not left open overnight.</p> <ul style="list-style-type: none"> • Dead or injured tortoises: If a dead or injured desert tortoise is found within the Project area, the Applicant or Designated Biologist shall notify by phone and email the USFWS, CDFW, and lead agencies within 24 hours of detection. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, possible cause of death or injury, if known, and other pertinent information. <p>Mitigation Measure Bio-11 Minimization of Impacts to Native Vegetation</p> <p>Table 3.5-3 provides an estimate of compensation acreages; however, final compensation shall be based upon final calculation of impacted acreage.</p> <p>Summary of compensatory mitigation:</p> <ul style="list-style-type: none"> • Total compensation acreage: 151.5 acres • Sonoran creosote bush scrub: 135 acres 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> Desert dry wash woodland acreage: 16.5 acres Unvegetated ephemeral wash: 13 acres (nested in the Sonoran creosote bush scrub) <p>No compensation shall be required for impacts to anthropogenic land use or fallow agriculture. The compensation acreage shall be based upon final calculation of impacted acreage. Compensation shall be provided for impacts to the following resources, at the specified ratios (acres acquired and preserved to acres impacted):</p> <ul style="list-style-type: none"> Sonoran creosote bush scrub: 1:1 Desert dry wash woodland: 5:1 Unvegetated Ephemeral Wash: 1:1 <p>The Applicant shall provide funding or bonding for the acquisition and conservation of compensation lands. Conservation instruments, associated documentation, and/or securities shall be submitted to the applicable agencies for review and approval, prior to initiating ground disturbance, pursuant to the requirements of permits and authorizations issued by lead, responsible, and permitting agencies.</p> <p>Mitigation Measure Bio-12 Burrowing Owl Avoidance and Relocation</p> <p>The Applicants shall prepare and implement a plan for burrowing owl. The plan shall be reviewed and guidance provided by the lead agencies prior to the start of ground-disturbing activities. Burrowing owl protection and relocation shall follow the Staff Report on</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>Burrowing Owl Mitigation (CDFG 2012) and incorporate the following requirements:</p> <p>Pre-construction surveys for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, whitewash) shall be conducted throughout each work area. Survey schedules shall be coordinated with constructing the desert tortoise exclusion fence and the pre-construction desert tortoise clearance surveys. As needed, follow-up surveys shall be conducted no more than 14 days prior to construction.</p> <p>Should any of the pre-construction surveys identify burrowing owl or active burrows within the solar facility, the Biological Monitor shall coordinate with the Construction Contractor to implement avoidance and setback distances as specified in the Staff Report on Burrowing Owl Mitigation (CDFG 2012).</p> <p>Any unoccupied suitable burrows within the solar facility site shall be excavated and filled in under the supervision of the Biological Monitor prior to site preparation during the non-breeding season.</p> <p>If passive relocation of burrowing owls is needed, the Applicant shall draft a plan detailing methods for the relocation and monitoring and management of the passive relocation.</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
Impact BIO-3 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?	Potentially significant	Mitigation Measures BIO -1 through BIO-8 and Mitigation Measure BIO -11	Less than significant
Impact BIO-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially significant	Mitigation Measures BIO -1 through BIO-11	Less than significant
Impact BIO-5 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	Potentially significant	Mitigation Measures BIO -1 through BIO-7 and Mitigation Measure BIO -11	Less than significant
Impact BIO-6 Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially significant	<p>Mitigation Measures BIO -1, BIO-2, BIO-4 and BIO -11</p> <p>Mitigation Measure Bio-13: Stream Protection and Compensation.</p> <p>Prior to ground-disturbing activities in waters potentially regulated by the state, the Applicant shall confer with the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB) and, if required, obtain appropriate authorization. The Applicant shall implement all conditions associated with regulatory agency agreements and authorizations including compensatory mitigation and, unless otherwise specified by CDFW and/or the RWQCB, shall implement the best</p>	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>management practices identified below to minimize adverse impacts to streams and watersheds:</p> <ul style="list-style-type: none"> • Construction crews shall minimize disturbance to wetlands, streambeds, and banks of any state-jurisdictional waters to the extent feasible. • Vehicles and equipment shall not be operated in standing or flowing water. • The Applicant shall prevent water containing mud, silt, or other pollutants from grading or other activities from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows. • Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from entering ephemeral drainages. • No petroleum products or other pollutants from the equipment shall be allowed to enter any state-jurisdictional waters. • No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into off-site state-jurisdictional waters. • Stationary equipment such as motors, pumps, generators, and welders shall be positioned over drip pans. Stationary heavy equipment shall have 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>suitable containment to handle a catastrophic spill/leak. Cleanup equipment such as brooms, absorbent pads, and skimmers shall always be on site. The cleanup of all spills shall begin immediately.</p> <ul style="list-style-type: none"> • All excess materials or debris shall be removed from the work area after completion of construction. • Project impacts to desert dry wash woodland and unvegetated ephemeral wash shall be mitigated by providing compensatory mitigation consistent with MM BIO-11. 	
Impact BIO-7 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially significant	Mitigation Measures BIO-1 through MM BIO-13	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measures BIO -1 through BIO-13	Less than significant
3.6 Cultural Resources			
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5	Potentially significant	<p>Mitigation Measure Cultural-1: Project Archaeologist</p> <p>Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program (CRMP). A Cultural Resource Monitoring Plan shall be developed in consultation with the monitoring tribe(s) that addresses the details of all activities and</p>	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>provides procedures that must be followed in order to reduce the impacts to cultural, tribal cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.</p> <p>Mitigation Measure Cultural-2: Develop and Implement Cultural Resources Environmental Awareness Training.</p> <p>Prior to issuance of a grading permits and for the duration of ground disturbance (as defined in MM Cultural-4), the Applicant shall provide Worker Environmental Awareness Program</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>(WEAP) training to all workers prior to beginning work at the Project site. The training shall be prepared by the Project Archaeologist, may be conducted by any member of the archaeological team, and may be presented in the form of an annotated and narrated digital slide show. Tribal representatives shall be given the opportunity to participate in development of the WEAP training. The Project Archaeologist shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended but must be resumed if ground disturbance resumes. Training shall include the following:</p> <ul style="list-style-type: none"> • A discussion of applicable laws and penalties under the law • Samples or visuals of artifacts that might be found in the Project vicinity • A brief review of the cultural sensitivity of the Project and the surrounding area • A discussion of what such artifacts may look like when partially buried, or wholly buried, and then freshly exposed • A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits • Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>supervisor and the Project Archaeologist or archaeological monitors, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist</p> <ul style="list-style-type: none"> • Instruction that the Project Archaeologist, alternate Project Archaeologist, and supervisory archaeological resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist • Identification of reporting procedures in the event of a discovery • An acknowledgment form signed by each worker indicating that they have received the training • A sticker that shall be placed on hard hats indicating that WEAP training has been completed • This is a mandatory training, and all construction personnel must attend prior to beginning work on the Project site. A copy of the sign-in sheet shall be kept ensuring compliance with this measure. <p>Mitigation Measure Cultural-3: Cultural Resources Monitoring Plan.</p> <p>Prior to the start of construction, the Project Archaeologist shall develop a Cultural Resources Monitoring Plan that addresses the details of all activities and provides procedures that must be followed to reduce the potential impacts to undiscovered buried archaeological resources associated with the Project.</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>The Cultural Resources Monitoring Plan shall describe a program for monitoring for undiscovered National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) eligible cultural resources during Project construction and avoidance and treatment measures in the event of a find. The plan shall identify archaeological monitoring procedures for monitoring during initial ground disturbing activities in previously-undisturbed areas and provide a process that should be followed in the event that an inadvertent discovery is identified, including the discovery of human remains. The frequency and location of archeological monitoring will be determined by the Project Archaeologist with consideration to the rate of excavation, materials excavated, and the presence and abundance of artifacts and features. The plan should also identify the roles and responsibilities of all parties, notification procedures, communication protocols, conditions for reduction or cessation of monitoring, and reporting requirements. The Cultural Resources Monitoring Plan may require that protective fencing or other markers, at the discretion of the County, be erected and maintained to protect resources from inadvertent adverse effects during construction. The plan shall also include maps and narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources, if any. The plan shall detail provisions for monitoring construction activities in these high</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>sensitivity areas. It shall also detail the methods, consultation procedures, and timelines for addressing all post-review discoveries. Specific element of the plan include:</p> <p>The plan shall identify person(s) expected to perform any monitoring tasks, their responsibilities, and the reporting relationships between Project construction management and the mitigation and monitoring team. It shall also specify monitoring reporting and what forms/documentation needs to be completed daily during monitoring.</p> <p>The Project Archaeologist shall manage all monitoring, mitigation, curation, and reporting activities under the Cultural Resources Monitoring Plan. The Applicant shall ensure that the Project Archaeologist makes recommendations regarding the eligibility for listing in the NRHP and CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.</p> <p>The Cultural Resources Monitoring Plan shall address the authority to halt ground disturbance during construction. If a cultural resource over 50 years of age is found, or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts.</p> <p>Pursuant to California Code of Regulations title 14 section 15126.4(b), the plan shall specify that preservation in place is the preferred method of</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>mitigating impacts in the event of an unanticipated discovery of an archaeological site determined to be a historical resource. Potential means of preservation in place include but are not limited to the following:</p> <ul style="list-style-type: none"> • Planning construction to avoid the archaeological site • Deeding the archaeological site to a permanent conservation easement • Capping or covering the archaeological site with a layer of chemically stable soil before building facilities on it • Incorporating the site within parks, green space, or other open space • When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. • Preparation and implementation of a data recovery plan to be used to guide the data recovery and disposition of any historical or Tribal Cultural Resource (as defined under the California Environmental Quality Act) that may be encountered during construction and that cannot be avoided or preserved in place. The data recovery plan shall include, minimally, a regional cultural setting, appropriate regional research questions, field and laboratory methods for the data recovery effort, and analysis and reporting 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>requirements. The data recovery plan shall include treatment measures that focus on recovering information related to tribal values as they are conveyed through archaeological data. The treatment measures shall be developed through consultation among traditionally culturally affiliated tribes and the County. Treatment measures may include detailed resource documentation, preparation of interpretative or educational materials, reburial of artifacts that convey tribal values, or other measures identified in coordination with the tribes and the landowner.</p> <ul style="list-style-type: none">• Following implementation of data recovery and other treatment protocols, a report documenting the methods and results of the data recovery and treatment program shall be prepared by a Secretary of the Interior-qualified archaeologist and shall be submitted to the County for review and approval. <p>Mitigation Measure Cultural-4: Archaeological Monitoring</p> <p>Archaeological Monitors working directly under the Project Archaeologist shall monitor initial grading activities in undisturbed soil on private land.</p> <p>For the linear facilities on BLM-administered land, a qualified lead archaeological monitor that meets the Secretary of the Interior’s Professional Qualifications Standards (as defined in Code of Federal Regulations title 36 part 61) shall be present for initial grading activities in</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>undisturbed soil. If additional archaeological monitors are needed, they do not need to have the same qualifications but may work under the supervision of the lead archaeological monitor; in such cases the lead archaeological monitor must be on site.</p> <p>The frequency and location of archeological monitoring will be determined by the Project Archaeologist, or qualified lead archaeologist on BLM land, with consideration to the rate of excavation, materials excavated, and the presence and abundance of artifacts and features.</p> <p>Daily monitoring forms shall be completed by the archaeological monitor(s) and the Project Archaeologist shall be responsible for retaining, editing, and compiling them. The County shall be provided with a compilation of the daily reports on a monthly basis. The Project Archaeologist shall have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted.</p> <p>Mitigation Measure Cultural-5: Unanticipated Resources</p> <p>The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* and or Tribal Cultural Resources are discovered, the following procedures shall be followed:</p> <p>All ground disturbance activities within 100 feet of the discovered cultural resource/Tribal</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>Cultural Resource shall be halted and the Project archaeologist shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative, and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, avoidance, recovery, etc.) for the cultural Resource and or Tribal Cultural Resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.</p> <p>Mitigation Measure Cultural-6: Environmental Constraints Sheet</p> <p>Prior to issuance of grading permits: the developer/ applicant shall provide evidence to the Riverside County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate an area that will be used, if needed, for reburial of any artifacts that have been identified during grading and cannot be avoided. This area will be protected and not disturbed in the future. This is confidential information, and the exact</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>nature of this area will not be called out on the grading plans.</p> <p>Mitigation Measure Cultural-7: Artifact Disposition</p> <p>Prior to Grading Permit Final Inspection In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and Human Remains) and Provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through the following methods.</p> <p>Desert Training Related Resources- All artifacts related to the Desert Training Canter activities shall be curated with the General Patton Memorial Museum.</p> <p>Historic Resources- Non Desert Training Center related historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>Archaeological Resources ensuring access and use pursuant to the Guidelines.</p> <p>Pre-contact resources-A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be included in the Phase IV Report. The details of any disposition of artifacts shall be documented in the Phase IV report.</p> <p>Mitigation Measure Cultural-8: Phase IV Monitoring Report</p> <p>Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		stipulated in the Cultural Resources Monitoring Plan. The report will also include the Tribal Monitoring notes as a confidential appendix. Once approved by the County Archaeologist, the Project Archaeologist shall provide a copy to the consulting tribes and the South Coastal Information Center (SCIC)..	
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially significant	Mitigation Measures Cultural-1 through Cultural-8	Less than significant
		Mitigation Measure Cultural-9: Human Remains Protocol	
Impact CUL-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially significant	If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the “Most Likely Descendant”. The Most Likely Descendant shall then make	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. There will be no photography of human remains or associated resources.	
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Cultural-1 through Cultural-9	Cumulatively Considerable
3.7 Energy			
Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Potentially significant	Mitigation Measure Air-1: Control On-Site Off-Road Equipment Emissions	Less than significant
Impact ENG-2: Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Air -1	Less than significant
3.8 Geology, Soils and Minerals			
Impact GEO-1: Would the project be subject to strong seismic ground shaking?	Less than significant	No mitigation required	Less than significant
Impact GEO-2: Would the project be subject to seismic-related ground failure, including liquefaction?	Less than significant	No mitigation required	Less than significant
Impact GEO-3: Would the project result in substantial soil erosion or the loss of topsoil?	Less than significant	No mitigation required	Less than significant
Impact GEO-4: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?			
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?	Less than significant	No mitigation required	Less than significant
Impact GEO-6: Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?	Less than significant	No mitigation required	Less than significant
Impact GEO-7: Would the project have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Less than significant	No mitigation required	Less than significant
Impact GEO-8: Would the project result in grading that affects or negates subsurface sewage disposal systems?	Less than significant	No mitigation required	Less than significant
Impact GEO-9: Would the project be impacted by or result in an increase in wind erosion and blow sand, either on or off site?	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Air -1, Air-3, and BIO-6	Less than significant
3.9 Greenhouse Gas			
Impact GHG-1: Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment?	Less than significant	No mitigation required	Less than significant
Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
Cumulative Impact	Less than significant	No mitigation required	Less than significant
3.10 Hazards and hazardous materials			
Impact Hazards – 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially significant	<p>Mitigation Measure Hazards-1: UXO Training and Reporting Plan</p> <p>Where ground disturbance work is involved, the construction contractor(s) should have a representative that be OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) trained in accordance with standard 29 CFR section 1910.120 and hold a current certification. The Applicant shall prepare a UXO Training and Reporting Plan to properly train all site workers in the recognition, avoidance, and reporting of military debris and ordnance that will meet all applicable requirements. The Applicant shall submit the plan to Riverside County for review prior to the start of construction. The plan shall contain, at a minimum, the following:</p> <ul style="list-style-type: none"> • A description of the training program outline and materials, and the qualifications of the trainers • Notification and avoidance requirements where potential UXO, or munitions debris are noted by site workers • Identification of available trained experts and appropriate agencies that will respond to notification of discovery of any munitions debris or ordnance (unexploded or not) 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • Work plan to recover, remove and dispose of discovered ordnance 	
Impact Hazards – 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially significant	<p>Measure Hazards-2: Health and Safety - Worker Environmental Awareness Program</p> <p>A Worker Environmental Awareness Program shall be prepared, and all construction crews and contractors shall be briefed on the plan prior to starting work on the Project. The plan shall address health and safety issues associated with normal and unusual (emergency) conditions. The program shall include, but not be limited to, the following information and guidance:</p> <ul style="list-style-type: none"> • Environmental health and safety protocol (including, but not limited to, hazards of Valley fever, including the identification of symptoms, proper work procedures, when and how to use personal protective equipment, and informing supervisors of suspected symptoms of work-related Valley fever) • An emergency response plan • Environmental awareness training, which shall include environmental, cultural, health, and safety training • Noise/ear protection protocol • First aid training • Fire protection and extinguisher maintenance, guidance, and documentation • Disposal of hazardous materials and waste guidance in accordance with local, state, and federal regulations 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
<p>Impact Hazards – 3: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.</p>	<p>Potentially significant</p>	<p>Measure Hazards-3: Perform a Phase II Environmental Site Assessment</p> <p>Prior to issuance of grading permits, the Applicant shall perform a limited Phase II Environmental Site Assessment (Phase II ESA) to ensure that potentially contaminated soils are identified, characterized, removed, and disposed of properly. The Phase II ESA would be limited to the following areas:</p> <ol style="list-style-type: none"> 1. Open 55-gallon drum labeled as motor oil in photo #5 of the Phase I ESA, 2. Dispenser site of diesel above ground storage tank (AST) in the water pump area in photo #17 of the Phase I ESA, 3. Dispenser side of 10,000-gallon diesel AST and 20,000-gallon gasoline AST stored on dirt and equipment storage area in photo #21 and 22 and the Phase I ESA; and 4. Stained soil area of numerous 5-gallon buckets seen in photo #22 and #23 in the Phase I ESA. <p>The Phase II ESA shall be submitted to the County for approval prior to Project construction. The Phase II ESA shall include:</p> <ul style="list-style-type: none"> • Description of soil testing methodology and results, which shall include the collection of soil samples at the above-mentioned areas. This soil profiling shall be performed prior to initiation of Project construction. 	<p>Less than significant</p>

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> In the event that contamination is identified above action levels, procedures for handling contaminated soil. <p>Any contaminated soils identified by testing conducted and found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations. Contaminated soil excavated from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.</p>	
Impact Hazards – 4: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than significant	No mitigation required	Less than significant
Impact Hazards – 5: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Potentially significant	<p>Mitigation Measure Fire-1: Fire Safety</p> <p>The Fire Management and Prevention Plan prepared by the Applicant to ensure the safety of workers and the public during construction, operation and maintenance, and decommissioning for the Project shall include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> Procedures shall be established for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions Work restrictions shall be implemented during Red Flag Warnings and High to Extreme Fire Danger days 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • All internal combustion engines used at the Project site shall be equipped with spark arrestors. Spark arrestors shall be in good working order. • Once new access 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. • Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. • Equipment parking areas and small stationary engine sites shall be cleared of all flammable materials. • Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation. • Each construction site (if construction occurs simultaneously at various locations) shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires. • The Project owner shall coordinate with RCFD to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site. • The plan shall include information about the type of BESS technology on site, potential hazards, and procedures for disconnecting or shutting down the BESS in case of fire or to reduce the chance of fire. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • All construction workers, plant personnel, and maintenance workers visiting the plant and/or transmission lines to perform maintenance activities shall receive training on fire prevention procedures, the proper use of firefighting equipment, and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by RCFD. Fire prevention procedures shall be included in the Project's Worker Environmental Awareness Program. • Vegetation near all solar panel arrays, ancillary equipment, and access roads shall be controlled through periodic cutting, spraying of weeds, and/or other appropriate management methods. • RCFD shall be consulted during plan preparation and fire safety measures recommended by these agencies included in the plan. • The plan shall list fire prevention procedures and specific emergency response and evacuation measures that shall be required to be followed during emergency situations. • All on-site employees shall participate in annual fire prevention and response training exercises with the RCFD. • The plan shall list all applicable wildland fire management plans and policies established by state and local agencies and demonstrate how the Project will comply with these requirements. • The Project owner shall designate an emergency services coordinator from among the full-time on-site employees who shall perform routine patrols 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>of the site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project owner shall notify RCFD of the name and contact information of the current emergency services coordinator in the event of any change.</p> <ul style="list-style-type: none"> • Remote monitoring of all major electrical equipment (transformers and inverters) shall screen for unusual operating conditions. Higher than nominal temperatures, for example, can be compared with other operational factors to indicate the potential for overheating which under certain conditions could precipitate a fire. Units could then be shut down or generation curtailed remotely until corrective actions are taken. • Fires ignited on site shall be immediately reported to RCFD. • The engineering, procurement, and construction contract(s) for the Project shall provide reference to or clearly state the requirements of this mitigation measure. • The Project owner must provide the Fire Management and Prevention Plan to RCFD for review and comment before construction. 	
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Air-1, Hazards-1, Hazards-2, Hazards-3, and Fire-1	Less than significant
3.11 Hydrology and Water Quality			
Impact Hydro-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
<p>Impact Hydro-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</p>	<p>Potentially significant</p>	<p>Mitigation Measure Hydro-1: Groundwater Monitoring, Reporting, and Mitigation Plan</p> <p>Prior to the Project's use of water from any well that extracts groundwater from the Chuckwalla Valley Groundwater Basin, the Applicant shall prepare and implement a Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP) for the Project. The GMRMP shall be prepared by a certified hydrogeologist registered in the State of California and submitted by the Applicant to the County for review and approval prior to the start of Project construction.</p> <p>The GMRMP shall provide detailed methodology for monitoring groundwater levels and water quality in the Project production well(s) and closest accessible private well(s). Monitoring shall be performed prior to construction to establish pre-construction groundwater levels that can be used as a baseline against which later measurements can be compared.</p> <p>Monitoring of groundwater levels and water quality shall be conducted on a quarterly basis during Project construction and a semi-annual basis during Project operation and maintenance for at least the first 5 years of the Project (including the construction period). All Project production wells shall be metered, and total monthly and annual usage in gallons recorded for the life of the Project. Monitoring reports shall be prepared and submitted to the County for review and comment following each monitoring event.</p>	<p>Less than significant</p>

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>The reports shall include, at a minimum, the following information:</p> <ul style="list-style-type: none"> • Tabulated groundwater level, quality, and production data • Total monthly water use in gallons and acre-feet • Hydrographs that show groundwater level trends • Trend analysis of water quality data • Comparison of monitoring results to baseline conditions <p>If groundwater monitoring results indicate that Project-related pumping has resulted in a static groundwater level decline of 5 feet or more below the baseline trend, determined by the past 5 years of static groundwater level data, at any of the nearby private monitoring wells, the Project Applicant shall consult with the County to determine what remedial activities are needed, which could include the following:</p> <ul style="list-style-type: none"> • Cessation or reduction of pumping until groundwater levels recover to within 5 feet from the baseline trend • Compensation for whatever additional equipment is necessary to lower nearby well pumps to levels that can adequately continue pumping • Compensation to repair or replace wells found to be damaged or inoperable due to lowered groundwater levels • Compensation for increased energy cost due to Project-related groundwater level drawdown in wells 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> If groundwater level declines are occurring, pumping by other local users will be evaluated in the monitoring reports and, if possible, differentiated from Project-related pumping. This analysis could include comparing changes in the timing and amounts of groundwater level fluctuations to pre-Project baseline data, production at other locations, and seasonal changes. <p>Additionally, the Colorado River Accounting Surface is at an elevation between approximately 238 and 240 feet above mean sea level (amsl) in the Chuckwalla Valley, and groundwater elevation in the Project area is approximately 400-470 feet amsl. GRRMP-required groundwater monitoring activities and reporting shall include proximity of the depth of Project-related groundwater pumping to the Colorado River Accounting Surface to ensure that Project-related groundwater pumping does not draws water from below the accounting surface. If groundwater monitoring results indicate that Project-related pumping is approaching the accounting surface, the Project shall implement water conservation measures, including cessation of pumping, to reduce the amount of water withdrawn from Project wells.</p>	
Impact Hydro-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: <ul style="list-style-type: none"> i. result in a substantial erosion or siltation on- or off-site; 	Potentially significant	Mitigation Measure Hydro-2: SWPPP Development and Implementation At least 60 days prior to site mobilization, the Applicant shall submit to Riverside County Civil Engineering for review and approval a SWPPP	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
<ul style="list-style-type: none"> ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows? 		<p>for the project. The SWPPP shall address adequate procedures and standards required for specific project activities including, but not limited to, BMPs for drainage erosion and sedimentation control; dewatering; hazardous materials identification, handling, storage, and disposal; and emergency response and cleanup.</p> <p>The SWPPP and BMP materials shall be stored and available on site prior to initiating ground-disturbing activities and throughout the construction period.</p> <p>All necessary erosion and sediment control BMPs shall be installed prior to conducting grading or vegetation clearing activities during the wet season and before the onset of any anticipated storm events. Temporary BMPs such as silt fences or wattles, which are intended to minimize sediment transport from temporarily disturbed areas, shall remain in place until disturbed areas have stabilized.</p>	
Impact Hydro-4: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less than significant	No mitigation required	Less than significant
Impact Hydro-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than significant	No mitigation required	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Hydro-1 and Hydro-2	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
3.12 Land Use and Planning			
Impact LU-1 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than significant	No mitigation required	Less than significant
Cumulative Impacts	Less than significant	No mitigation required	Less than significant
3.13 Noise			
Impact NOI-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than significant	No mitigation required	Less than significant
Impact NOI-2: Generate excessive groundborne vibration or groundborne noise levels.	Less than significant	No mitigation required	Less than significant
Cumulative Impacts	Less than significant	No mitigation required	Less than significant
3.14 Paleontological Resources			
Impact PALEO-1 would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially significant	Mitigation Measure Paleo-1: Worker's Environmental Awareness Program Worker's Environmental Awareness Program. Prior to the start of construction, all field personnel should receive a worker's environmental awareness training on paleontological resources. The training should provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project site, the role of the paleontological	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>monitor, an outline of steps to follow in the event that a fossil discovery is made and contact information for the project paleontologist. The training should be developed by the Project paleontologist and can be delivered concurrent with other training including cultural, biological, safety, and others.</p> <p>Mitigation Measure Paleo-2: Paleontological Resource Impact Mitigation Program</p> <p>Prior to the start of any Project-related construction activities, the Applicant shall retain a County-approved paleontologist (Project Paleontologist) to prepare and implement a project-specific Paleontological Resource Impact Mitigation Program (PRIMP) to be approved by the County.</p> <p>At a minimum, information to be contained in the PRIMP, in addition to other information required under industry standard, the County CUP and grading requirements, and Society of Vertebrate Paleontology standards, is as follows:</p> <ul style="list-style-type: none"> • Identification (name) and qualifications of the Project Paleontologist and qualified paleontological monitors to be employed for grading operations monitoring. • Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens. • Description of the project site and planned earthwork and excavation. 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • A site-specific plan and map prepared by the Project Paleontologist which identifies construction impact areas with sediments of High (PFYC 4) and Moderate (PFYC 3a) sensitivity for encountering significant paleontological resources and the approximate depths at which those resources are likely to be encountered for each Project component. • The PRIMP shall require the qualified paleontological monitor(s) to monitor all construction-related earth-moving activities in sediments determined to have a High (PFYC 4) sensitivity. At the discretion of the Project Paleontologist, monitoring may be adjusted based on field conditions. • The PRIMP shall define monitoring procedures and methodology and shall specify that sediments of Moderate (PFYC 3a) or undetermined sensitivity shall be monitored on a part-time basis (as determined by the Project Paleontologist). Sediments with very low or low potential will not require paleontological monitoring (PFYC 1 and 2). • The PRIMP shall be submitted to the County for review and approval 60 days prior to start of Project construction. The PRIMP must be approved by the County prior to the Notice To Proceed. <p>Mitigation Measure Paleo-3: Paleontological Fossil Recovery</p> <p>In the event that a paleontological resource is discovered, the paleontological monitor will have the authority to temporarily divert the</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:</p> <ul style="list-style-type: none"> • Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity shall be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) will recover them following standard field procedures for collecting paleontological as outlined in the PRIMP prepared for the Project. The Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the potentially significant fossil(s) can be removed in a safe and timely manner. • Fossil Preparation and Curation. The museum that has agreed to accept fossils that may be discovered during Project-related excavations will be identified in the PRIMP. Upon completion of Project ground-disturbing activities, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens shall be identified 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the County - approved repository (identified on the permit and in the PRIMP) and receipt(s) of collections submitted to the County no later than 60 days after all ground-disturbing activities are completed.</p> <p>Mitigation Measure Paleo-4: Paleontological Resources Monitoring Report</p> <p>The Applicant shall ensure preparation of a paleontological resource mitigation and monitoring report by the Project Paleontologist following completion of ground-disturbing activities. The contents of the report shall include, but not be limited to, a description and inventory list of recovered fossil materials (if any); a map showing the location of paleontological resources found in the field; determinations of scientific significance; proof of accession of fossil materials into the pre-approved museum or other repository; and a statement by the Project Paleontologist that Project impacts to paleontological resources have been mitigated. The report shall be certified by the professionally qualified Project Paleontologist responsible for the content of the report and submitted to the County. In addition, all appropriate fossil location information shall be submitted to the Western Information Center, San Bernardino County Museum, and Los Angeles County Museum of Natural History, at a</p>	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		minimum, for incorporation into their Regional Locality Inventories.	
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Paleo-1 through Paleo-4	Less than significant
3.15 Population and Housing			
Impact POP-1: Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than significant	No mitigation required	Less than significant
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less than significant	No mitigation required	Less than significant
Impact POP-3: Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	Less than significant	No mitigation required	Less than significant
Cumulative Impacts	Less than significant	No mitigation required	Less than significant
3.16 Public Services and Utilities			
Impact PS-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the public services.	Less than significant	No mitigation required	Less than significant
Impact UTILITIES-1: Would the project require or result in the relocation of construction of new or expanded water, wastewater treatment or storm drainage system, whereas the	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
construction or relocation would cause significant environmental effects?			
Impact UTILITIES - 2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than significant	No mitigation required	Less than significant
Impact UTILITIES - 3: Would the project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?	Less than significant	No mitigation required	Less than significant
Impact UTILITIES - 4: Would the project result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than significant	No mitigation required	Less than significant
Impact UTILITIES - 5: Would the project generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than significant	No mitigation required	Less than significant
Impact UTILITIES - 6: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?	Less than significant	No mitigation required	Less than significant
Impact UTILITIES - 7: Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?	Less than significant	No mitigation required	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
Cumulative Impacts	Less than significant	No mitigation required	Less than significant
3.17 Recreation			
Impact Recreation – 1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less than significant	No mitigation required	Less than significant
Cumulative Impacts	Less than significant	No mitigation required	Less than significant
3.18 Traffic and Transportation			
Impact TRANS-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Potentially significant	<p>Mitigation Measure Traffic-1: Construction Traffic Control Plan</p> <p>Prior to the start of construction, the Project owner shall submit a Construction Traffic Control Plan for review by Riverside County for affected roads and intersections that would be directly affected by the construction activities and/or would require permits and approvals. The Construction Traffic Control Plan shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • If multiple construction projects occur at the same time and conditions at the intersection warrant, plans for installation of a temporary signal or use of manual intersection control during the construction period at the I-10 westbound ramp at SR-177 and the I-10 eastbound ramp at SR-177 • The locations and use of flaggers, warning signs, barricades, delineators, cones, arrow boards, 	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>etc., according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Joint Utility Traffic Control Manual</p> <ul style="list-style-type: none"> • The locations of all road or traffic lane segments that would need to be temporarily closed or disrupted due to construction activities • The locations where guard poles, netting, or similar means to protect transportation facilities for any construction or conductor installation work requiring the crossing of a local street highway is proposed • The use of continuous traffic breaks operated by the California Highway Patrol on state highways (if necessary) • Additional methods to reduce temporary traffic delays to the maximum extent feasible during morning (7:00 a.m. to 9:00 a.m.) and afternoon (4:00 p.m. to 6:00 p.m.) peak traffic periods, or as directed in writing by the affected public agency in encroachment or other permits. This should also include feasible ways to reduce construction-related trips on I-10, SR-177, and Corn Springs Road during peak traffic periods. • Plans to encourage or provide ridesharing/carpooling opportunities for construction and operational workers • Plans to provide written notification to property owners and tenants at properties affected by access restrictions to inform them about the timing and duration of obstructions and to arrange 	

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>for alternative access if necessary. The coordination shall occur at least one week prior to any blockages</p> <ul style="list-style-type: none"> Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by the Project owner of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage, providing short detours, and developing alternate routes in conjunction with the public agencies Coordination with adjacent development projects to spread work shifts into multiple hours (instead of peak period) or the installation of additional temporary traffic signals or manual traffic control officers during peak periods to mitigate the temporary impacts. 	
Impact TRANS-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than significant	No mitigation required	Less than significant
Impact TRANS-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially significant	Mitigation Measure Traffic-1: Construction Traffic Control Plan	Less than significant
Impact TRANS-4: Would the project result in inadequate emergency access or access to nearby uses?	Potentially significant	Mitigation Measure Traffic-1: Construction Traffic Control Plan	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
Cumulative Impact	Cumulatively Considerable	Mitigation Measure Traffic-1	Less than significant
3.19 Tribal Cultural Resources			
<p>Impact TCR-1 Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <ul style="list-style-type: none"> i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? 		<p>Mitigation Measures Cultural-1 through Cultural-9</p> <p>Mitigation Measure Tribal Cultural Resources-1: Native American Monitor Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s).</p> <p>In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. Activities will be documented in Tribal Monitoring Notes which will be required to be</p>	
	Potentially significant		Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>submitted to the County Archaeologist prior to grading final inspection.</p> <p>The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition.</p> <p>This agreement shall not modify any condition of approval or mitigation measure.</p> <p>Mitigation Measure Tribal Cultural Resources-2: Tribal Monitor Notes</p> <p>Tribal Monitoring Notes Prior to Grading Final, a copy of Tribal Monitoring Notes shall be submitted to the Archaeologist. Upon receipt and approval of the no condition will be cleared.</p>	
Cumulative Impact	Cumulatively Considerable	Mitigation Measures Cultural-1 through Cultural-9 and Mitigation Measures Tribal Cultural Resources-1 and Tribal Cultural Resources-2	Cumulatively Considerable
3.20 Wildfire			
Impact Wildfire-1 Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Potentially significant	Mitigation Measure Traffic-1: Construction Traffic Control Plan	Less than significant
Impact Wildfire-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Potentially significant	Mitigation Measure Fire-1: Fire Safety The Fire Management and Prevention Plan prepared by the Applicant to ensure the safety of workers and the public during construction, operation and maintenance, and	Less than significant

EXECUTIVE SUMMARY

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<p>decommissioning for the Project shall include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Procedures shall be established for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions • Work restrictions shall be implemented during Red Flag Warnings and High to Extreme Fire Danger days • All internal combustion engines used at the Project site shall be equipped with spark arrestors. Spark arrestors shall be in good working order. • Once new access 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. • Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees. • Equipment parking areas and small stationary engine sites shall be cleared of all flammable materials. • Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation. 	

EXECUTIVE SUMMARY

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> Each construction site (if construction occurs simultaneously at various locations) shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires. The Project owner shall coordinate with RCFD to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site. The plan shall include information about the type of BESS technology on site, potential hazards, and procedures for disconnecting or shutting down the BESS in case of fire or to reduce the chance of fire. All construction workers, plant personnel, and maintenance workers visiting the plant and/or transmission lines to perform maintenance activities shall receive training on fire prevention procedures, the proper use of firefighting equipment, and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by RCFD. Fire prevention procedures shall be included in the Project's Worker Environmental Awareness Program. Vegetation near all solar panel arrays, ancillary equipment, and access roads shall be controlled through periodic cutting, spraying of weeds, and/or other appropriate management methods. RCFD shall be consulted during plan preparation and fire safety measures recommended by these agencies included in the plan. 	

EXECUTIVE SUMMARY

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> • The plan shall list fire prevention procedures and specific emergency response and evacuation measures that shall be required to be followed during emergency situations. • All on-site employees shall participate in annual fire prevention and response training exercises with the RCFD. • The plan shall list all applicable wildland fire management plans and policies established by state and local agencies and demonstrate how the Project will comply with these requirements. • The Project owner shall designate an emergency services coordinator from among the full-time on-site employees who shall perform routine patrols of the site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project owner shall notify RCFD of the name and contact information of the current emergency services coordinator in the event of any change. • Remote monitoring of all major electrical equipment (transformers and inverters) shall screen for unusual operating conditions. Higher than nominal temperatures, for example, can be compared with other operational factors to indicate the potential for overheating which under certain conditions could precipitate a fire. Units could then be shut down or generation curtailed remotely until corrective actions are taken. • Fires ignited on site shall be immediately reported to RCFD. 	

EXECUTIVE SUMMARY

Impact	Level of Significance Before Mitigation	Mitigation	Level of Significant After Mitigation
		<ul style="list-style-type: none"> The engineering, procurement, and construction contract(s) for the Project shall provide reference to or clearly state the requirements of this mitigation measure. The Project owner must provide the Fire Management and Prevention Plan to RCFD for review and comment before construction. 	
Impact Wildfire-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Potentially significant	Mitigation Measure Fire-1: Fire Safety	Less than significant
Impact Wildfire-4 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?	Less than significant	No mitigation required	Less than significant
Impact Wildfire-5 Expose people or structures either directly or indirectly, to a significance risk of loss, injury, or death involving wildland fires?	Potentially significant	Mitigation Measure Fire-1: Fire Safety	Less than significant
Cumulative Impact	Cumulatively Considerable	Mitigation Measure Fire-1	Less than significant

1 Introduction

1.1 Overview

In compliance with the California Environmental Quality Act (CEQA), the County of Riverside (County) is the Lead Agency responsible for preparation of this Draft Environmental Impact Report (EIR) for the proposed Savira Solar Project (Project). As the CEQA Lead Agency, the County is responsible for coordinating with the Project applicant, Savira Renewables LLC (Applicant or Proponent), the public, and responsible agencies during the CEQA process. This EIR will inform the public and decision-makers at local and State permitting agencies of potentially significant environmental impacts associated with the Project and identify means of reducing or eliminating those impacts. The information contained within this EIR will be considered by applicable decision-makers in determining whether to grant the necessary Project approvals.

The Applicant is proposing the Project to generate up to 150 megawatts (MW) and store up to 250 MW of electricity from solar *photovoltaic* (PV) panels on approximately 535 acres in Riverside County, California. The Project consists of 6 parcels on private land (~535 acres), including Assessor Parcel Numbers (APN) 811-123-001, 811-231-003, 811-231-004, 811-231-009, 811-190-004, and 811-190-005. The Applicant would site the solar facility, *battery energy storage system* (BESS), on-site substation, and an approximately 1.8-mile portion of a 230 kilovolt (kV) *generation-tie* (gen-tie) line within the County of Riverside's jurisdiction, requiring a Conditional Use Permit (CUP240027) and Development Agreement (DA2400008) for construction, operation, and decommissioning.

If approved, the Project would interconnect to the electrical grid at Southern California Edison's (SCE's) Red Bluff Substation, via the existing Arica and Victory Pass Substation. The gen-tie line would originate at the on-site substation, expected to be located on private property (APN 811-190-004) for 0.3 mile. The gen-tie would extend another 1.5 miles northwest, south of and parallel to BLM open route DC511. It would then turn south into the existing Arica/Victory Pass Substation located just south of DC511. From the Arica/Victory Pass Substation, the electrical power generated by the Project would be transmitted to the SCE Red Bluff Substation via the existing 3-mile Arica/Victory Pass 230 kV gen-tie line. A 1.5-mile portion of the new gen-tie line would traverse federal lands managed by the BLM and would require a Right-of-Way (ROW) Grant.

1.2 California Environmental Quality Act

Under CEQA, as amended (Public Resources Code section 21080(a)), an environmental review document must be prepared, reviewed, and certified by the decision-making body before action is taken on any non-exempt discretionary project proposed to be carried out or approved by a State or local public agency in the State of California. Following CEQA review, the County, as the lead agency, has the authority to act first on the Project before any of the responsible agencies take action on the Project (see Section 1.9, Anticipated Permits and Approvals). Riverside County decision makers (Board of Supervisors) will use the EIR for decision-making regarding the Project. If the Project is approved by all required permitting agencies, the County would be responsible for reviewing and approving all CEQA-related pre-construction compliance plans and ensuring that the Project modifications and operations are conducted in accordance with the mitigation measures and other permit conditions.

1.2.1 Purpose of the EIR

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the Project. The Riverside County Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. The final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the Project on lands subject to County jurisdiction.

Section 15151 of the State CEQA Guidelines provides the following standards for EIR adequacy:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure.

CEQA requires that an EIR reflect the independent judgment of a lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the Project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the Project while still attaining most of the basic objectives of the Project.

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The County will consider the Draft EIR, comments received on the Draft EIR, responses to those comments, and any changes to the Draft EIR before deciding whether to certify the Final EIR as complying with CEQA and take action on the Project. The County will consider whether to approve Conditional Use Permit (CUP240027) and Development Agreement (DA2400008) for the construction, operation, maintenance, and decommissioning of the Project on land subject to County jurisdiction.

Comments on this Draft EIR should focus on the adequacy of the document in identifying and analyzing the potential environmental effects, determination of significance, and effectiveness of mitigation measures.

1.3 Project Objectives

The Applicant seeks to build the Project to meet the following objectives:

- Establish a renewable energy power-generation facility of a sufficient size and configuration to produce up to approximately 150 MW of electricity in a cost-competitive manner.
- Establish an energy storage system of sufficient size and configuration to store up to approximately 250 MW of electricity for at least four-hour discharge in a cost-competitive manner.
- Assist California load-serving entities in meeting their obligations under California's Renewable Portfolio Standard (RPS) Program and energy generation goals under the Clean Energy and Pollution Reduction Act of 2015 (Senate Bill 350) and the 100 Percent Clean Energy Act of 2018 (Senate Bill 100) as well as greenhouse gas (GHG) emissions reduction goals of the California Global Warming Solutions Act of 2006 (AB 32), as amended by Senate Bill 32 in 2016.
- Assist California load-serving entities in meeting their obligations under CPUC's Energy Storage Framework and Design Program.
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing battery energy storage capacity.
- Minimize environmental impacts and land disturbance associated with solar energy development by siting the facility on relatively flat, contiguous lands with high solar insolation, in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access.
- Conform with the Desert Renewable Energy Conservation Plan, including Conservation Management Actions, on BLM-administered land.
- Bring living-wage jobs and property tax revenue to Riverside County.
- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.

1.4 Summary of the Project Evaluated in this EIR

The Lead Agency for the Project is the County of Riverside, under whose authority this EIR has been prepared. For purposes of this EIR, the term *Project* refers to the discretionary actions proposed as required to implement Conditional Use Permit CUP240027 and Development Agreement DA2400008 along with all the activities associated with its implementation including planning, construction, operation (including maintenance), and decommissioning. In summary, the Project, as evaluated throughout this EIR, evaluates the impacts that would occur as a result of developing the Project site. Specifically, the Applicant is requesting the following governmental approvals from the County to implement the Project (refer to Chapter 2: Description of the Project, for a complete description of the Project's construction and operational characteristics). Conditional Use Permit CUP240027 is proposed for the construction, operation, and decommissioning of the Project within the County's jurisdiction.

Section 1.8 provides a list of known discretionary and ministerial actions needed to implement the Project. This EIR covers all federal, State, and local government approvals that may be needed to construct or implement the Project, whether explicitly noted below or not.

1.5 Public Review and Noticing

CEQA requires a lead agency for a proposed project to solicit, record, and evaluate feedback from other agencies, the public, and other interested parties on the environmental effects of the project to aid decision-making. Additionally, CEQA can, in certain circumstances, require that projects be monitored after they have been permitted to ensure that mitigation measures are implemented.

Public and agency participation in the CEQA process for the Project has and will continue to occur through the steps described below.

1.5.1 Notice of Preparation

In compliance with State CEQA Guidelines section 15082, a Notice of Preparation (NOP) was issued on March 24, 2025. The notice briefly described the Project, location, environmental review process, potential environmental effects, and opportunities for public involvement. A map was included that illustrated the boundary of the *study area* defined for the Project.

The NOP was submitted electronically to the Office of Planning and Research (State Clearinghouse) for issuance to State agencies. The NOP was filed with the Riverside County Clerk on March 7, 2025. It was mailed to agencies, organizations, local governments, elected officials, Native American Tribes, all residents within 1 mile of the boundaries of the Project site, and individuals on the County's interested parties list. A newspaper ad was also published in *The Press-Enterprise*, the local newspaper of record, and the NOP was mailed to the Palo Verde Valley Library Public Library in Blythe.

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The NOP solicited input regarding the scope and content of the environmental information to be included in the Draft EIR. The public comment period for the NOP ended on April 22, 2025. A full copy of the NOP is provided in Appendix A: Scoping Summary Report. Section 1.7 includes a summary of the written and oral comments received.

1.5.2 Public Scoping Meeting

In compliance with California Code of Regulations section 15082(c), Riverside County conducted a public scoping meeting to inform the public about the Project, provide information regarding the environmental review process; and gather public input regarding the scope and content of the Draft EIR. The public scoping meeting was held on the following date and location:

March 31, 2025, at 1:30 p.m.

Riverside County Planning Department

4080 Lemon Street, 1st Floor, Board Chambers, Riverside, CA 92501.

The CEQA Scoping Summary, provided in Appendix A of this EIR, contains copies of the PowerPoint Presentation that was used at the scoping meeting. There were no attendees at the scoping meeting, either in person or virtually.

1.5.3 Native American Tribal Outreach

In compliance with Assembly Bill 52 (AB52), on December 30, 2024, the County of Riverside mailed certified letters to representatives of 16 tribes that had previously submitted a written request to the County of Riverside to receive notification of proposed projects. These tribes included the Soboba Band of Luiseno Indians, Agua Caliente Band of Cahuilla Indians, Quechan Indian Nation, Pechanga Band of Indians, Rincon Band of Luiseno Indians, Morongo Band of Indians, Cabazon Band of Mission Indians, Augustine Band of Cahuilla Indians, Ramona Band of Cahuilla Indians, Cahuilla Band of Indians, Pala Band of Mission Indians, Colorado River Tribes, Santa Rosa Band of Cahuilla Indians, Torres Martinez Desert Cahuilla Indians, Twenty-Nine Palms Band of Mission Indians and the San Manuel Band. The letters included a brief description of the Project, information on how to contact the lead agency, and a map showing the Project components. The letters noted that requests for consultation needed to be received within 30 days of the date of receipt of the notification letter; three responses were received, which came from the Soboba Band of Luiseno Indians, Agua Caliente Band of Cahuilla Indians and the Quechan Historic Preservation Officer. Additional details on the AB 52 consultation process are included in Section 3.6 (Cultural Resources) and Section 3.19 (Tribal Cultural Resources) and EIR Appendix D.

1.5.4 Review of Draft EIR

A Notice of Completion (NOC) has been filed with the State Clearinghouse to begin the public review period (Public Resources Code [PRC], Section 21161) for this Draft EIR. Pursuant to PRC section 21092.3 and State CEQA Guidelines Section 15087(c), a notice of availability of this Draft EIR was posted in the Riverside County Clerk's office.

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This Draft EIR has been distributed directly to agencies, organizations, and interested individuals and made publicly available for review and comment in accordance with section 15087 of the CEQA Guidelines and PRC 21092(b)(3). In compliance with CEQA Guidelines section 15129, a list of federal, State, and local agencies and other organizations contacted in preparation of this Draft EIR is provided in Section 6.

The Draft EIR and technical appendices are available for public review online at <https://planning.rctlma.org/environmental-notices-ceqa>, or via <https://planning.rctlma.org/> (under the “Projects, Programs, and CEQA” tab, by selecting “Environmental Notices (CEQA)”), or in person at the following Riverside County Planning Department location:

Riverside Office: 4080 Lemon Street, 12th Floor, Riverside, CA 92501

To request a hardcopy, please reach out to Elizabeth Mora-Rodriguez, whose contact information is below.

Organizations and interested members of the public are invited to comment on the information presented in this Draft EIR during the 45-day public review period.

Written comments may be mailed, emailed or faxed using the following contact information:

Elizabeth Mora-Rodriguez, Project Planner
TLMA Planning Department
4080 Lemon Street, 12th Floor, Riverside, CA 92501.
Phone: (951) 955-3024
Email: emorarodriguez@rivco.org

All significant environmental issues raised in comments received during the public review period for the Draft EIR will be responded to in the Final EIR.

1.5.5 Preparation and Certification of Final EIR and MMRP

Following consideration of the comments received during this Draft EIR comment period, the Final EIR will be prepared and circulated per CEQA requirements and will include responses to all comments that raise significant environmental issues. Consideration of the Final EIR and requested Project approvals by the County Board of Supervisors is anticipated in late 2025.

The Final EIR will include comments received on the Draft EIR and responses to those comments, along with any modifications to the Draft EIR. In addition, CEQA Guidelines section 15097 requires that public agencies adopt a program for monitoring mitigation measures that reduce or eliminate significant impacts on the environment. Accordingly, a Mitigation Monitoring and Reporting Program (MMRP) will be prepared for the Project and included as part of the Final EIR.

The County Board of Supervisors will consider all comments on the Draft EIR before deciding whether to certify the Final EIR and make a decision whether or not to approve the Project.

1.6 Scoping Comments

1.6.1 Scoping Comments Summary

This section summarizes the verbal and written comments received from the public and agencies during the scoping period for the Project. A total of 5 scoping comments were received during the scoping period. The Scoping Summary includes all scoping comments received during the scoping period (refer to Appendix A).

Scoping concerns are summarized below.

Native American Heritage Commission

- Requests the Project complies with SB 18 and AB 52

South Coast Air Quality Management District

- Recommends using South Coast Air Quality Management District's (SCAQMD's) CEQA Air Quality Handbook and website as guidance when preparing the air quality and greenhouse gas analyses.
- Recommends using the California Emissions Estimator Model (CalEEMod) land use emissions software to estimate pollutant emissions.
- Requests identifying any potential adverse air quality impacts that could occur from all phases of the Project and all air pollutant sources related to the Project.
- Provides several resources to assist with identifying potential air quality mitigation measures.

California Department of Fish and Wildlife

- Recommends that the Draft EIR include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.
- Recommends species-specific surveys for sensitive species that the Project footprint has the potential to support, including but not limited to Western Burrowing Owl (*Athene cunicularia hypugaea*), Mojave Desert Tortoise (*Gopherus agassizii*), American Badger (*Taxidea taxus*), Desert kit fox (*Vulpes macrotis arsipus*) and Bats
- Recommends the development of a Bird and Bat Conservation Strategy (BBCS)
- Requests providing a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project (including the plan's land use designations, policies and programs).
- Recommends the Draft EIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]).
- Request the EIR identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible.

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- Recommends that a California Endangered Species Act (CESA) incidental take permit (ITP) be obtained if the Project has the potential to result in take of a state-listed species, such as desert tortoise which have the potential to occur on site, either through construction or over the life of the project.
- Recommends, to facilitate the issuance of a Lake and Streambed Alteration Agreement, if needed, that the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring reporting commitments.
- Recommends that the DEIR include an analysis of impacts to wildlife from Project-related construction noise, and appropriate avoidance, minimization, and mitigation measures that will reduce impacts to less than significant.
- Recommends that the DEIR include lighting design specifications for all artificial nighttime lighting that will be used by the Project, an analysis of the direct and indirect impacts of artificial nighttime lighting on biological resources, and appropriate avoidance, minimization, and mitigation measures that will reduce impacts to less than significant.
- Commented that the Project should report any special status species and natural communities detected during Project surveys to the CNDDB.
- The Project would have an impact on fish and/or wildlife, and therefore filing fees are necessary. They state that the fees are payable upon filing of the Notice of Determination (NOD) by the lead agency.

Riverside County Department of Waste Resources

- Requests that the EIR consider quantitatively analyzing potential solid waste impact and discuss feasible mitigation programs/regulatory compliance
- Provides information on surrounding landfills that could be used.
- Recommends measures to help reduce the Project's anticipated solid waste impacts and enhance efforts to comply with the State's mandate (AB 75) of 50% solid waste diversion from landfilling.

Defenders of Wildlife

- Requests that the EIR consider the potential for sensitive species and habitats, adherence to agency-approved species-specific protocols, and identification of appropriate avoidance, minimization and mitigation measures.
- Requests consultations with wildlife agencies early in the planning process
- Requests analyzing the impacts with the permanent conversion of land use, as well as cumulative impacts.

Applicable scoping comments for each resource are discussed and addressed under the Project impact analysis for each issue area section in Chapter 3, Environmental Analysis.

1.7 EIR Format and Content

This EIR was prepared in accordance with State and County administrative guidelines established to comply with CEQA. State CEQA Guidelines section 15151 provides the following standards for EIR adequacy:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a Proposed Project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure.

This EIR is divided into the following major sections.

- **Executive Summary.** Provides an overview of the Project and a summary of the significant impacts identified in the analysis and associated mitigation measures. A summary of the alternatives and environmentally superior alternative is also provided.
- **Section 1: Introduction.** Provides an overview of the Project evaluated in the EIR and a summary of the objectives for the Project. This section also discusses the scoping process, the EIR process, and agency use of the document and provides a summary of the contents of the EIR.
- **Section 2: Description of the Project and Alternatives.** This section details the location and characteristics of the Project along with a description of the surrounding land uses. It includes construction and operational aspects of the Project and relevant background information. It provides descriptions of the alternatives that were evaluated in the document. The section also presents an alternatives screening analysis that was used to identify alternatives that could reduce significant impacts associated with the Project. The alternatives selected through the screening analysis are evaluated in detail throughout the document.
- **Section 3: Environmental Setting, Impacts, and Mitigation Measures.** This section contains a detailed environmental analysis of the existing conditions, potential impacts of the Project, mitigation measures, and cumulative impacts.
- **Section 4: Other CEQA Considerations.** This section presents an analysis of the Project's growth-inducing impacts and other CEQA requirements, irreversible commitment of resources, significant and unavoidable impacts, and energy conservation. This section also discusses issues raised by agencies and the public during scoping that are not discussed in Section 3 because the issues raised are outside of the scope of CEQA.

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- **Section 5: Alternatives.** This section analyzes the alternatives and provides a comparative analysis (matrix) to distinguish the relative effects of each alternative and its relationship to Project objectives and impacts. The alternatives analysis also identifies the “environmentally superior alternative,” as required by CEQA Guidelines sections 15126.6(d) and (e)(2).
- **Section 6: List of Preparers.** This section provides a list of individuals that prepared or contributed to this Draft EIR.
- **Section 7: References.** This section lists reference materials used to prepare the Draft EIR.
- **Appendices.** The CEQA Scoping Summary, technical reports and studies, and other relevant information are included as appendices to support the environmental analyses.

1.7.1 Terminology Used in this Document

CEQA documents include the use of specific terminology. To aid the reader in understanding terminology and language used throughout this document, the following CEQA terms are defined below and discussed in greater detail in Section 3.1 (Introduction to Environmental Analysis):

- **Project/Proposed Project:** The whole of an action that has the potential to result in a direct or indirect physical change in the environment.
- **Environment:** The baseline physical conditions that exist in the area before commencement of a Project and that the project would potentially affect or alter. The environment is where significant direct or indirect impacts could occur as a result of project implementation, and it includes such elements as air, biological resources (i.e., flora and fauna), land, ambient noise, mineral resources, water, and objects of aesthetic or cultural significance.
- **Direct impacts:** Impacts that would result in a direct physical change in the environment as a result of project implementation. Direct impacts would occur at the same time and place as a project.
- **Indirect or secondary impacts:** Impacts that would result from implementation of a Project but that may occur later in time or farther removed in distance.
- **Significant impact on the environment:** A substantial, or potentially substantial, adverse change in physical conditions that is the result of implementation of a Project implementation. This can include substantial or potentially substantial adverse changes to air, biological resources (flora or fauna), land, water, minerals, ambient noise, and objects of cultural or aesthetic significance. An economic or social change may factor into an assessment of whether a physical impact is significant, but it not itself a significant impact on the environment.
- **Mitigation measures:** Project-specific actions that, if adopted, avoid or substantially reduce a Project’s significant environmental effects. Effective mitigation measures can:
 - avoid the impact altogether;

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- minimize the impact by reducing the degree or magnitude of the action and its implications;
 - rectify the impact by repairing, rehabilitating, or restoring the affected environment;
 - reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; or
 - compensate for the impact by replacing or providing substitute resources or environments.
- **Best management practices (BMPs):** Measures that avoid, minimize, or reduce impacts, which are distinguished from mitigation measures because BMPs are: (1) requirements of existing policies, practices, and measures required by law, regulation, or local policy; (2) ongoing, regularly occurring practices; and (3) not specific to any Proposed Project. Any BMPs discussed in the EIR are inherently part of a Project and are not additional mitigation measures proposed as a result of the significance findings from the CEQA environmental review process.
 - **Cumulative impacts:** Two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts (State CEQA Guidelines section 15355). The following statements also apply when considering cumulative impacts:
 - The individual impacts may be changes resulting from a single project or a number of separate projects.
 - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the Project when added to other closely related past, present, and reasonably foreseeable probable future projects.
 - Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

Section 15130 of the State CEQA Guidelines provides further direction on the definition of cumulative impacts:

(a)(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts [emphasis added].

(b)...The discussion of cumulative impacts shall...focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact [emphasis added].

For example, if another project contributes only to a cumulative impact upon natural resources, its impacts on public services need not be discussed as part of cumulative impact analysis. Taken together, these elements define what counts for the practitioner and help to focus the evaluation upon other actions that are closely related in terms of impact on the resource—not closely related project types.

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Terms used in this document to describe the level of significance of adverse impacts are defined as follows:

- **No Impact:** An impact to a specific environmental resource would not occur.
- **Less than significant:** An impact that is adverse but that falls below the defined thresholds of significance and does not require mitigation.
- **Less than significant with mitigation incorporated:** An impact that exceeds the defined thresholds of significance but is reduced to a less than significant level through the incorporation of mitigation measures.
- **Significant:** An impact that exceeds the defined thresholds of significance. A significant impact would or could potentially cause a substantial adverse change in the environment and would require incorporation of feasible mitigation measures to eliminate the impact or reduce it to a less-than-significant level.
- **Significant and unavoidable:** An impact that cannot be eliminated or lessened to a less-than-significant level through incorporation of mitigation measures.

1.8 Anticipated Permits and Approvals

The majority of the Project site would be located on private lands under County jurisdiction, which would require discretionary approvals from the County. The Applicant is seeking a minimum 40-year Conditional Use Permit (CUP240027) and Development Agreement (DA2400008) for the construction, operation, and decommissioning of the solar facility.

Ancillary permits, including grading and construction permits as well as certificates of occupancy are anticipated from the County. These permits and approvals are local ministerial actions that are exempt from CEQA.

A portion of the new gen-tie line and access road would be located on federal lands managed by the BLM and will require a ROW Grant. The BLM would comply with the National Environmental Policy Act (NEPA) to evaluate environmental impacts of the Project to support the ROW Grant.

Other state and local agencies or regulatory entities that could exercise discretionary authority over specific elements of the Project are described in Table 1-1. Table 1-1 provides a list of permits and other approvals that will (or may) be needed for the Project. The County, as the CEQA lead agency, will act first on the Project before any of the responsible agencies.

County decision makers (Board of Supervisors) may certify the EIR as being in compliance with CEQA and would make any findings or statement of overriding considerations required by law prior to the County or any other agency relying on the EIR for permit/land use approvals. If the Project is approved, the County will be responsible for reviewing and approving all pre-construction compliance plans and ensuring that the Project modifications and operations are conducted in accordance with the Project mitigation measures and other permit conditions.

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Table 1-1 Permits and Approvals for the Project

Agency	Permit	Applicability
Federal		
Bureau of Land Management	Grant of right-of-way	For collection line segment, gen-tie line, access roads, and associated facilities construction and operation on BLM-administered land (NEPA compliance required; the BLM does not act as a responsible agency and would not rely upon the County's certified EIR).
State/regional		
South Coast Air Quality Management District	Indirect Source Review	An Indirect Source Review (District Rule 9510) will be filed with the SCAQMD to determine potential mitigation, if any, for emissions of oxides of nitrogen (NO _x) and particulate matter less than or equal to 10 microns in diameter (PM ₁₀)
	Authority to Construct and Permit to Operate	Facility backup generator permits for Project operations, if required
California Department of Fish and Wildlife	Lake and Streambed Alteration Agreement	For compliance with Fish and Game Code section 1602 for all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state
	Incidental Take Permit	For compliance with section 2081 of the California Endangered Species Act if avoidance of listed species is not possible
Colorado River Basin Regional Water Quality Control Board (RWQCB)	Waste Discharge Requirements Order	Regulates the discharge of dredged or fill material under the Porter-Cologne Water Quality Control Act
County		
Riverside County	Conditional Use Permit	Construction of the solar facility on private land under County jurisdiction

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Agency	Permit	Applicability
	Development Agreement	<p>Riverside County authorizes construction activities under the master Construction Permit. This permit encompasses grading, building, electrical, mechanical, landscaping and other activities.</p> <p>The County's review for ordinance standards is undertaken as part of this review.</p>
	Variance Request	<p>If determined through the detailed design process that structures would exceed 105 feet</p>
Riverside County Department of Waste Resources	Waste Recycling Plan	<p>To address solid waste impacts and help the County comply with AB 939 (Integrated Waste Management Act) and the California Green Building Standards, through diverting solid waste from landfill disposal</p>
Riverside County Department of Environmental Health	Septic System Review and Permitting	<p>Ensures that the proposed use of the system is consistent with federal, state, and local requirements for septic system design</p>

1 INTRODUCTION

1.8.1 Related Federal Review and Consultation Requirement

The Project would include linear facility routes on adjacent land administered by the BLM and associated with the Savira Solar Project. The activities proposed on federal land comprise the following:

- a new approximate 1.5-mile-long generation-tie (gen-tie) line right-of-way (ROW);
- use of the existing 3-mile-long Arica/Victory Pass gen-tie line and ROW from the existing Arica/Victory Pass Substation to the existing Southern California Edison (SCE) Red Bluff Substation;
- use of approximately 4 miles of existing access roads; and
- a new approximately 0.3-mile-long medium voltage line and associated access road.

The new 230-kV gen-tie line would originate at the Savira Solar Project solar substation, expected to be located on private property (APN 811-190-004), and would connect with the existing Arica/Victory Pass substation. As noted, 1.5 miles of the gen-tie would be on BLM-administered land and 0.3 miles of the gen-tie would be on private land. The gen-tie line would travel south of and parallel to BLM open route DC511. Construction access would be provided by route DC511 with connecting spur roads to the gen-tie towers. From the Arica/Victory Pass substation, power would travel by an existing gen-tie line from the Arica/Victory Pass substation to the SCE 230 kV Red Bluff substation, located on lands administered by the BLM. The access roads would use existing (i.e., already disturbed) BLM roads. The medium voltage line would connect to two disparate solar array sites proposed on private lands and would connect with the solar facility substation on private land.

The Project is on land allocated as a Development Focus Area (DFA) for solar, wind, and geothermal projects by the Desert Renewable Energy Conservation Plan (DRECP). The DRECP Final Environmental Impact Statement (EIS) was approved by a Record of Decision (ROD) signed on September 14, 2016 (BLM 2016a).

1.9 Primary Contact Person

The primary contact person for this EIR is Elizabeth Mora-Rodriguez and her contact information is listed below:

Elizabeth Mora-Rodriguez, Project Planner
County of Riverside TLMA Planning Department
4080 Lemon Street, 12th Floor, Riverside CA, 92501
Phone: (951) 955-3024
Email: emorarodriguez@rivco.org

2 Description of the Proposed Project and Alternatives

2.1 Introduction

Savira Renewables, LLC (Applicant), a wholly-owned, indirect subsidiary of Clearway Energy Group LLC, proposes to construct the Savira Solar Project (Project), a utility-scale solar photovoltaic (PV) power-generation and energy storage facility, along with associated transmission infrastructure, to generate and deliver electrical power generated from a renewable energy source to the statewide electricity transmission grid.

The Project site is located on approximately 535 acres in eastern Riverside County, 8.5 miles east of the town of Desert Center, California. The Project would generate up to approximately 150 megawatts (MW) of renewable energy via arrays of solar PV panels and store up to approximately 250 MWs of energy via a *battery energy storage system* (BESS). Additional facilities would include an operations and maintenance (O&M) building, a 230-kilovolt (kV) Project substation, an approximately 1.8-mile-long generation-interconnection (gen-tie) line, and access driveways. From the Project substation, the electrical power generated would be transmitted via a new high voltage 230 kV gen-tie line to the existing Arica/Victory Pass substation, then carried on an existing gen-tie line from the Arica/Victory Pass substation to the Southern California Edison (SCE) 230 kV Red Bluff substation, which would require some substation upgrades. The Project would include linear facility routes. The following linear facilities would be located on adjacent land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office within land allocated as a Development Focus Area (DFA) for solar, wind, and geothermal projects by the Desert Renewable Energy Conservation Plan (DRECP; Figure 2-1 Project Location):¹

- A new approximately 1.5-mile-long high voltage (230 kV) gen-tie line²
- Use of the existing 3-mile-long Arica/Victory Pass gen-tie line from the existing Arica/Victory Pass Substation to the existing SCE Red Bluff Substation
- A new approximately 0.3-mile-long medium voltage (34.5 kV) collection line segment and associated access road³
- Use of approximately 4 miles of existing access roads

¹ The DRECP Final Environmental Impact Statement (EIS) was approved by a Record of Decision (ROD) signed on September 14, 2016 (as shown in Figure 2-2 DRECP Development Focus Areas) (BLM 2016).

² The Project gen-tie line would be a total of 1.8 miles long, 1.5 miles of the line being located on the adjacent BLM Land, of which 0.3 mile will be located on private land.

³ The complete medium-voltage collection line network would be largely located within the solar arrays on BLM, with only approximately 0.3 miles located on private land.

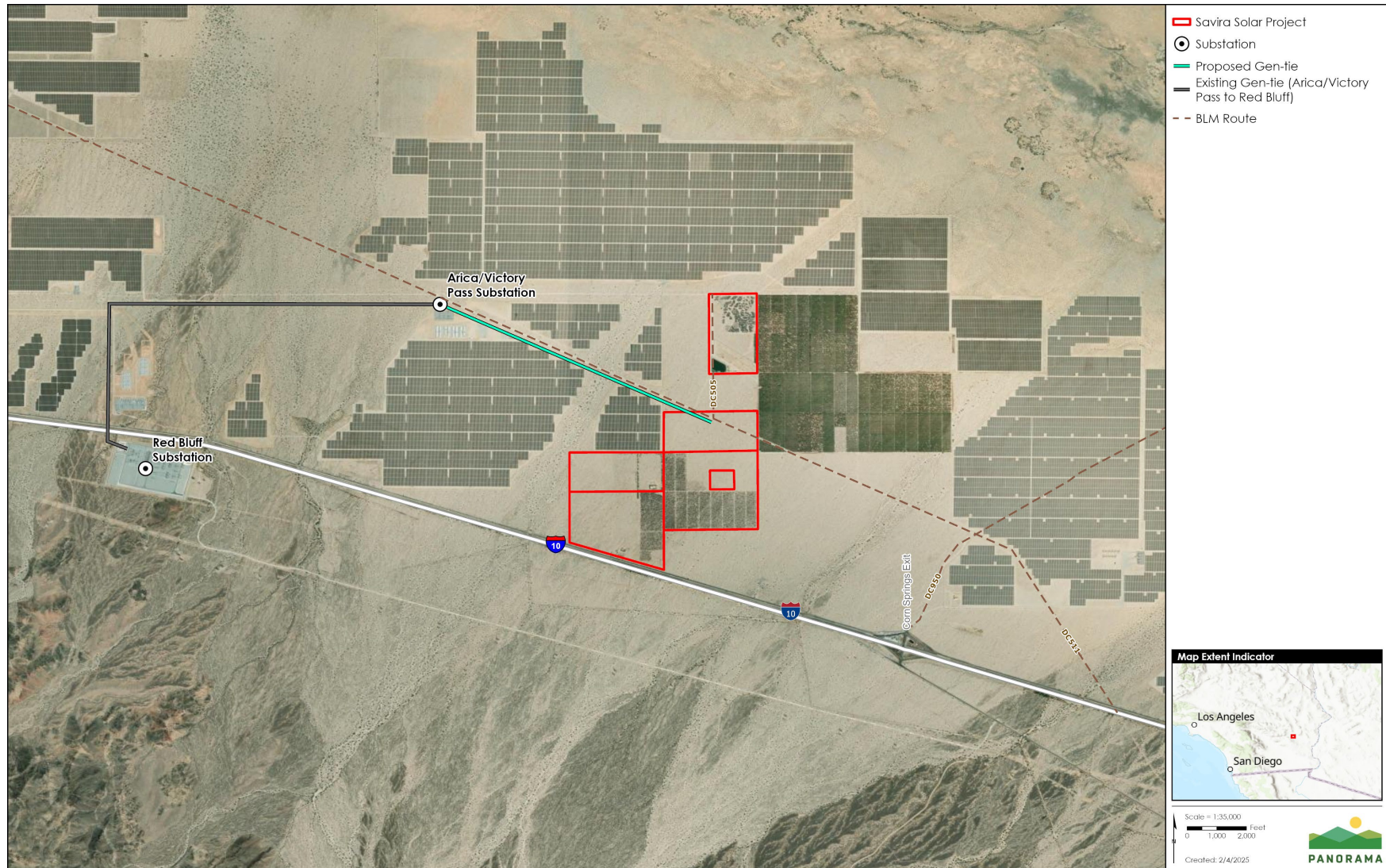
2-DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES

The Project's gen-tie would consist of approximately 1.8 miles of newly constructed line along with approximately 3 miles of existing line, with 1.5 miles of the line being located on the adjacent BLM land, of which 0.3 mile would be located on private land. The Project's collection line network would include an approximately 0.3-mile-long segment on BLM land to connect the Project's non-contiguous private parcels. The access road would use approximately 4.0 miles of existing (i.e., already disturbed) BLM roads.

The *commercial operation date* (COD) for the Project is anticipated to be in 2028. The Project would operate for a minimum of 40 years. At the end of its useful life, the Project would be decommissioned and the land returned to its pre-Project conditions. A decommissioning bond would ensure that the Project would be properly decommissioned.

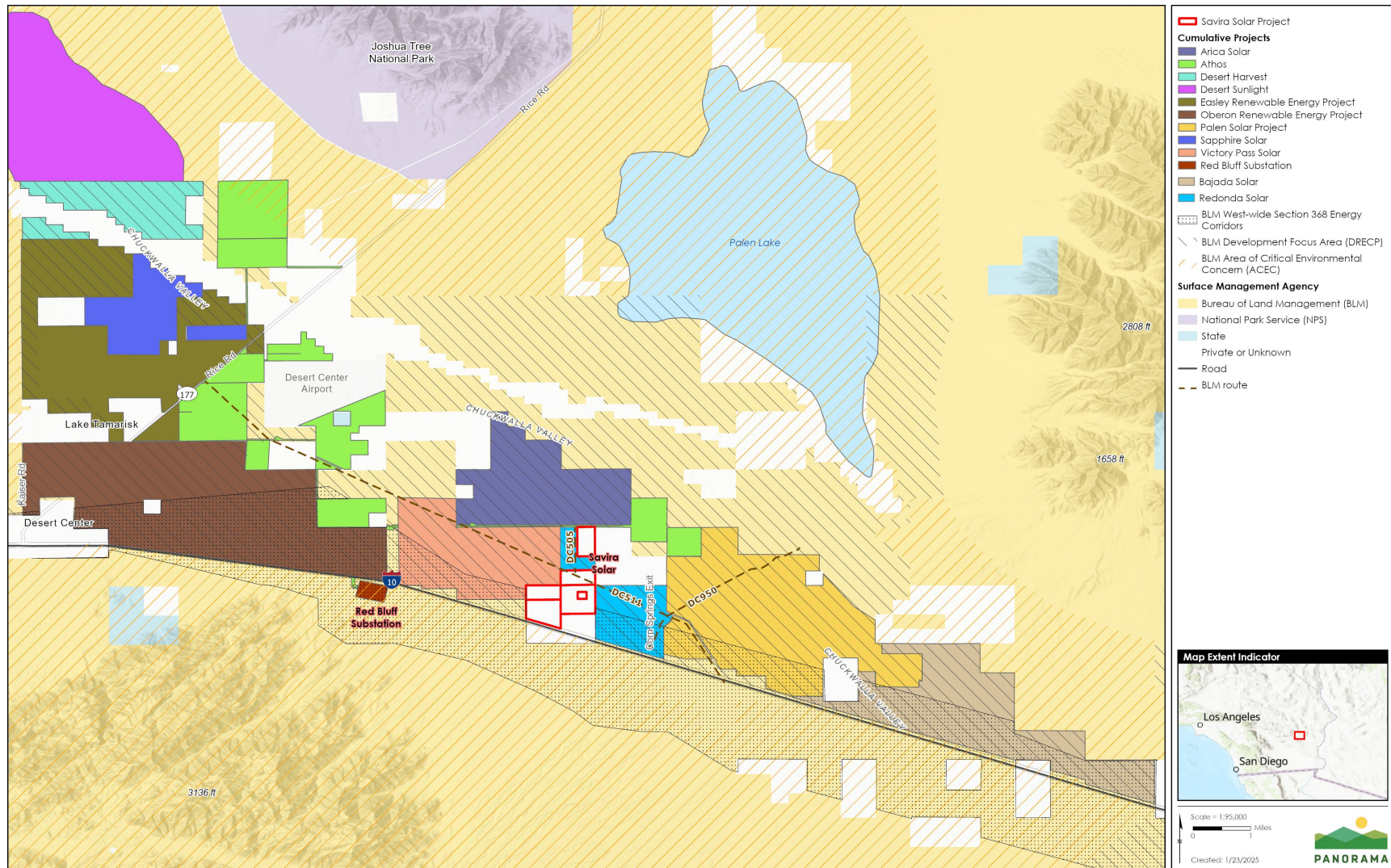
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Figure 2-1 Project Location



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Figure 2-2 DRECP Development Focus Areas



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The Applicant is seeking a CUP for a term of not less than 40 years (CUP240027) for the construction, operation, and decommissioning of the solar and battery facility and gen-tie line. Ancillary permits, including grading and construction permits, and certificates of occupancy are anticipated to be required from the County. These permits and approvals are local ministerial actions that would be issued following California Environmental Quality Act (CEQA) compliance and Project approval by the County.

On June 6, 2025, Savira submitted a Standard Form 299 application for a ROW grant from BLM to construct, operate, maintain, and decommission the gen-tie, access road routes, and medium voltage line. The BLM will perform a separate review of these facilities under the National Environmental Policy Act (NEPA).

2.2 Project Location and Surrounding Land Uses

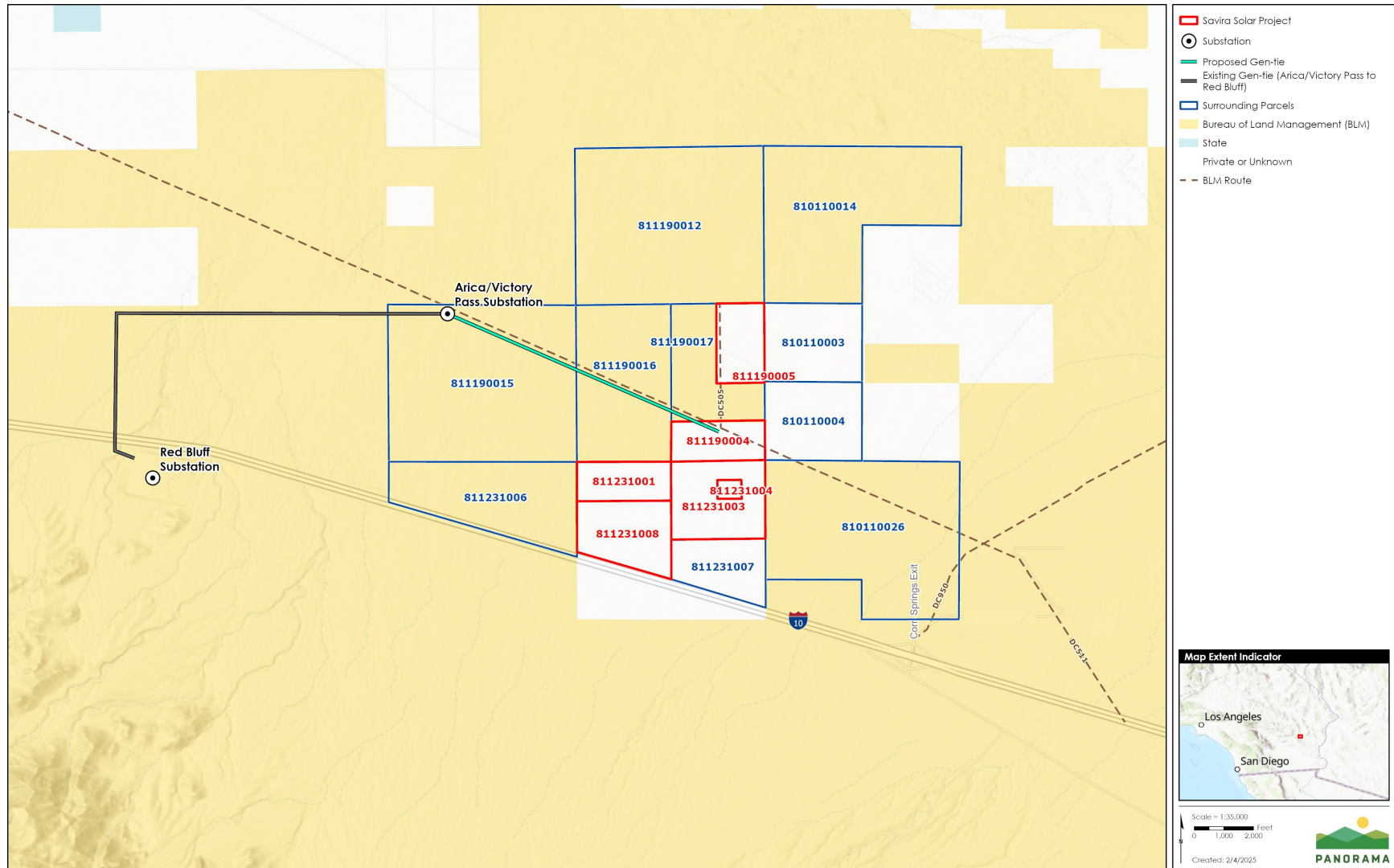
The Project site is located in Riverside County, north of Interstate 10 (I-10) and approximately 8.5 miles east of the town of Desert Center, California (as shown in Figure 2-1 Project Location). The Project site consists of six parcels on private land, totaling approximately 535 acres, the Assessor's Parcel Numbers (APNs) of which are shown outlined in red on Figure 2-3 Project Vicinity.

Regional access to the Project site is provided from the Corn Springs exit off I-10. This exit leads to BLM open route DC 950 and then to open route DC 511. To reach the northern portion of the site, usage of BLM open route DC 505 is proposed. Project-related roads for direct access to the site would include a perimeter road and interior solar field access ways.

The land uses surrounding the Project site includes the existing Victory Pass Solar Project to the west, existing Arica Solar Project, and Palm nursery to the north, and undeveloped BLM land to the east that has been proposed for solar development. The I-10 corridor is immediately south of the Project, with existing transmission lines and undeveloped BLM land south of I-10. The Project site is also near to the existing Palen Solar Project and the existing Athos Solar Project. Surrounding nearby solar projects are shown in Figure 2-2 DRECP Development Focus Areas.

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Figure 2-3 Project Vicinity



2.3 Project Components

The Project would consist of three major components: a PV solar power and BESS (solar site), located on private lands; gen-tie line, access roads, and a collection line segment, located on BLM-administered lands; and SCE activities consisting of facility upgrades within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project substation.

2.3.1 Solar Site (Private Lands)

The Project consists of the following major components on approximately 535 acres of private lands, as described in greater detail in this section and illustrated in Figure 2-4 Project Layout.

- Solar array blocks
- Power Conditioning System: Direct Current (DC) Collection System to Alternating Current (AC) Transformers
- Medium voltage (34.5kV) interior collection power lines
- Substation and associated equipment
- 250 MW battery energy storage system (BESS)
- Operation and maintenance (O&M) building
- Lighting and facility power
- Supervisory control and data acquisition system (SCADA) and Communications
- Meteorological Stations
- Interior access roads
- Fencing
- Wastewater facilities
- Detention basins

Solar Array Blocks

The Project would include solar array blocks comprising PV modules, inverters, and transformers. The Project would use commercially available high-efficiency PV modules that are Underwriters Laboratory (UL)-listed or approved by another nationally recognized testing laboratory. Commercial PV modules are typically 77 inches long by 39 inches wide but could be as long as 96 inches. Materials commonly used for solar PV modules include monocrystalline silicon, polycrystalline silicon, amorphous silicon, and copper indium selenide/sulfide. PV modules are not considered hazardous waste, but some may contain cadmium, arsenic, copper, and selenium, which are considered toxic materials. The PV modules would likely be composed of bifacial panels, which can passively absorb light, including energy reflected from the ground surface, from either side of the module. While traditional panels generally use polycrystalline materials, bifacial panels use monocrystalline cells. Both types can have antireflective coating added to reduce glare.

The PV modules would be mounted on single-axis horizontal tracker mounting systems. The vertical support legs for the tracker mounting system would consist of driven posts (wide flange

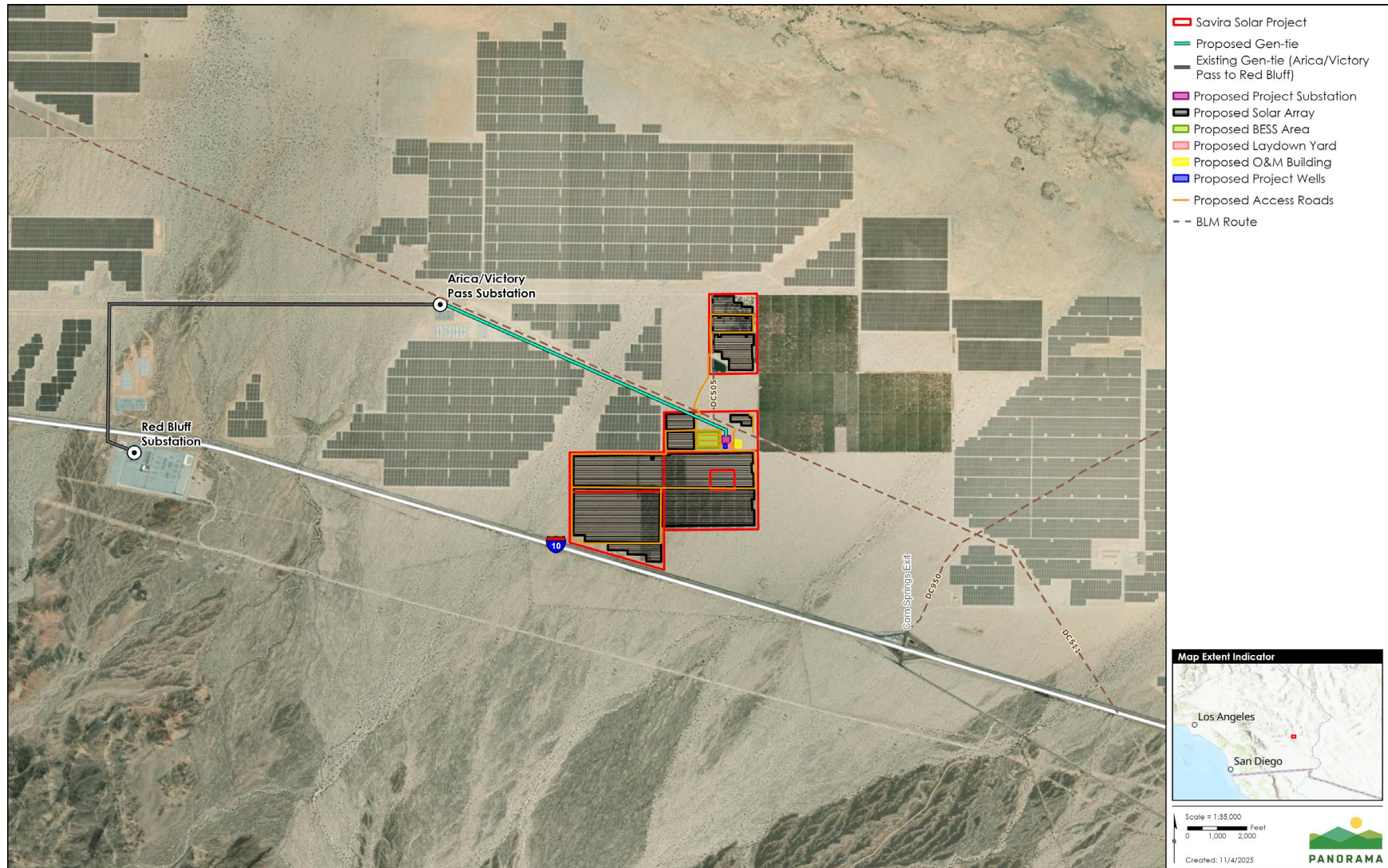
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I-beam) approximately 6 to 8 inches across and 6 to 12 feet deep. Posts in some areas of the solar array may need to be deeper depending on hydrologic conditions or other soils constraints.

With a horizontal tracker mounting system, the PV modules are arranged in arrays of north-south oriented rows, and drive motors rotate the horizontally mounted PV modules on a single axis from east to west to follow the sun throughout the day. The rows are typically spaced approximately 12 feet (4 meters) to 20 feet (6 meters) apart. In this type of system, a given row ranges from approximately 140 feet (43 meters) to 4000 feet (122 meters) long, and each is powered by a low-voltage solar-powered drive motor. The motor and accompanying actuator are mounted to one of the driven posts on which the PV modules are mounted and do not require a separate foundation. The maximum top edge height of panels when in the most vertical position is approximately 12 to 15 feet off the ground. The minimum bottom edge height of panels when in the most vertical position is approximately 1 to 3 feet off the ground.

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Figure 2-4 Project Layout



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Power Conditioning System: DC Collection System to AC Transformers

The PV modules would convert solar energy (i.e., sunlight) into DC electricity, and one or more combiner boxes would be installed in each array block to collect the DC electricity from PV modules. A *power conditioning system* (PCS), which is made up of inverters and medium voltage transformers as well as other electrical equipment, would convert the DC electricity generated by the PV modules and collected at the combiner box into AC electricity. Each PCS would serve approximately four array blocks. Each inverter may also be coupled with a battery (described in more detail below) with the capacity to store energy produced. From the inverter or battery, power is then passed through transformers to convert the low-voltage output from the inverters to medium voltage (34.5 kV AC) that is suitable for exporting onto the electricity distribution network. Each PCS also would contain communication equipment to communicate with the tracker units to control operation and detect anomalous conditions. All electrical equipment would be housed in protective enclosures, typically 10 feet wide by 20 feet long, on concrete or pier-mounted equipment pads.

Medium Voltage (34.5 kV) Interior Collection Power Lines

A medium voltage (34.5 kV) collection system would convey electricity from the PCSs to the on-site substation. *Photovoltaic cells* (PVCs) located along each 34.5 kV collector line circuit and would aggregate AC power from PCSs for transmission to the Project substation. The cables from the medium voltage transformers to the PVCs would be installed either underground or overhead. If underground, they would be installed using 35 kV-rated medium voltage cables listed for direct-buried applications. Underground 34.5 kV cables would be installed to comply with the minimum burial depth in accordance with the National Electrical Code, either directly in the ground (minimum 36-inch depth) or within a prefabricated duct bank system (minimum 24-inch depth). Overhead 34.5 kV collector lines would be installed as double-circuit lines on wood or steel poles with cross-arms and post insulators (typical of medium voltage installations in electric distribution systems). Collector line poles are typically 30 to up to 75 feet tall. The collector system cables would be installed in a linear arrangement generally following the array blocks. One approximately 0.3-mile segment of the collection line system would require crossing BLM land to connect the two non-contiguous private parcels APN 811-190-015 and 811-190-016.

Substation and Associated Equipment

One substation would be developed within the Project site within an approximately 2-acre graded area (90,000 square feet). At the substation, the medium voltage (34.5 kV AC) collection system would be stepped up to a high voltage (230 kV) gen-tie line. The substation would be constructed based on applicable electrical safety codes. The substation would be separately fenced and grounded to provide increased security and protection around the medium- and high-voltage electrical equipment. The substation area would include a transformer containment area, a microwave tower, a control house, and several transformers. Containment measures for all substation equipment would be provided in accordance with Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) part 112 and all applicable codes required by the local, state, and federal governing authorities.

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The transformer containment area would be lined with an impermeable membrane covered with gravel and would include a drain with a valve that would remain closed under normal conditions. Transformers would be provided with secondary oil containment equal to 110 percent of the volume of oil present in the transformer in addition to the volume of rainwater for a 25-year, 24-hour rainfall event. All other equipment in the substation would be placed on foundations of concrete or equivalent engineered substrate per engineering specifications. The remaining area within the substation fence would be covered in aggregate, road base, or other appropriate materials to minimize dust and disturbance.

250 MW Battery Energy Storage System

The Project would include up to 250 MW BESS. The BESS is expected to either be located adjacent to the substation (i.e., centrally located), known as AC-coupled BESS, or distributed throughout the solar array blocks at the PCS equipment pads or tracker rows, known as DC-coupled BESS. If centrally located, the BESS would be located on up to approximately 15 acres. If distributed throughout the arrays, multiple battery containers would be located at each solar array inverter requiring up to approximately 0.6 acres per block. All batteries would be fully enclosed in the manufacturer's battery container. A BESS within a building is not proposed. Subject to final design, the containers would be approximately 8 feet wide by 28 feet long by 10 feet high, with approximately 6.5 feet of clearance on all sides. The BESS area would require a slight slope to facilitate sheet flow, and the battery containers would be surrounded by gravel. The foundations for the battery containers are expected to be driven-steel I-beam piles. If BESS is not developed as part of the Project, the land may instead be used for additional solar arrays or laydown.

Operations and Maintenance Building

The Project may include an O&M area, occupying up to 5 acres, consisting of a permanent O&M building that would house administrative, operation and maintenance equipment and personnel, and would include an adjacent gravel or compacted dirt parking area. Alternatively, the Project may rely on the existing Arica Solar and Victory Pass Solar shared O&M facility. If a shared O&M facility is used instead of a new on-site facility, the land may instead be used for additional solar arrays or laydown.

If constructed on-site, additional components of the O&M area could include a laydown and storage area, a warehouse, trash containers, water storage tanks (for potable water and potentially for fire protection), and a septic field. The O&M area would be equipped with exterior lighting. Lighting would be shielded and downward facing to avoid light spillage beyond the Project site. The O&M building would also include communication equipment and a storage and equipment area. It would contain offices, toilets, and other features necessary for usage on a daily basis. The design and construction of this building would be consistent with applicable County building standards.

Lighting and Facility Power

Permanent lighting would be provided within the substation(s), around the O&M building, around the BESS, and at the entry gates. Substation yard lighting and lighting within the O&M building and BESS would be controlled by a switch and/or timer and would be off unless needed.

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Exterior lights at the substation yard, O&M building, and BESS would be low lighting controlled by a switch or sensor to allow O&M personnel to reach the infrastructure safely at night, if needed. Both the low lighting and yard or interior lighting for facilities and associated infrastructure would be shielded to keep light downward and within the boundaries of the Project site and at the minimum intensity necessary for the intended use. Night lighting would be controlled or reduced using directed lighting, sensors, shielding, and/or reduced lumen intensity.

The O&M building, monitoring systems, and lighting are proposed to be powered by bringing in a permanent SCE distribution line. Alternatively, solar power, with a minimum 12-hour battery storage unit and a 250 to 300 kVA diesel or liquid natural gas generator could be used as backup. For a new permanent distribution line, new poles may need to be constructed, to be determined by SCE and the available distribution grid.

Supervisory Control and Data Acquisition System (SCADA) and Communications

The Project would utilize a supervisory control and data acquisition (SCADA) system to manage operations. The SCADA system uses propriety software, a fiber optic transmission system, a telephone, radio and/or microwave communications network, and/or other means of communication such as radio-links or phase loop communication systems. The SCADA system functions as a remote start, stop, reset, and tag out for the facility, thus minimizing the manpower required to monitor site diagnostic information generated from the Project solar array blocks. The SCADA system would also control the Project substation, allowing for fully centralized operation of the Project to meet all California Independent System Operator and utility interconnection requirements.

The primary telecommunication line will consist of either a microwave tower, up to approximately 100 feet in height, or fiber optic cable and/or copper telecommunication line, installed above and/or below ground. All communications infrastructure would be co-located within the same alignment as the gen-tie and access roads to the extent possible. The telecommunication route may use a combination of new poles and/or below ground installations between the point of connection to existing telecommunications infrastructure and the Project substation. If below ground installation is determined by engineering to be the best option, this would require a trench to be constructed running alongside the access road DC 511 for the length of the gen-tie. Telecommunication lines may also be attached to the new gen-tie line. Lines will be placed within utility franchise easements to the extent feasible. A digital radio system may also be used. A secondary (backup) internet connection will be provided using a point-to-point microwave wireless link. Once the Savira gen-tie line reaches the Arica/Victory Pass Substation, existing infrastructure is anticipated to be used for the communication systems.

Meteorological Stations

Permanent meteorological stations may be installed in the solar development area near the O&M facilities or dispersed throughout the arrays to monitor wind speed and communicate with the tracker units over the life of the Project. Monitoring would allow for the trackers to rotate to a flat

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position to reduce the potential for damage during high wind activity⁴. The meteorological station may include multiple towers with monopole or lattice designs and typically does not exceed 30 feet in height but is often closer to 10 feet in height. The station includes research-grade instruments to measure all standard meteorological quantities and various irradiance sensor technologies to measure additional solar irradiance spectral bands, full spectrum curves, and directional components.

Interior Access Roads

A new perimeter road would be located just inside of the site's perimeter fence. The perimeter road will be constructed to allow access by maintenance and security personnel and to meet Riverside County Fire Department requirements. This road would be approximately 20 feet wide and would be composed of graded/compacted dirt or an aggregate base in some or all areas to meet Project dust and flood control requirements. A perimeter road would also be built around the substation, BESS, and O&M facilities.

Within the solar array blocks, new interior roads would be built to provide vehicle access ways to the solar equipment (i.e., PV modules, inverters, transformers) for O&M activities. These access ways would be between 16 to 24 feet wide and spaced approximately every 1,320 feet across the solar field. They would meet the County Fire Department policy #TP 15-002. The existing surface area would be graded and compacted using on-site materials to facilitate use by two-wheel-drive vehicles. The access ways would connect to the perimeter road at each end.

Where internal access ways cross drainages, cutoff walls and fill material may be needed to stabilize the road crossings.

Fencing

The solar field and support facilities perimeter would be secured with chain-link metal-fabric security fencing along with desert tortoise exclusion fencing. Controlled access gates would be located at the site's entrance and would include desert tortoise guards or other methods to exclude desert tortoise. The perimeter fence would be an approximately 6- to 7-foot-high chain-link fence, installed on posts, with three-strand barbed-wire at the top and with grounding where needed. The perimeter security fence would have permanent tortoise exclusion fencing incorporated and trenched into the ground if needed. Permanent tortoise exclusion fence material would be galvanized 1-inch by 2-inch vertical wire mesh fence, extending at least 2 feet above the ground and 12 inches into the ground. Design would follow the current recommendations for fence specifications established by the U.S. Fish and Wildlife Service (USFWS). A tortoise barrier guard will be required across every access road that enters or exists the solar facility. Breakaway fencing may need to be used at drainages.

⁴ High wind activity is defined as sustained winds of 30 miles per hour (mph) (48 kilometers per hour [kph]) for one hour and/or frequent gusts of at least 45 mph (72 kph) that are occurring or expected within the next 36 hours (NOAA 2025).

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Additional interior fencing would be included around the on-site substation and the BESS, if centrally located.

Wastewater Facilities

Wastewater generated during construction would include sanitary waste from portable toilets. The waste from portable toilets would be collected by a contracted sanitary disposal service and transported to a licensed disposal facility. During the operation and maintenance phase, a septic system or leach field may be required for facilities at the O&M building. The leach field, if needed, would be located near the O&M building and connected to it by a sewer line. The final design would depend on site-specific information such as soil percolation, contours, and anticipated use and would follow all state and federal guidelines regarding design.

Detention Basins

To meet current Riverside County site development requirements, a detention/retention basin or basins may be required. The basin(s) would be designed to maintain existing flows offsite in accordance with County requirements as determined by an engineering-level hydrology study.

2.3.2 Linear Facilities (BLM-administered Lands)

The Project would include linear facility routes components on adjacent BLM land, including:

- High Voltage (230 kV) Gen-tie Line and Grid Connection
- Medium Voltage (34.5 kV) Collection Line
- Site Access Roads

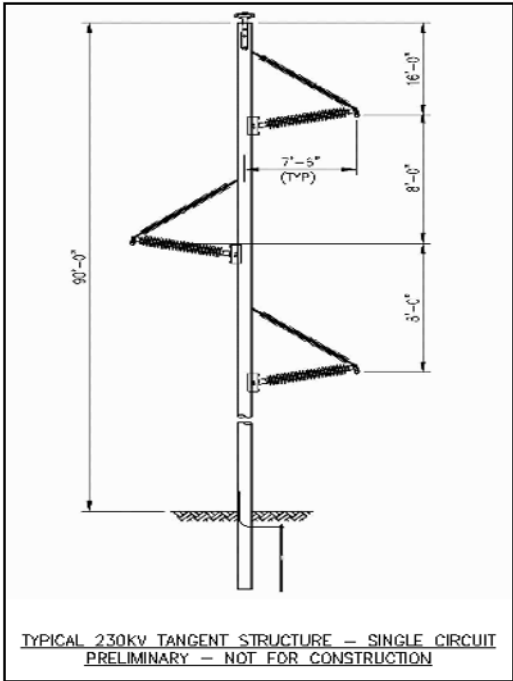
High Voltage (230 kV) Gen-tie Line and Grid Connection

Electrical power would be conveyed from the Project substation to the existing Arica/Victory Pass substation via a new approximately 1.8-mile-high voltage (230 kV) gen-tie line. Approximately 0.3 mile of this corridor is on private land and approximately 1.5 miles is on BLM land. The existing Arica/Victory Pass substation is an operational substation at the Arica and Victory Pass solar facilities, located on BLM-administered land and owned by Clearway subsidiaries.

Up to approximately 25 new gen-tie poles would be constructed south of the existing BLM road DC 511 and parallel to the existing SCE 161 kV transmission line. The gen-tie line from the Project substation would terminate at an existing dead-end structure within the Arica/Victory Pass substation. Gen-tie poles would be approximately 400 to 1,200 feet apart, with an average of approximately 800 feet apart. The gen-tie poles would likely be steel monopole structures approximately 100 to 150 feet in height, up to a maximum of 199 feet. These specifications are similar to the existing gen-tie lines in the region. A typical transmission pole is shown in Figure 2-5 Typical Gen-Tie Support Structures. The gen-tie would either use the existing access road with spur roads to reach specific towers and/or include a new access road parallel to the gen-tie line. The ROW width needed for the gen-tie line would be 150 feet.

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Figure 2-5 Typical Gen-Tie Support Structures



Source: Wikimedia Commons



Source: Wikimedia Commons

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All overhead electrical lines will be designed and installed in accordance with the Avian Power Line Interaction Committee's (APLIC) Suggested Practices for Avian Protection on Power Lines (APLIC 2006).

At the Arica/Victory Pass substation, power from the Project would be combined with power generated at the Arica and Victory Pass solar facilities then transmitted approximately 3 miles on the existing circuit to the existing Red Bluff substation owned by SCE. The existing line consists of 16 poles. New relaying and communication improvements at the Arica/Victory Pass substation would be required. No new pole construction or other ground disturbance would be required beyond the Arica/Victory Pass substation. The appropriate ROW approvals would be obtained from BLM for construction and operation of the Project's gen-tie line and interconnection with the Arica/Victory Pass substation and usage of the existing Arica/Victory Pass gen-tie line to Red Bluff substation.

Medium Voltage (34.5 kV) Collection Line

In addition to the on-site collection line system, one approximately 0.3-mile segment would be needed to connect the non-contiguous private parcels to the Project substation. The segment on BLM land would be designed and installed in the same manner as the collection system on private land.

Site Access Roads

Regional access to the Project site is provided from the Corn Springs exit off I-10. This exit leads to BLM open route DC 950 and then to open route DC 511. To reach the northern portion of the site, usage of BLM open route DC 505 is also proposed. Approximately 4 miles of existing BLM roads is proposed for site access. Access routes DC950 and DC511 are graveled. While these routes were used during construction of the Palen Solar Project and Arica and Victory Pass Solar projects and are being improved under the Arica and Victory Pass ROW, some improvements could be needed along the entire length of the road to provide access for the Project. Improvements could include removing vegetation to meet the required width of road needed (generally 30 feet wide), contour grading to level and compact the road, low water crossings to stabilize the road in areas where it crosses desert washes or other stabilization in excessively sandy areas and, potentially, some use of gravel or other stabilizing material. Grading will result in a manner that ensures no obstruction to the movement of desert tortoises across the off site access roads. Alternate access using State Route 177 and BLM open routes may be requested for emergency use only if the Corn Springs exit is inaccessible. The appropriate ROW approvals would be obtained from the BLM for use of the existing BLM roads.

2.3.3 Potentially Shared Facilities

The Savira Renewables LLC parent company is in the process of permitting a separate solar PV facility, the Redonda Solar Project, on BLM lands adjacent to the Project (<https://eplanning.blm.gov/Project-Home/?id=99dbebec-a7f2-f011-8407-001dd80db62a>). In the event that the Redonda Solar Project is permitted and constructed prior to the Project being constructed, the Project may share the substation, gen-tie, BESS, and O&M facility on the Redonda site. The Redonda substation, gen-tie, BESS, and O&M facility are being permitted by

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the BLM and by the CDFW and are not addressed in this EIR. If the Redonda Solar Project is not permitted and constructed, the Project would construct this infrastructure as described in Section 2.3.1.

The Redonda Solar Project substation, gen-tie, BESS, and O&M facility are not part of the whole of the action under CEQA or a connected action under NEPA because where a project located on private land may share facilities with a project located on federal land, but sharing of facilities is not required and either project could be developed with or without the other, the non-federal project is not part of the whole or the action or a connected action.

2.3.4 Southern California Edison Activities

Facility upgrades would be necessary for the Project to interconnect to SCE's existing Red Bluff substation. SCE activities would include telecommunication, metering, power system control, and reliability improvements at the existing Red Bluff substation, existing Devers Substation, existing Arica/Victory Pass Substation, as well as equipment installation at the Project substation. The improvements would be limited to the existing substation footprint (or within the Project substation footprint).

SCE activities at the Red Bluff substation would include the following:

- Installation of all required lightwave, channel banks, and associated equipment (including terminal equipment)
- Addition of points to existing remote terminal unit (RTU) to include points for new protection relay/status/alarm/control

SCE activities at the Devers Substation would include the following:

- Replacement of twenty-seven (27) 63 kA, 220 kV circuit breakers with 80 kA, 220 kV circuit breakers and all associated equipment and materials
- Reconstruction of the 220 kV switchrack
- Replacement of structures and spans for all existing 220 kV lines to accommodate the reconstruction of the 220 kV switchrack
- Point addition updates for the reconstruction of the 220 kV switchrack

SCE activities at the Arica/Victory Pass and Project Substations would include the following:

- Installation of all required lightwave, channel banks, and associated equipment (including terminal equipment)
- Installation of meters required to meter the retail load and energy storage
- Installation of one RTU to monitor typical generation elements

2.4 Construction Activities

The Project is anticipated to be constructed in a single phase. Construction would include the major activities of pre-construction work, including geotechnical investigations, site surveying

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and staking, desert tortoise fencing, and clearance, followed by mobilization, construction grading and site preparation, installation of drainage and erosion controls, PV panel/tracker assembly, and solar field construction followed by testing and commissioning. Some aspects of construction may be initiated off site, including pre-fabrication activities specific to the site along with main power transformer construction that is specific to the site. Some construction activities would require coordinating with other entities, such as the commissioning of the gen-tie line into the Red Bluff substation and any ROW crossing.

2.4.1 Construction Workforce, Schedule, Equipment and Materials Workforce

Project construction is anticipated to last approximately 15 months. The on-site construction workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The on-site construction workforce is anticipated to be an average of approximately 125 construction workers, including laborers, craftsmen, supervisory personnel, support personnel, construction management, and delivery drivers. Most construction staff and workers would commute daily to the jobsite from within Riverside and San Bernardino counties.

2.4.2 Construction Hours

Construction generally would occur during daylight hours and may occur 7 days a week. Additional hours may be necessary due to weather, to make up schedule deficiencies, or to complete critical construction activities. For instance, during hot weather, it may be necessary to start work earlier (e.g., at 5:00 a.m.) to avoid work during high ambient temperatures. Construction would require some nighttime activity for installation, service or electrical connection, inspection, and testing activities, but this would occur rarely.

2.4.3 Geotechnical Investigations

A design-level geotechnical investigation would be performed including additional subsurface evaluation and laboratory testing prior to construction. The geotechnical investigation would allow for the development of a geological profile and the characterization of soils conditions that could affect the engineering design. Geotechnical investigations typically include a series of borings and test pits, electrical resistivity, percolation, and seismic refraction tests, and prototype pile pull tests systematically distributed across the entire Project area, substation, and gen-tie corridor. Geotechnical testing would be completed by crews of two to three people. The work area for each geotechnical testing location would typically encompass an area of approximately 20 by 40 feet for the drill equipment laydown area, 4x4 vehicle parking, and area to maneuver the equipment around the geotechnical site. Bores for solar infrastructure would typically be 20 feet deep, whereas bores for the gen-tie or substation equipment may be 50 or more feet deep.

2.4.4 Pre-construction and Site Preparation Activities

Land surveying and staking

A licensed professional land surveyor would conduct a land survey of the Project to stake/flag the boundaries, work areas (permanent and short-term use), cut and fill zones, access roads,

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structures, and offsets. Survey and staking would continue through the initial construction stages as the site is graded and prepared for facility installation to mark locations of foundations, piers, gen-tie structures, and other site structures as necessary for construction. Staking/flagging would be maintained until final cleanup and/or reclamation is complete, after which all survey staking would be removed. Staking and flagging is typically performed using wood lathe and colored flagging.

Clearance Surveys and Fencing

After Project staking, desert tortoise exclusionary fencing would be installed, if required. Fencing is typically installed prior to the desert tortoise clearance periods. Permanent security and tortoise fencing could be trenched simultaneously, or temporary tortoise fencing could be installed first and later be attached to the permanent security fencing. Biological and other monitors would clear the fencing locations of any sensitive species, including desert tortoise, prior to fence installation. Fence construction crews may use a drive and crush technique along the fence line to reduce ground disturbance or may require grading of the fence line.

Once fencing is installed, desert tortoise clearance surveys would be performed, if required. Clearance surveys would follow the appropriate USFWS protocol.

Mobilization and establishment of temporary facilities for construction

Temporary construction workspace, laydown, and mobilization areas would be established after tortoise clearance. The Project construction contractor would develop a temporary construction mobilization and laydown area at the location of the O&M building or other centralized location(s) that would include temporary construction trailers with administrative offices, construction worker parking, temporary water service, temporary construction power services, and tool sheds and containers as well as a laydown area for construction equipment and material delivery and storage and parking. This area would be up to 5 acres in addition to the O&M area and anticipated to be adjacent to it. Areas adjacent to the permanent access roads could be used for temporary laydown as the solar field is developed, allowing for the O&M building and facilities to be constructed adjacent to the roads. Other laydown yards may be established along roads throughout the facility. These facilities would typically be approximately 2 acres in size, and up to 10 yards may be needed.

A Stormwater Pollution Prevention Plan (SWPPP), or equivalent document, would be prepared by a qualified engineer or erosion control specialist, and once approved, would be implemented before and during construction. The SWPPP (or equivalent document) would reduce potential impacts related to erosion and surface water quality during construction activities and throughout the life of the solar and storage facility. It would include Project information and best management practices (BMPs). The BMPs would include stormwater runoff quality control measures, management for concrete waste, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed.

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Site clearing, grading, and excavation

Additional environmental clearance surveys, such as nesting bird surveys and burrowing owl clearance surveys, would be performed at the Project site prior to commencement of construction activities, as needed, during the applicable season.

The level of site disturbance has not been determined for the Project. Under typical construction methods for a solar site, the Project site uses a drive and crush method to reduce vegetation and allow construction of the site. While grading would be limited to areas that specifically require no slope, the bulk of the site would still be disturbed but the vegetation root systems are left intact.

Initial site preparation involving vegetation clearing, grubbing, and grading would use excavators, graders, scrapers, dump trucks, back-hoes, compactors, loaders, pick-ups trucks, water pulls/trucks, and maintenance trucks. Most of the site clearing efforts would be completed within several months of commencement of construction activities. Other clearing would be ongoing throughout construction and could include excavation and backfill for foundations, underground wiring, duct banks, and associated facilities. Environmental monitors would be present as required.

Site clearing and grading would occur after the perimeter erosion and sediment control measures have been installed. Excavation activities include trenching for the installation of electrical collection systems, communication lines, and structural foundations. Clearing, grading, and excavations are required for the perimeter fencing, gates, tortoise guards, substation area preparation, and laydown yard preparation. The civil design site plan would contain details for the grading and drainage design of the overall site.

Gravel, aggregate, and concrete

Concrete would be poured in place for equipment and building foundations, fence footing, and miscellaneous small pads. Concrete would be brought on site from the nearest feasible provider. The surface of the O&M area parking lot would be paved, graveled, or otherwise compacted, and substation areas would be gravel. Gravel/aggregate may also be used for the road systems, where approved and needed, to ensure low water crossings.

2.4.5 Facility Construction

Solar array assembly and construction

Within each area designated for PV equipment, the solar field would be constructed by array, with materials for each row of PV modules staged next to that row within each solar array. Solar array construction would generally follow a consecutive sequence:

- Prepare trenches for underground feeder line cable.
- Install underground feeder line cable.
- Backfill trenches.
- Install steel foundation posts and tracker structures.
- Install PV modules.
- Install concrete footings for inverters and transformers.

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- Install inverter and transformer equipment.
- Perform electrical terminations.
- Inspect, test, and commission equipment.

Cable trenches would be used to provide underground connection of Project equipment. Trenches would contain electrical conductors for generated power and fiber optic cables for equipment communication. One trench would be constructed across BLM land to connect the incontiguous private parcel to the on-site substation. Upon completion of the installation, the trench will be backfilled.

The feeder lines would be installed in a trench approximately 8 inches (20 centimeters) wide and 30 inches (76 centimeters) deep. The assembled PV modules would be installed on steel posts to which steel tracker structures would be attached. The depth to which the posts would be buried would depend on site-specific geotechnical work, potential scour, and other engineering considerations and would vary throughout the site, likely from 7 feet to 15 feet. The height of the posts would depend on site-specific geotechnical work, depth of flood level, and other engineering considerations and could vary throughout the site but would typically be 4 to 12 feet. Trucks would be used to transport the PV modules to the solar field, and skid steers (lightweight tracked vehicles) would be used to place the modules into the rows. A small mobile crane may be used to assist construction workers in setting the solar modules on the driven-steel posts. Final solar field assembly would require skid steers, small cranes, tractors, and rubber-tired forklifts.

Substation construction

Construction of the on-site substation would be initiated with grading, foundation excavation, installation of grounding grid and underground conduit, backfilling, and compaction. Concrete foundations and containment systems would then be installed followed by electrical structural equipment, including lightning protection. Underground conduit would be placed 36 to 42 inches below ground, depending on the NEC code. High voltage transformer(s), breakers, and other equipment enclosures would be installed on foundations. Fencing would be installed around the entire substation site. Underground and overhead cabling would be installed and terminated with inspection, testing, and commissioning of equipment conducted at energization per the Interconnection Agreement. Additional drainage systems would be constructed as needed and approved.

BESS construction

BESS construction would follow a similar process to PV solar array construction:

- Prepare trenches for underground feeder line cable.
- Install underground feeder line cable.
- Backfill trenches.
- Install BESS foundations, either steel foundation piles or graveled pads.
- Install BESS containers.
- Install concrete footings for inverters and transformers.
- Install inverter and transformer equipment.
- Perform electrical terminations.

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- Inspect, test and commission equipment.

The BESS must be nearly level; therefore, the proposed BESS area would be cleared and graded. Site preparation also would include construction of drainage components to capture and direct stormwater flow around the BESS facility. Once the foundations are in place for the BESS, the batteries, inverters, and other electrical equipment would be mounted and installed.

High voltage (230 kV) gen-tie line construction

Construction of the gen-tie would likely occur concurrently with the rest of the facility. It is anticipated that conductor stringing would be conducted one phase at a time, with all equipment in the same operational place until all phases are strung.

The Project gen-tie line would be located within a 150-foot ROW and would be primarily overhead, but undergrounding could be an option based on design constraints, existing utilities, and resources. The overhead gen-tie line structure foundations would be excavated to a depth of 45 feet or more and include concrete supports depending on final engineering. Foundation sizes (permanent disturbance) would be 30 to 40 feet in diameter depending on topography. Gen-tie structures would be monopole steel structures typically ranging from 100 to 150 feet in height but potentially reaching heights as tall as 199 feet. A 3-phase 230-kV bundled set of conductors would be strung along the structures, and the line would be equipped with a ground wire and a fiber optic telecommunication cable. Helicopters may be used to support overhead construction. Drones may also be used to support gen-tie and medium voltage collector line construction.

Up to 150-foot by 250-foot temporary laydown or staging area would be required at each gen-tie pole or tower location for equipment and hardware. An approximately 200-foot diameter area around each corner may be needed for stringing and pulling wires after towers are constructed. Grading of laydown areas would be minimized. In general, little to no grading is expected to be required for these areas, but vegetation may be removed.

2.4.6 Construction Water Use and Dust Control

A total of approximately 250 acre-feet (AF) of water is estimated to be needed for construction, primarily for dust control. Water would either be pumped from a new, on-site well or trucked in from an on-site or off site source.

2.4.7 Construction Waste Management

Construction waste would be managed in accordance with applicable state and local regulations. Light trash items that could be blown away in the wind easily and food would be placed in closed containers with lids.

Limited quantities of hazardous wastes would be generated from construction activities, such as waste hydraulic fluids and lubricating oils from leaks and maintenance activities and the associated oil-soaked materials (i.e., rags, sorbents, and filters). Used hydraulic fluids and lubricating oils would be recycled when possible. The oil-containing solids would be managed

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as hazardous waste and sent to an approved off site disposal facility in accordance with applicable policies.

The Spill Prevention, Control, and Countermeasure (SPCC) Plan and a Hazardous Materials Business Plan (HMBP) would be implemented during construction of the Project as required by federal and state regulations if the quantities of hazardous materials onsite meet minimum thresholds. Contractor personnel would be properly trained to control and clean up any spills. Industry BMPs would be used to prevent spills; however, should any spills occur, they would be cleaned up completely, quickly, and safely and reported to the appropriate authorities as required in accordance with the construction SWPPP (or equivalent document). Fuel, oil, and hydraulic fluid used in on-site vehicles and equipment would be transferred directly from a service truck to construction equipment and would be stored on site in accordance with the SPCC Plan and HMBP. Should fueling or maintenance occur on site, it would be done in a designated area that includes secondary containment located away from washes or drainages or, should refueling be needed in the field due to the nature of some larger construction vehicles, it would be completed with secondary containment. It is possible that fuel tanks would be stored on site during construction. Each tank would contain between 500 and 1,000 gallons of fuel. These tanks would be utilized for the construction period only and removed from site once construction is complete.

Service personnel and construction contractors would follow standard operating procedures for filling and servicing construction equipment and vehicles to reduce the potential for incidents involving hazardous materials. Batteries would be used during construction in vehicles and equipment. As with any other commercial vehicle, spent batteries would be recycled and/or disposed of at an appropriate facility. All measures required in the SWPPP (or equivalent document), SPCC Plan and HMBP would be implemented.

2.4.8 Equipment and Materials

Materials would be delivered to the site during construction periodically throughout the day via trucks. Material deliveries would avoid rush hour. Signage would be placed on the delivery route from the Corn Springs exit off I-10 directing delivery traffic to the Project site. Once delivered to the site, construction equipment would be used on site for the construction phase and transported off site when no longer needed for construction.

2.4.9 Construction Access, Equipment, and Traffic

Construction worker vehicles and haul trucks would travel approximately 120- and 100-miles round trip, respectively, a portion of which would be along the unpaved access road.

Materials would be delivered to the site during construction periodically throughout the day via trucks. Material deliveries would avoid rush hour. Signage would be placed on the delivery route from the Corn Springs exit off I-10 directing delivery traffic to the proposed locations. Once delivered to the site, construction equipment would be used on site for the construction phase and transported off site when no longer needed for construction. Haul truck trips would involve

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a maximum of 20 per day, with an average of 15 per day. The construction vehicles to be used on site are listed by phase in Table 2-1, below.

Table 2-1 Off-Road Equipment Required during Project Construction

Equipment	Horsepower	Hours/week	Quantity
Aerial Lift	49	20	4
Backhoe	127	35	2
Bulldozer	215	35	1.7
Crane	81	20	1
Forklift	89	35	3.9
Front End	225	35	2.0
Grader	179	35	2.8
Pile driver	180	35	8.0
Roller	131	35	2.8
Skid steer	73	20	3.1
Trencher	78	35	2
Water truck	84	35	4.9
Welder	78	20	1.9

Source: (Clearway 2024)

2.5 Operation and Maintenance Activities

The facility would operate 7 days a week using automated facility controls and monitoring systems with SCADA control systems. To maintain power-generation performance, PV array cleaning, maintenance repairs, troubleshooting, and testing may occur up to 24 hours per day (including nighttime).

2.5.1 Operation and Maintenance Workforce

The Project would directly employ approximately 10 people during operations. This workforce would include administrative and management personnel, operators, and security and maintenance personnel. Most operation and maintenance staff would be located off site, with site visits occurring daily for security, maintenance, and repairs.

2.5.2 Site Maintenance

A plant operation and maintenance program typical of a Project this size would be implemented and would primarily include equipment inspections. During the first year of operation, the frequency of inspections would be increased to address settling and electrical termination torque values (e.g., for year one, inspections shown as semi-annually are performed quarterly, inspections shown as annual are performed semi-annually). At designated intervals,

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approximately every 10 to 15 years, major equipment maintenance would be performed. Operation and maintenance procedures would be consistent with industry standard practices for maintaining the useful life of plant components.

Normal BESS operations include regular augmentation to maintain capacity while batteries degrade. Augmentation activities include delivery of new BESS containers and installation. Battery container foundations for augmentation batteries would be installed during the construction period; therefore, no new ground disturbance would be required during operation and maintenance. Depending on the specific battery technology and design, augmentation is anticipated to start as soon as the second year of operations and occur as often as once per year.

One panel cleaning is anticipated per year. Cleaning would occur utilizing power washers carried by small trucks or the best available technology at the time that minimizes trips and water usage. Other cleaning methods that utilize new technology could be used so long as methods would not involve the transporting of a substantial amount of water and the methods would not result in significant runoff of water or any other substance from panel surfaces.

Operation and maintenance would require the use of vehicles and equipment including crane trucks for minor equipment maintenance. Pick-up trucks would be in periodic use on the site. No heavy equipment beyond rubber tire water trucks would be used during normal plant operation. Vehicle traffic to the Project site during operation and maintenance would be minimal, at less than 10 round-trips per day under normal operational conditions.

2.5.3 Fire Safety During Operation

The BESS facility design, construction, and operation would follow applicable fire and building codes. The enclosures would include fire detection systems specific to the type and design of the selected battery systems. In case of thermal runaway event, certain detection sensors would be able to shut-off each battery enclosure thus preventing fire propagation. BESS would comply with National Fire Protection Association (NFPA) 855, Standard for Installation of Stationary Energy Storage Systems, which provides comprehensive guidelines for the safe installation of BESS including mitigation of fire risks as well as system design, construction, operation, and maintenance to ensure safety and reliability.

2.5.4 Drone Use

Normal facility operations include occasional drone use to quickly and easily inspect the equipment and site. Post-construction activities may include drones to monitor the rate and percent coverage of revegetated areas. O&M activities would also use drones equipped with infrared sensors to detect hotspots within panels, which is an indicator that the panel is malfunctioning and needs to be repaired or replaced. All drone operators would be fully licensed.

2.5.5 O&M Water Requirements

Up to 20 AF of water per year is estimated to be needed for the Project operation and maintenance. Operational water could be trucked to the site or accessed from an on-site well. A water storage

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tank would be constructed if required per County or Fire Department coordination for fire safety purposes.

2.5.6 Vegetation Treatment and Weed Management

Continued weed management in cleared areas would be maintained through regular monitoring and targeted application of the herbicide to be applied in accordance with the manufacturer's recommendations. Weed control activities would include non-mechanical, mechanical, and herbicide control methods. Manual non-mechanical means of vegetation management would be limited to the use of hand-operated power tools and hand tools to cut, clear, or prune species. Hand-operated tools such as hoes, shovels, and hand saws could be used under the program along with hand-pulling of plants. Mechanical control activities, such as chaining, disking, grubbing, and mowing using tractors or other heavy equipment, may also be used. The access roads would be kept clear of vegetation with targeted herbicide spraying, occasional scarifying, or weeding to reduce fire hazard and allow access to the panel arrays.

Common herbicides that might be used include those with the active ingredients clopyralid, triclopyr, chlorsulfuron, imazapyr, and glyphosate. The amount use would be in line with industry standards (10-44 gallons per acre). All applications would follow EPA approved instruction from the labels.

2.5.7 Hazardous Materials and Waste

Hazardous materials used during construction may include petroleum products such as fuel, oil, and hydraulic fluid used in on-site vehicles and equipment. Fuel tanks may be stored on site during construction and would contain between 500 and 1,000 gallons of fuel. The fuel tanks would be removed from the site once construction is complete. Fueling and maintenance that would occur on site would be done in a designated area that includes secondary containment. If quantities exceed regulatory thresholds, storage would be undertaken in compliance with the Spill Prevention, Control, and Countermeasure (SPCC) Plan and a Hazardous Materials Business Plan (HMBP), which would be developed prior to construction. The SPCC Plan and HMBP would contain requirements for storage, secondary containment, emergency and spill response, and the handling and storage of hazardous materials on the Project site. Material Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel.

Additionally, the Project would produce a small amount of hazardous waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning modules, electrical materials, unused paint, solvents, cleaners, waste oil, oily rags, and batteries. Workers would be trained to properly identify and handle all hazardous wastes. As noted above, hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste shipped off site for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location.

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2.6 Decommissioning and Repowering

The Project has an anticipated operational life of more than 40 years. At the end of the Project's operational term, the Applicant may either determine that the Project should be decommissioned and deconstructed or seek an extension of its CUP.

All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and County regulations. Because the solar arrays' supporting equipment would sit on the surface of the land, the land would be largely unaltered from its natural state when the arrays are removed after Project decommissioning. The Project would use BMPs to ensure the collection and recycling of materials and to avoid the potential for modules and batteries to be disposed of as landfill waste.

2.7 References

Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Available: <https://www.aplic.org/documents>.

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3 Environmental Setting, Impacts, and Mitigation Measures

3.1 Introduction to Environmental Analysis

Chapter 3 evaluates the impacts that may result directly, indirectly, or cumulatively from the Savira Solar Project (Project). This chapter also presents and applies criteria used for each environmental resource topic to determine whether an adverse impact is significant under the California Environmental Quality Act (CEQA) and describes potentially feasible mitigation measures, if any, that could substantially lessen or avoid significant impacts.

3.1.1 Introduction of Impact Analysis

This section provides an analysis of potential effects on resource areas that could result in *significant impacts*. Specifically, the resource area topics identified for further discussion include the following:

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

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Sections 3.2 through 3.20 discuss the environmental impacts that may result from the construction, operation, and decommissioning of the Project alone as well as and cumulative impacts. Where impacts may be significant or potentially significant according to the criteria identified, potential mitigation measures are identified to avoid or substantially lessen those impacts to the extent feasible.

The following topics are also included in Sections 3.2 through 3.20.

Environmental Setting

This section discusses the existing environmental conditions at the site and in the surrounding area as appropriate that are relevant to the issues under evaluation (the “baseline”), in accordance with Section 15125 of the CEQA Guidelines. The baseline conditions reflect the conditions around the time of the issuance of the Notice of Preparation and are used for comparison to establish the type and extent of the potential environmental impacts. For purposes of these discussions, the term *Project site* refers to both the proposed solar site (located on private land) and the *linear facility route* (LFR; located on Bureau of Land Management [BLM] land). The Project site comprises the components listed in Section 2.3: Project Components.

The information and data used to prepare the environmental setting were obtained from several sources, including the technical reports prepared for the Project, which include specific surveys and studies conducted for the Project and the Riverside County General Plan. In addition, information was obtained from research publications prepared by various federal and State agencies, GIS data from various sources, and private sources pertaining to key resource conditions found in the area.

Regulatory Framework

This section presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from federal, State, and local levels are discussed. The information and data used to prepare the regulatory background were obtained from the same sources listed under Environmental Setting.

Methodology

This section describes the process of analyzing the effects of the Project. In assessing impacts, this Environmental Impact Report (EIR) presumes that existing regulations and other public agency requirements that have been incorporated into the Project would be implemented.

Criteria for Determining Significance

This section describes the criteria used to determine which impacts should be considered potentially significant. Significance thresholds are based on criteria identified in Appendix G of the CEQA Guidelines (14 CCR §§ 15000–15387). The County of Riverside’s Environmental Assessment form was also taken into account when defining significance thresholds.

Impact Analysis, including Mitigation Measures

This section presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. A significant impact is defined under CEQA as “a

3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines § 15382). The CEQA Guidelines define *direct impacts* as those impacts that result from the Project and occur at the same time and place. Indirect impacts are caused by the Project but can occur later in time or farther removed in distance and are still reasonably foreseeable and related to the operation of the Project.

A less-than-significant impact with mitigation applies where the incorporation of mitigation measures has reduced an effect from potentially significant to less than significant. A less-than-significant impact means that the Project would not cause a potentially substantial adverse effect on the environment for that resource. No impact indicates that the impact does not apply to the Project.

The Mitigation Measures defined in this section identify the actions to avoid or substantially lessen potentially significant impacts of the Project to the extent feasible. Existing regulations and other public agency requirements, best management practices, and procedures that apply to similar projects are considered in determining what additional Project-specific mitigation may be required to reduce or eliminate impacts.

Cumulative Impacts

This section describes effects that may be individually limited but cumulatively considerable when measured along with other approved, proposed, or reasonably foreseeable future projects. Section 3.1.2: Cumulative Impact Scenario provides a detailed discussion regarding the cumulative impact approach and scenario.

3.1.2 Cumulative Impact Scenario

This section describes effects that may be individually limited but cumulatively considerable when measured along with other approved, proposed, or reasonably foreseeable future projects. The following discussion explains the factors relied on to frame the cumulative impacts analysis in this EIR.

CEQA Requirements for Cumulative Impact Analysis

CEQA defines cumulative impacts as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts (CEQA Guidelines § 15355; see also California Public Resources Code § 21083[b]). A cumulative impact consists of an impact that is caused as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts (CEQA Guidelines § 15130(a)(1)).

CEQA Guidelines section 15130 requires that an EIR discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable.” Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with those of past projects, other current projects, and probable future projects (CEQA Guidelines § 15065(a)(3)).

According to section 15130(b) of the CEQA Guidelines, the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not

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provide as great a level of detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact.

For purposes of this EIR, the Project would cause a cumulatively considerable and therefore significant contribution to a cumulative impact if:

- The cumulative effects of other past, current, and probable future projects without the Project are not significant and the Project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant cumulative impact.
- The cumulative effects of other past, current, and probable future projects without the Project are already significant and the Project's related incremental contribution to that condition would be cumulatively considerable and therefore significant. The standards used herein to determine whether the Project's incremental contribution is cumulatively considerable include the existing baseline environmental conditions and whether the Projects would cause a substantial increase in impacts or otherwise exceed an established threshold of significance.

Methodology for Cumulative Impact Analysis

CEQA Guidelines section 15130 provides that the following approaches can be used to adequately address 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.
- Regional growth projections method: A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

This EIR uses the list method.

Consistent with CEQA, the cumulative analysis uses a two-step approach. The first step determines whether the combined effects from the Project and other projects would be cumulatively significant. This was done by adding the Project's incremental impact to the anticipated impacts of other probable future projects and/or reasonably foreseeable development. Where the analysis determines that the combined effect of the projects and/or projected development would result in a significant cumulative effect, the second step evaluates whether the Project's incremental contribution to the combined significant cumulative impact would be cumulatively considerable as required by CEQA Guidelines section 15130(a).

CEQA Guidelines section 15064(h)(4) states that the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that a proposed project's incremental effects are cumulatively considerable. Therefore, it is not necessarily true

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that, even where cumulative impacts are significant, any level of incremental contribution must be deemed cumulatively considerable by the lead agency. If a proposed project's individual impact is less than significant, however, its contribution to a significant cumulative impact could be deemed cumulatively considerable depending on the nature of the impact and the existing environmental setting. If, for example, a proposed project is located in an air basin determined to be in extreme or severe nonattainment for a particular criteria pollutant, a project's relatively small contribution of the same pollutant could be found to be cumulatively considerable. Thus, depending on the circumstances, an impact that is less than significant when considered individually may still be cumulatively considerable.

Cumulative Scenario

Geographic Scope

The geographic area affected by the Project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. Generally, the geographic area associated with the environmental effects of the Project defines the boundaries of the area used for compiling the list of past, present, and reasonably foreseeable future related projects considered in the cumulative impact analysis. The geographic scope of each analysis is based on the Project site and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a proposed project, but not beyond the scope of the direct and indirect effects of that proposed project. For example, the air quality analysis includes consideration of regional air emissions (e.g., reactive organic gases/nitrogen oxides and particulate matter) and therefore includes the entire air basin. Conversely, in the case of noise impacts, given the localized impact, a smaller area surrounding the immediate site is appropriate for consideration. The geographic areas included within this analysis for purposes of determining whether the Project's contribution to a particular impact would be cumulatively considerable and therefore significant are as follows:

- **Aesthetics:** All cumulative projects identified in Tables 3.1-1 and 3.1-2
- **Agriculture and Forest Resources:** Desert Center Area
- **Air Quality:** Mojave Desert Air Basin
- **Biological Resources:** A large portion eastern Riverside County that consists of similar habitats as found in the Project site and immediate vicinity
- **Cultural Resources:** All cumulative projects identified in Table 3.1-1 and Table 3.1-2
- **Energy:** Global
- **Geology, Soils and Mineral Resources:** Chuckwalla Valley
- **Greenhouse Gas Emissions:** Global
- **Hazards and Hazardous Materials:** 1-mile-radius area around the Project site
- **Hydrology and Water Quality:** USGS Chuckwalla Hydrologic Unit (i.e., watershed)
- **Land Use and Planning:** Eastern Riverside County

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- **Noise:** Area extending 0.5 mile from the boundary of the Project site for noise and 200 feet from the boundary of the Project site for vibration
- **Paleontological Resources:** All projects on the same geologic units within Eastern Riverside County, including Holocene alluvium, and Pleistocene alluvium
- **Population and Housing:** Populated areas within a 2-hour worker commute distance of the Project's site, which would extend out into the rest of Riverside County and into San Bernardino County
- **Public Services and Utilities:** The service areas of each of the providers serving the Project
- **Recreation:** Recreational areas within a 20-mile distance from the Project site
- **Transportation and Traffic:** The study roadways and intersections and segments of I-10, near Corn Spring Exit.
- **Tribal Cultural Resources:** All cumulative projects identified in Table 3.1-1 and Table 3.1-2.
- **Wildfire:** 2-mile-radius area around the Project site.

Temporal Scope

This cumulative impact analysis considers other projects that are currently operational, under constructed, are permitted, or are probable future projects with pending applications (i.e., reasonably foreseeable). Both short-term and long-term cumulative impacts of the Project, in conjunction with other cumulative projects in the area, are evaluated in this section of each resource area analysis.

The schedule and timing of the Project and other cumulative projects is relevant to the consideration of cumulative impacts. Each project in a region will have its own implementation schedule, which may or may not coincide or overlap with the construction schedule for the Project. This is a consideration for short-term impacts.

Cumulative Projects

Desert Center Area Plan. As part of the Riverside County General Plan Update (Riverside County 2015), the County updated the Desert Center Area Plan. The Desert Center Area Plan reflects the limited development potential in this region. The Desert Center Area Plan designates most of the area Open Space:Rural (OS:RUR), Rural: Rural Residential (R:RUR), Community Development: Low Density Residential (CD:LDR), Community Development: Commercial Retail (CD:CR), and Community Development Commercial Tourist (CD:CT). The Desert Center Area Plan notes that future development on the private land should focus on infill and contiguous expansion of the existing communities at Desert Center and Lake Tamarisk but is likely to be limited (County of Riverside 2015b). This information was taken into consideration by the authors when drafting the cumulative analysis as it indicates limited future development on private land is projected.

Table 3.1-1 and Table 3.1-2 list cumulative projects in the Desert Center region. Table 3.1-1 includes approved and operational projects. Table 3.1-2 includes proposed and future projects. These projects are shown on Figure 2-3.

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Table 3.1-1 Past and Present Projects or Programs in the Project Area

ID	Project name	Location	Ownership	Status	Acres	Project description
1	Victory Pass Solar Project	4.5 miles east of Desert Center, adjacent to the north side of I-10	Clearway Energy Group	Operational as of 2024	1,400	200 MW of solar energy with up to 200 MW of battery storage on BLM-administered land. A shared overhead 230 kV gen-tie line with Arica Solar Project connect to SCE Red Bluff substation.
2	Oberon Renewable Energy Project	Northeast of Desert Center	IP Oberon, LLC	Operational as of 2024	2,600	500 MW solar PV and energy storage facility on BLM-administered land. A 0.5 mile 500 KV gen-tie line connects into SCE Red Bluff substation.
3	Palen Solar Project	East of Desert Center	EDR-RE	Operational as of 2022	3,400	457 MW solar PV and energy storage facility located 11 miles east of Desert Center on BLM-administered land. Includes a 6-mile gen-tie line that connects into SCE Red Bluff substation.
4	Desert Harvest Solar Project	North of Desert Center	EDR-RE	Operational as of 2022	1,208	150 MW solar PV project located immediately south of the Desert Sunlight project. The gen-tie route would parallel the existing Desert Sunlight line to interconnect with the existing SCE Red Bluff substation
5	Desert Sunlight Solar Project	6 miles north of Desert Center	NextEra	Operational as of 2014	4,400	550 MW solar PV project located on BLM land. The project includes a 230 kV transmission line that extends south from the site to interconnect with the Red Bluff substation

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ID	Project name	Location	Ownership	Status	Acres	Project description
6	Athos Renewable Energy Project	Desert Center	Soft Bank Energy	Operational as of 2022	3,400	500 MW solar PV and energy storage facility Project located on private land in unincorporated Riverside County. Portions of the gen-tie line cross public land to reach the SCE Red Bluff substation
7	Arica Solar Project	Adjacent to northside of Victory Pass project, 5 miles east-northeast of Desert Center	Clearway Energy Group	Operational as of 2024	1,400	265 MW solar PV project with up to 200 of battery storage. A shared overhead 5 miles east-northeast 230 kV gen-tie line with Victory Pass Solar of Desert Center Project connects to SCE Red Bluff substation.
8	Crimson Solar	South of I-10, 8 miles southwest of Blythe	Sonoran West Solar Holdings LLC (recurrent Energy)	Operational as of 2022	2,500	An up to 350 MW solar PV project located on BLM land. The project interconnect to the SCE Colorado River substation.
9	Desert Quartzite Solar	South of I-10, 8 miles southwest of Blythe	Desert Quartzite LLC	Operational as of 2024	3,770	A 450 MW solar PV facility with a project substation, access road, and transmission line, located primarily on BLM land.
10	Ten West Link Transmission Line	From the Colorado River substation in Blythe, California, to Tonopah, Arizona	Atlantica Yield PLC and Starwood Energy Group Global Inc.	Operational as of 2024	N/A	A 500 kV transmission line from Tonopah, Arizona, to Blythe, California. It spans 125 miles, with all but 21.5 miles of the line in the Arizona counties of Maricopa and La Paz and the remainder in Riverside County, California.
11	Blythe PV Project	Blythe	Clearway Energy Group, LLC	Operational as of 2009	200	21 MW solar PV project outside of Blythe

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ID	Project name	Location	Ownership	Status	Acres	Project description
12	McCoy/Arlington Solar Project	Blythe	NextEra	Operational as of 2016	8,100	An up to 750 MW solar PV project located primarily on BLM-administered land about 13 miles north of Blythe. Includes a 16-mile gen-tie line.
13	Genesis Solar Energy Project	North of I-10, 25 miles west of Blythe and 27 miles east of Desert Center	NextEra	Operational as of 2014	1,950	250 MW solar trough project north of the Ford Dry Lake. Project includes 6-mile natural gas pipeline and a 5.5-mile gen-tie line to the Blythe Energy Center to Julian Hinds Transmission Line, then east on shared transmission poles to the Colorado River substation.
14	Blythe Solar Power Project	Blythe	NextEra	Operational as of 2016	4,100	A 485 MW solar PV project located 2 miles north of I-10 and 8 miles west of the City of Blythe on BLM land. A 230 kV gen-tie line connects the solar energy generating facility to the SCE Colorado River substation.
15	SCE Red Bluff Substation	Southeast of Desert Center	SCE	Operational as of 2014	75	220/500 kV substation to interconnect renewable projects near Desert Center to the DPV transmission line.
16	Devers-Palo Verde (DPV) No.1 Transmission Line	Palo Verde, Arizona to Devers Substation near Palm Springs	SCE	Operational as of 1982	N/A	Existing 500 kV transmission line parallel to I-10 from Arizona to the SCE Devers Substation, near Palm Springs. DPV 1 loops into the SCE Colorado River substation, which is located 10 miles southwest of Blythe.

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ID	Project name	Location	Ownership	Status	Acres	Project description
16	Devers-Colorado River Transmission Line	From Blythe to Devers	SCE	Operational as of 2013	N/A	Existing 500 kV transmission line parallel to the I-10 from the SCE Colorado River Substation to the Devers Substation. Right-of-way requires 130 feet on federal, state, and private land.
18	Blythe Energy Project Transmission Line	From Blythe to Julian Hinds Substation	Blythe Energy LLC	Operational as of 2010	N/A	Existing 230 kV transmission line
19	SCE Colorado River Substation	Blythe	SCE	Operational as of 2013	90	A 500/230 kV substation located southwest of Blythe. Includes 108-foot-high dead-end structures. Outdoor night lighting is designed to illuminate the switchrack when manually switched on.
20	NRG Blythe II	Blythe	Clearway Energy Group, LLC	Operational as of 2016	150	20 MW solar PV facility next to Clearway's 21 MW Blythe Project that came online in spring 2017
21	Blythe Mesa Solar Project	East of Blythe	Blythe Mesa Solar II, LLC	Operational as of 2024	3,600	485 MW solar PV project located outside Blythe on private land. The gen-tie line crosses BLM land to reach the SCE Colorado River substation.
22	West-wide Section 368 Energy Corridors	Riverside County parallel to I-10	BLM, DOE, U.S. Forest Service	Approved by BLM & USFS in 2008, additional review of Region 1 ongoing	N/A	Designation of corridors on federal land in the 11 western states, including California, for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities (energy corridors). One of the corridors runs along the southern portion of Riverside County.

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Table 3.1-2 Future (Reasonably Foreseeable) Projects or Programs in the Project Area

ID	Project name	Location	Ownership	Status	Acres	Project description
1	Skybridge Eagle Mountain Hydrogen Project; Riverside County	7.5 miles northwest of Desert Center	Skybridge Energy, LLC	CUP Application 220009 filed with Riverside County in 2022 and still active as of 2025	133	50 MW solar PV facility to support 50 MW hydrogen electrolyzer generation
2	North Star 4 Solar Facility	South of 73rd Avenue, east of SH-11, north of Parkside Drive	Scognamillo, Peter	CUP Application 240023 files with Riverside County in 2025 and still active.	146.15	44.2 MWDC-32 MWAC photovoltaic solar panel array with a single-axis tracker system and a battery energy storage system (BESS), with interior roads, security fencing, and an electrical substation and gen-tie connection. The facility is expected to generate approx. 102,758 MWh per year.
3	North Star 5 Solar Facility	South of 73rd Avenue, east of SH-11, north of Parkside Drive	Scognamillo, Peter	CUP Application 240024 filed in 2025 and still active.	157.33	44.8 MWDC-32 MWAC photovoltaic solar panel array with a single-axis tracker system and a battery energy storage system (BESS), with interior roads, security fencing, and an electrical substation and gen-tie connection. The facility is expected to generate approx. 103,475 MWh per year.

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ID	Project name	Location	Ownership	Status	Acres	Project description
4	Stonewater	North of Landfill Road, south of 38th Avenue, east of Dillon Road, and west of Fillmore Street. It lies approximately 3.6 miles northeast of the City of Indio's city center and 3.6 miles north of the City of Coachella's city center.	Stonewater 800	CUP Application 250011 filed in 2025 and still active.	1.5	A 125 MW AC solar photovoltaic energy generating and energy storage facility. This facility will include an operations and maintenance building, a 230kV substation with a 1.5-acre footprint, and a 125 MW/500 MWh BESS. The project will transmit solar energy via a new 540-foot generation interconnection tie (gen-tie) line to access the Point of Interconnect (POI) on the existing Imperial Irrigation District's (IID) 230 kilovolt (kV) KN/KS line. The facility will also include a 34.5 kV collector system, with a connection path crossing Fargo Canyon Road and the 40th Avenue right-of-way, will connect the northern and southern sections of the solar project site. The Project applicant is seeking a minimum of 35-year CUP.
5	Calypso I Solar Project	South of I-10	EDFR	Under review by BLM (CACA 059319) as of 2025	3,271	300 MW solar PV project on BLM administered land that would connect into the Colorado River substation
6	Calypso II Solar Project	South of I-10, southwest of Blythe	EDFR	Under review by BLM (CACA 059320) as of 2025	2,133	300 MW solar PV project on BLM administered land that would connect into the Colorado River substation

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ID	Project name	Location	Ownership	Status	Acres	Project description
7	Grace Solar Energy Center; previously Palo Verde Mesa Solar Project (CUP03684R01)	East of Blythe near Neighbors Boulevard	NextEra	Approved by Riverside County in August 2017.	3,250	A 465 MW PV solar plant on 50 parcels totaling 3,250 acres, primarily on agricultural land. Gen-tie line is approximately 11.8 miles to the Colorado River substation
8	Desert Southwest Transmission Line	118 miles primarily parallel to the Devers- Palo Verde 500 kV line	Imperial Irrigation District	Final EIR/EIS prepared in 2005, approved by the BLM in 2006.	N/A	Approximately 118-mile 500 kV transmission line from a new substation near the Blythe Energy Project to the existing Devers Substation located 10 miles north of Palm Springs, California.
9	Eagle Mountain Pumped Storage Project	Eagle Mountain iron ore mine, north of Desert Center	Eagle Crest Energy Company	FERC License issued June 2014. Project was approved by BLM in August 2018. FERC issued extensions to the deadline to complete project construction until June 19, 2027.	90	1,300 MW pumped storage project designed to store off-peak energy to use during peak hours. The off-peak energy would be used to pump water to an upper reservoir. The water is released to a lower reservoir through an underground electrical generating facility.
10	Lycan Solar Project (CUP230017)	South of I-10, east of the Corn Spring Exit	EDFR	Under permitting by Riverside County and BLM as of 2025	6,912	An up to 600 MW solar PV plant and energy storage system with an approximately 12-mile-long gen-tie line to interconnect with the existing Southern California Edison Red Bluff substation

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ID	Project name	Location	Ownership	Status	Acres	Project description
11	Easley Renewable Energy Project	Northeast of Desert Center	IP Land Holdings, LLC	BLM decision of record executed 12/6/24 under construction in 2025	3,735	Project on BLM land adjacent and north northeast of the Oberon site; would generate and store up to 650 MW of solar-generated electrical power
12	Sapphire Solar Project	Adjacent to Easley project; northeast of Desert Center	EDF-RE	Final EIR completed 11/26/24	1,123	117 MW solar PV project on 1,082 acres private land; gen-tie line and access roads would cross BLM-administered land to connect into Desert Harvest substation/Red Bluff substation
13	Bajada Solar Project	East of Desert Center	Clearway Energy Group	In the environmental review phase as of 2025	2,700	350 MW solar PV project that would connect into the Red Bluff substation.
14	Redonda Solar Project	East of Desert Center	Clearway Energy Group	In the environmental review phase as of 2025	887	250 MW solar PV project that would connect into the Arica and Victory Pass substation

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ID	Project name	Location	Ownership	Status	Acres	Project description
15	Desert Center General Plan Amendment	Desert Center	Allen Grant	Requested to the County (GPA240075) in 2024	334.6	Change the General Plan Foundation Component of five parcels from Community Development: Rural Open Space, Rural Residential, and Rural Desert to Community Development: Commercial Retail (CD:CR) & Medium Density Residential (CD: MDR), to allow for submittal of an application to build affordable single-family detached and attached residences on parcels designated Medium Density Residential.

Source: (Riverside County Planning Department 2025)

3.1.3 References

Riverside County. 2015. *Desert Center Area Plan*.

Riverside County Planning Department. 2025. "Query for Active Major P.D. Plans by District_202503." April 8. Retrieved from: <https://planning.rctlma.org/active-projects#2741959481-1146643532>.

3.2 Aesthetics

This section presents the environmental setting and analysis of impacts to aesthetics resulting from the Project and alternatives. This section describes the existing aesthetic conditions for the Project area, applicable regulations, potential for environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.2.1 Environmental Setting

Concepts and Terminology

Terms used in the characterization of aesthetic conditions are defined as follows:

- Visual character is the natural and human-made features of a site and general visual attributes. Visual character provides context for the public's perception of visual quality.
- Visual quality is the overall visual impression or attractiveness of a site or locale as determined by specific elements (e.g., color, variety, vividness, coherence, uniqueness, harmony, pattern). For the aesthetic analysis, the visual quality of a site or locale is rated as follows:
 - Low: The location is lacking in natural or cultural visual resource amenities typical of the region. A site with low visual quality will have aesthetic elements that are perceptibly uncharacteristic of the surrounding area.
 - Moderate: The location is typical or characteristic of the region's natural or cultural visual amenities. A site with moderate visual quality maintains the visual character of the surrounding area, with aesthetic elements that do not stand out as either contributing to or detracting from the visual character of an area.
 - High: The location has visual resources that are unique or exemplary of the region's natural or cultural scenic amenities. A site with high visual quality is likely to stand out as particularly appealing and makes a notable positive contribution to the visual character of an area.
- Viewers: Potentially affected individuals in the visual study area (defined below). Viewers within land uses that derive value from the visual quality of their surroundings are potentially sensitive to changes in visual conditions.
- Viewer exposure: The degree to which a site is visible from a given viewpoint, representing both how much of and how clearly a site can be seen. Viewer exposure considers some or all of the following factors: landscape visibility (i.e., the ability to see the landscape); viewing distance (i.e., the proximity of viewers to a site); viewing angle (whether a site would be viewed from a superior, inferior, or level line of sight); extent of visibility (whether the line of sight is open and panoramic to a site or restricted by terrain, vegetation, and/or structures); and duration of view.
- Visual sensitivity: The degree to which viewers of a site are likely to be affected by visual changes. Visual sensitivity is rated as high, moderate, or low as determined

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by a combination of visual quality, viewer types, number of viewers, and viewer exposure. Higher visual sensitivity is associated with sites with a higher visual quality and with a greater potential for changes to degrade or detract from the visual character of a public view.

- **Visibility:** The degree to which a site can be seen from a viewpoint or surrounding area.
- **Viewshed:** The geographic area visible from a particular viewpoint, which is often broken up into foreground, middleground, and background:
 - **Foreground:** What is visible within 0.25 to 0.5 miles from the viewpoint; defines the most noticeable details in the landscape and prominent objects and features.
 - **Middleground:** What is visible within 0.5 miles to 3 miles from the viewpoint.
 - **Background:** What is visible beyond 3 to 5 miles from the viewpoint. Term viewshed is also used in visual impacts analysis to refer to the geographic area from which a project site is visible.
- **Scenic Highway:** Any stretch of public roadway that is designated as such by a federal, State, or, county, or local agency.
- **Scenic vista:** Designated viewing area known for high scenic quality. A scenic vista may be officially designated as such by a federal, State, or local agency or may be an area that is otherwise designated, signed, and accessible to the public solely for viewing and sightseeing.

Project Setting

The area surrounding the Project site is within the Great Basin section of the Basin and Range physiographic province. This vast desert region in the western United States features highly eroded mountain ranges that rise sharply from broad, flat desert valleys and extend from eastern Oregon to western Texas. The immediate region surrounding the Project site is located in the Chuckwalla Valley in eastern Riverside County and is characterized by a broad, flat desert plain with scattered dry lakes and rolling sand dunes. The general topography of the Chuckwalla Valley is relatively flat with few desert washes, including the high-elevation Mojave Desert and the low-elevation Sonoran Desert. The Chuckwalla Valley is surrounded by multiple mountain ranges, including the Eagle Mountains to the northwest, the Coxcomb and Granite Mountains to the north, the Palen Mountains to the northeast, and the Chuckwalla Mountains to the south. These rugged mountains, with their angular ridges and bluish hues, contrast sharply with the flat, light-colored expanse of the Chuckwalla Valley floor. Views within the Chuckwalla Valley are expansive, showcasing a landscape that appears to be transitioning from a predominantly natural desert environment to one with increasing urban, agricultural, and solar industrial development. Developments in this region include clustered residential development, such as Lake Tamarisk Desert Resort, and limited palm farm operations. However, these land uses are not visually prominent and tend to decrease into the larger desert plain landscape.

The Project site is in a rural area. The Project site is situated on private parcels, the developed portions of which currently consist primarily of deciduous orchards or fallow agricultural fields. The remaining undeveloped portions of these parcels primarily support relatively nondescript

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desert scrub, such as creosote bushes and desert soil. The immediate surrounding area of the Project site consists of some desert washes, a palm date farm, and solar power-generation development. The relatively flat desert landscape of the Project site has little visual variety or distinctive topography, with minimal variation in form, line, color palette, and texture—characteristics typical of the region.

The Project site is surrounded by distant and nearby mountain ranges that provide visually interesting backdrops. The Project site itself lacks visual variety and scenic quality as the site is substantially influenced by numerous anthropogenic modifications in the surrounding area. These include seven adjacent or nearby solar power-generation developments, multiple existing transmission lines, the Arica/Victory Pass and Red Bluff substations, scattered man-made structures, four-wheel-drive tracks, access roads, Interstate 10 (I-10) immediately south of the Project site, and State Route 177 (SR 177), located approximately 6.2 miles west of the site. The nearest clustered residential developments are Lake Tamarisk Desert Resort, approximately 7.1 miles northwest, and Desert Center, approximately 8.5 miles east. Overall, the scenic quality of the Project site is typical of the region.

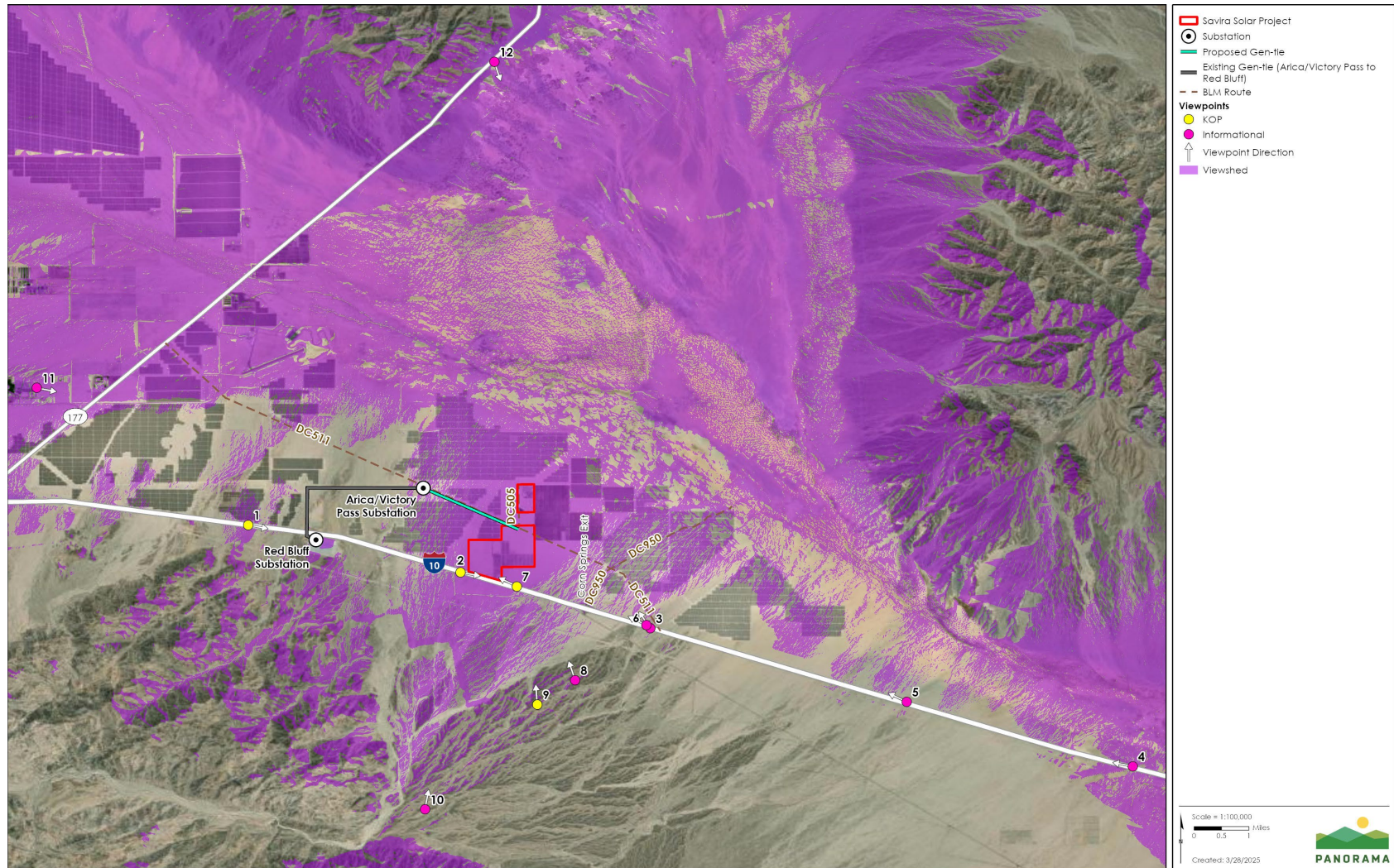
Project Visibility and Viewshed

The visual impacts viewshed for the Project is shown in Figure 3.2-1. The viewshed analysis was conducted using a modeled height of 15 feet for the PV modules as this would be the tallest potential height of the modules. For describing the Project's visual setting and addressing potential visual impacts, the viewshed is divided into distance zones of foreground, middleground, and background.

As shown in Figure 3.2-1, given the flat topography of the area, the Project site is visible in the foreground from some viewpoints, but the view is not contiguous. The Project site is also visible in the middleground and background from some viewpoints but would likely not be noticeable or would be blocked by existing infrastructure.

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Figure 3.2-1 Project Viewshed and Key Viewpoints Considered Location Map



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Scenic Highways, Vistas, and Resources

Scenic Highways

Per the list of eligible and officially designated State Scenic Highways from California Department of Transportation (Caltrans), I-10 is not a designated Scenic Highway, nor is SR 177. The nearest State-designated Scenic Highway is State Route 62 (SR 62) near the intersection of SR 177, which is approximately 25 miles north of the Project site.

Scenic Vistas

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

Lighting and Glare

Minimal street lighting exists along I-10 in the vicinity of the Project site. Headlights from vehicles on the roadway are the main source of intermittent light. Additional sources of light emanate from scattered agricultural and renewable energy facilities in the immediate vicinity.

Selection of Key Observation Points (KOPs)

Viewpoint Selection

Visual conditions, viewer experience, and viewer response are studied through the identification and selection of the most critical and representative viewpoints, referred to as *key observation points* (KOPs). Preliminary KOPs were selected within the Project viewshed based on areas evaluated for other recent solar projects in the area. The 12 preliminary KOPs identified are listed in Table 3.2-1, below, and identified on Figure 3.2-1. Of the 12 preliminary KOPs identified, four (KOPs 1, 2, 7, and 9) are carried forward for visual simulation and impact analysis (see Figure 3.2-2 through Figure 3.2-5). The remaining eight KOPs have landscape and viewing conditions similar to the selected KOPs, potential impacts can be informatively extrapolated based on the analysis for the selected KOPs, and aesthetic impacts are similar to or less than impacts for the selected KOPs with similar landscape and viewing conditions. Photographic simulations for each selected KOP are included in Section 3.2.4.

Field Investigations

Panorama Environmental, Inc. (Panorama) conducted field investigation of the KOPs on July 10 and 11, 2024, to evaluate existing visual conditions and collect photographs. Photographs were taken using a Sony A7ii mirrorless camera with a full frame sensor and a Sony FE 50-millimeter (mm) f/2.5 G lens. The camera was mounted on a tripod set at a constant height of 5.5 feet. The precise camera positions (latitude, longitude, and elevation) were recorded using a Bad Elf GNSS Surveyor GPS device capable of submeter accuracy. Multiple photographs were taken at approximately 15-degree intervals in the direction of Project features to capture multiple view options of the Project site and vicinity. The approximate view direction for each photograph was recorded in the field in azimuth degrees. From the resulting array of photographs, the most optimal single-frame photographs to demonstrate existing and proposed views of the Project features were selected and used to create stitched panoramic images that represent approximately 90 degrees of view.

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Table 3.2-1 Visual Sensitivity

KOPs	Approximate distance from Project site	Visual quality	Visual exposure and affected viewers	Visual sensitivity
KOP 1 – I-10 (Eastbound)	Approximately 3.35 miles west	Low. Dominant views include public roads, traffic barriers, traffic delineator posts, aboveground transmission lines, solar developments, and undeveloped desert land containing desert shrub.	Moderate. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a slightly downward line of sight.	Moderate. Moderate visual quality, few affected viewers, and low exposure conditions. Direct views of the Project site. KOP selected for full analysis.
KOP 2 – I-10 (Eastbound)	Approximately 0.25 mile west	Moderate. Dominant views include public roads, traffic delineator posts, a water tank, aboveground transmission lines, solar developments, and undeveloped desert land containing desert shrub.	High. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a mostly level line of sight.	Moderate. Moderate visual quality, many affected viewers, and high exposure conditions. Direct views of the Project site. KOP selected for full analysis.
KOP 3 – I-10 (Eastbound facing west)	Approximately 2 miles east	Low to moderate. Dominant views include public roads and signage, traffic barriers, solar developments, undeveloped desert land containing desert shrub, and mountain ranges in the background.	Low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a mostly level line of sight.	Low. Moderate visual quality, few affected viewers, and low exposure conditions. Distant views of the Project site. KOP not selected for full analysis.
KOP 4 – I-10 (Westbound)	Approximately 9.8 miles east	Moderate. Dominant views include public roads, traffic delineator posts, fencing, and undeveloped desert land containing desert shrub.	Very low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with an elevated line of sight.	Very low. Moderate visual quality, few affected viewers, and low exposure conditions. No views of the Project site. KOP not selected for full analysis.

3.2 AESTHETICS

KOPs	Approximate distance from Project site	Visual quality	Visual exposure and affected viewers	Visual sensitivity
KOP 5 – I-10 (Westbound)	Approximately 6.2 miles east	Moderate. Dominant views include public roads, fencing, and undeveloped desert land containing desert shrub.	Very low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with an elevated line of sight.	Very low. Moderate visual quality, few affected viewers, and low exposure conditions. Distant to no view of the Project site. KOP not selected for full analysis.
KOP 6 – I-10 (Westbound)	Approximately 2 miles east	Moderate. Dominant views include public roads, traffic delineator posts, rock and dirt piles, fencing, solar developments, undeveloped desert land containing desert shrub, and mountain ranges in the background.	Low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a mostly level line of sight.	Low. Moderate visual quality, few affected viewers, and low exposure conditions. Distant views of the Project site. KOP not selected for full analysis.
KOP 7 – I-10 (Westbound)	Approximately 0.25 mile southeast	Moderate. Dominant views include public roads, traffic delineator posts, fencing, transmission lines, solar development, undeveloped desert land containing desert shrub, and mountain ranges in the background.	High. High viewer exposure. Viewers would primarily be motorists passing at a high speed with a mostly level line of sight.	Moderate. Moderate visual quality and many affected viewers, and high exposure conditions. Direct views of the Project site. KOP selected for full analysis.
KOP 8 – Corn Springs Road	Approximately 2.15 miles southeast	Moderate. Dominant views include undeveloped desert land containing desert shrubs, transmission lines, and mountain ranges in the background.	Low to Moderate. Limited viewer exposure. Viewers would primarily be motorists traveling along Corn Springs Road at a slightly elevated line of sight.	Low. Moderate visual quality, few affected viewers, and low exposure conditions. Views of the Project would be limited. KOP not selected for full analysis.

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KOPs	Approximate distance from Project site	Visual quality	Visual exposure and affected viewers	Visual sensitivity
KOP 9 – Corn Springs Road	Approximately 2.3 miles south	Moderate. Dominant views include undeveloped desert land containing desert shrubs, and transmission lines and mountain ranges in the background.	Moderate. Limited viewer exposure. Viewers would primarily be motorists traveling along Corn Springs Road at a slightly elevated line of sight but a slightly downward line of sight.	Moderate. Moderate visual quality, few affected viewers, and low exposure conditions. Downward views of the Project site. KOP selected for full analysis.
KOP 10 – Corn Springs Road	Approximately 4.25 miles south	Moderate. Dominant views include a wide dirt road, undeveloped desert land containing desert shrubs, and mountain ranges in the background.	Low to moderate. Limited viewer exposure. Viewers would primarily be motorists traveling along Corn Springs Road at a slightly elevated line of sight.	Low. Moderate visual quality, few affected viewers, and low exposure conditions. Views of the Project would be limited. KOP not selected for full analysis.
KOP 11 – Lake Tamarisk Desert Resort	Approximately 7.20 miles northwest	Moderate. Dominant views include undeveloped desert land containing desert shrubs, and transmission lines and mountain ranges in the background	Very low. The Project site is minimally visible from this public viewpoint.	Very low. Moderate visual quality, few affected viewers, and very low exposure conditions. The Project is blocked from view by existing, similar infrastructure. KOP selected for full analysis.
KOP 12 – Rice Road	Approximately 7.50 miles north	Moderate. Dominant views include public roads, undeveloped desert land containing desert shrub, and mountain ranges in the background.	Very low. The Project site is not visible from this public viewpoint.	Very Low. Low to moderate visual quality, few affected viewers, and low exposure conditions. The Project is not visible from this public viewpoint. KOP not selected for full analysis.

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Figure 3.2-2 KOP 1 – I-10 (Eastbound)



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Figure 3.2-3 KOP 2 – I-10 (Eastbound)



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Figure 3.2-4 KOP 7 – I-10 (Westbound)



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Figure 3.2-5 KOP 9 – Corn Springs Road



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Figure 3.2-6 KOP 11 – Lake Tamarisk Desert Resort



3.2 AESTHETICS

KOP Analysis

KOP 1: I-10 (Eastbound)

KOP 1 is located west of the western boundary of the Project site, along I-10 looking east.

Visual Character

The existing view of the Project site from KOP 1 is shown in Figure 3.2-2. The foreground includes the roadways, road signage, aboveground transmission lines, a communication tower, the SCE Red Bluff Substation, and undeveloped desert land with scattered native desert shrubs. The Project site boundary is visible in the middleground and background and is not screened by topography or vegetation. KOP 1 is on a slightly higher elevation than the Project site such that viewers would be looking slightly down at the Project.

Visual Quality

KOP 1 has low visual quality, with scattered desert shrubs, roadways, road signage, aboveground transmission lines, substation infrastructure, and existing solar development comprising the main view in the foreground. The middleground and background also include views of undeveloped desert land and distant aboveground transmission lines. Existing views of the Project site are not screened by topography, vegetation, or elevation. The viewshed at KOP 1 contains anthropogenic elements such as roadways, road signage, traffic controls, and utility development; however, these elements do not obstruct views of the Project site.

Affected Viewers and Visual Exposure

Views of the Project site from KOP 1 are experienced by the public when driving eastbound along I-10, which runs east to west along the southern boundary of the Project site. Visual exposure is of short duration for motorists. Motorists are generally focused on the road conditions in front of them and are not likely to be focused on side-angle views of the Project site.

Visual Sensitivity Conclusion

The visual quality of KOP 1 is moderate, and the visual exposure to the Project site is low. Visual sensitivity to changes in the foreground, middleground, or background is low because of the generally short duration for viewing while traveling along I-10.

KOP 2 I-10 (Eastbound)

KOP 2 is located on the western boundary of the Project site, along I-10, looking east.

Visual Character

The existing view of the Project site from KOP 2 is shown in Figure 3.2-3. The foreground includes roadways, traffic delineator posts, a water tank, aboveground transmission lines, solar development, undeveloped desert land with scattered native desert shrubs, and mountain ranges in the distance. The Project site boundary is visible in the middleground and background and is not screened by topography or vegetation. KOP 2 is at a similar elevation to the Project site, allowing viewers to view the Project site at eye level.

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Visual Quality

KOP 2 has moderate visual quality, with scattered desert shrubs, roadways, traffic delineator posts, an individual water tank, aboveground transmission lines, and existing solar development comprising the main view in the foreground. The middleground and background also include views of undeveloped desert land and distant aboveground transmission lines. Existing views of the Project site are not screened by topography, vegetation, or elevation. The viewshed of KOP 2 contains anthropogenic elements such as roadways, traffic controls, and utility development; however, these elements do not obstruct views of the Project site.

Affected Viewers and Visual Exposure

Views from KOP 2 are experienced by the public when driving eastbound along I-10, which runs east to west along the southern boundary of the Project site. Visual exposure is of short duration for motorists. Motorists are generally focused on the road conditions in front of them and are not likely to be focused on side-angle views of the Project site.

Visual Sensitivity Conclusion

The visual quality of KOP 2 is moderate, and visual exposure to the Project site is high given the proximity. However, visual sensitivity to changes in the foreground, middleground, or background is low because of the existing solar development in the vicinity, the limited number of viewers traveling along I-10, and the generally short duration of views while in transit.

KOP 7 – I-10 (Westbound)

KOP 7 is located near the southeastern boundary of the Project site, along I-10, looking northwest.

Visual Character

The existing view of the Project site from KOP 7 is shown in Figure 3.2-4. The foreground includes roadways, traffic delineator posts, fencing, aboveground transmission lines, undeveloped desert land with scattered native desert shrubs. The Project site boundary is visible in the middleground and background and is not screened by topography or vegetation. KOP 7 is at a similar elevation to the Project site, allowing viewers to see the Project at eye level.

Visual Quality

KOP 7 has moderate visual quality, with scattered desert shrubs, roadways, traffic delineator posts, fencing, aboveground transmission lines, and existing solar development comprising the main view in the foreground. The middleground and background also include views of undeveloped desert land and distant aboveground transmission lines. Existing views of the Project site are not screened by topography, vegetation, or elevation. The viewshed of KOP 7 contains anthropogenic elements such as roadways, traffic controls, fencing, and utility development; however, these elements do not obstruct views of the Project site.

Affected Viewers and Visual Exposure

Views of the Project site from KOP 7 are experienced by the public when traveling westbound along I-10, which runs east to west along the southern boundary of the Project site. Visual exposure is of short duration for motorists. Motorists are generally focused on the road conditions in front of them and are not likely to be focused on side-angle views of the Project site.

3.2 AESTHETICS

Visual Sensitivity Conclusion

The visual quality of KOP 7 is low, and the visual exposure to the Project site is low. Visual sensitivity to changes in the foreground, middleground, or background is low because of the existing solar development in the vicinity, the limited number of viewers traveling along I-10, and the generally short duration of views while in transit.

KOP 9 – Corn Springs Road

KOP 9 is located south of the southern boundary of the Project on Corn Springs Road, looking north.

Visual Character

The existing view of the Project site from KOP 9 is shown in Figure 3.2-5. The foreground includes aboveground transmission lines and undeveloped desert land with scattered native desert shrubs. The Project site boundary is slightly visible in the middleground and background and is mostly screened by topography or vegetation. KOP 9 is at a slightly higher elevation than the Project site so that viewers are looking down onto the Project site.

Visual Quality

KOP 9 has moderate visual quality, with scattered desert shrubs comprising the main view in the foreground. The middleground and background also include views of undeveloped desert land, distant aboveground transmission lines, and mountain ranges. Existing views of the Project site are not screened by topography, vegetation, or elevation. The viewshed of KOP 9 contains mostly desert shrub, which does not obstruct views of the Project site.

Affected Viewers and Exposure Conditions

Views of the Project site from KOP 9 are experienced by the public when driving along Corn Springs Road, which runs north to south along the southern boundary of the Project site. Visual exposure is of short duration for motorists. Motorists are generally focused on the road conditions in front of them and are not likely to be focused on distant views of the Project site.

Visual Sensitivity Conclusion

The visual quality of KOP 9 is low, and the visual exposure to the Project site is low given the distance. The visual sensitivity to changes in the foreground, middleground, or background view is low because of the limited number of viewers traveling along Corn Springs Road.

KOP 11 – Lake Tamarisk Desert Resort

KOP 11 is located west, northwest of the western boundary of the Project at the outside area at the eastern edge of the Lake Tamarisk Desert Resort, looking east, southeast.

Visual Character

The existing view of the Project site from KOP 11 is shown in Figure 3.2-6. The foreground includes undeveloped desert land with scattered native desert shrubs. The middleground includes existing solar infrastructure, and both the middleground and background include existing gen-tie lines and substations associated with existing solar projects. The Project site

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boundary is not visible in the background because it is screened by topography and existing infrastructure.

Visual Quality

KOP 11 has moderate visual quality, with scattered desert shrubs comprising the main view in the foreground. The middleground and background include views of existing aboveground solar arrays, transmission lines, and a substation, and distant mountain ranges. Existing views of the Project site are screened by topography, vegetation, and existing infrastructure which would obstruct views of the Project site.

Affected Viewers and Exposure Conditions

Minimal views of the Project site from KOP 11 are experienced by the public living or visiting the Lake Tamarisk Desert Resort. Visual exposure would be of longer duration for people walking in the open space on the eastern side of Lake Tamarisk. The public would likely be focused on the nearer desert vegetation or the distant mountain ranges and are not likely to be focused on distant minimal views of the Project site.

Visual Sensitivity Conclusion

The visual quality of KOP 11 is moderate, and the visual exposure to the Project site is very low given the distance and blockage of views by existing infrastructure. The visual sensitivity to changes in the foreground, middleground, or background view is very low because of the very low exposure conditions.

3.2.2 Regulatory Framework

Federal, State, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Laws, Regulations, and Policies Federal Land Policy and Management Act

Section 102(a) of the Federal Land Policy and Management Act (FLPMA) of 1976 (Bureau of Land Management (BLM) 1976) states that “the public lands are to be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” Section 103(c) identifies “scenic values” as one of the resources for which public land should be managed. Section 201(a) states, “the Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including scenic values).” Section 505(a) requires that “each right-of-way (ROW) shall contain terms and conditions which will minimize damage to the scenic and esthetic values.”

National Park Service Night Sky Program

Nighttime views and environments are among the critical park features the NPS protects (NPS, n.d.). Under the Night Sky Program, NPS staff monitor dark night skies and develop exterior lighting guidelines to determine what light is appropriate for a location’s historic character, energy, cost, maintenance efficiency, light pollution, and wildlife. Portions of Joshua Tree

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National Park (JTNP) are located within the Project's viewshed, and JTNP has been designated an International Dark Sky Park by the International Dark-Sky Association.

Bureau of Land Management Visual Resource Management System

The Bureau of Land Management (BLM) uses the Visual Resource Management (VRM) System to inventory and manage scenic values on lands under its jurisdiction. Guidelines for applying the system are described in BLM Manual 8400 et seq (BLM 1984). VRM classes are assigned through Resource Management Plans. The assignment of VRM classes is based on the management decisions made in the Resource Management Plans. The 2016 Desert Renewable Energy Conservation Plan Land Use Plan Amendment assigned a VRM Class IV to the Development Focus Area that contains the Project site. The VRM Class IV management objective is the least restrictive classification and provides for management activities (projects) that require major modifications of the existing character of the landscape. The level of change allowed may be high and may dominate the view and be the major focus of viewer attention.

State

California Scenic Highway System

The California Department of Transportation administers the state Scenic Highway Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (California Streets and Highways Code § 260 et seq.). The Scenic Highway Program includes a list of officially designated highways and highways that are eligible for designation (Caltrans n.d.). If a highway is listed as eligible for official designation, it is part of the Scenic Highway Program, and care must be taken to preserve its eligibility status.

Local

Riverside County General Plan

The Land Use Element of the County of Riverside General Plan (Riverside County 2021a) contains the following policies relevant to aesthetics that apply to the Project:

Policy LU 4.1:

Require that new developments be located and designed to visually enhance, not degrade, the character of the surrounding area through consideration of the following concepts:

- Compliance with the design standards of the appropriate area plan land use category.
- Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent ordinances and regulations.
- Preserve natural features such as unique natural terrain, arroyos, canyons, and other drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.

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Policy LU 7.1:

Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.

Policy LU 9.1:

Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

Policy LU 9.2:

Require that development protects environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.

Policy LU 14.1:

Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

Policy LU 14.3:

Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.

Policy LU 14.4:

Maintain an appropriate setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways based on local surrounding development, topography, and other conditions.

Policy LU 14.5:

Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.

Policy LU 21.1:

Require that grading be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.

Policy LU 21.3:

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Ensure that development does not adversely impact the open space and rural character of the surrounding area.

Policy LU 26.1:

Require that development be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.

Policy LU 26.3:

Ensure that development does not adversely impact the open space and rural character of the surrounding areas.

Policy LU 30.8:

Require that industrial development be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area.

The Circulation Element of the County of Riverside County General Plan (Riverside County 2015a) contains the following policies relevant to aesthetics that apply to the Project:

Policy C 19.1:

Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.

Policy C 25.2:

Locate new and relocated utilities underground when possible and feasible. All remaining utilities shall be located or screened in a manner that minimizes their visibility by the public.

The Open Space Element of the County of Riverside County General Plan (Riverside County 2015b) contains the following policies relevant to aesthetics that apply to the project:

Policy OS 21.1:

Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

Policy OS 22.1:

Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.

Policy OS 22.4:

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Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan when it is necessary to preserve unique or special visual features.

Policy OS 22.5:

Utilize contour grading and slope rounding to gradually transition graded slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors.

The Desert Center Area Plan contained in the County of Riverside General Plan (Riverside County 2021b) contains the following policies relevant to aesthetics that apply to the Project:

Policy DCAP 2.3.

Assure that the design of new land uses subject to discretionary review visually enhances, and does not degrade, the character of the Desert Center Region.

Policy DCAP 4.1:

When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.

Policy DCAP 8.1.

Protect the scenic highways within the Desert Center Area Plan from change that would diminish the aesthetic value of adjacent properties through adherence to the policies found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

County of Riverside Ordinance No. 655 (“Light Pollution Ordinance”)

The intent of the County’s Light Pollution Ordinance is to restrict the permitted use of certain light fixtures from emitting into the night sky undesirable light rays that have a detrimental effect on astronomical observation and research. The Light Pollution Ordinance establishes Zone A and Zone B for purposes of lighting regulation enforcement. Development within Zone A is subject to more stringent lighting regulations than that within Zone B, as Zone A encompasses lands within 15 miles of Palomar Observatory and Zone B encompasses lands 15 to 45 miles from Palomar Observatory. Within both Zones A and B, low-pressure sodium lamps are preferred, and all nonexempt outdoor light fixtures must be shielded. Regarding Class II (e.g., parking lot, walkway, security) lighting, lighting above 4,050 lumens is prohibited in both zones.

The Project site is located approximately 95 miles northeast of the Palomar Observatory, which is not within Zone A or Zone B.

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3.2.3 Methodology for Analysis

Visual Analysis

Scenic Vistas

For purposes of this analysis, a *scenic vista* is defined as a formally designated scenic vista or any public vantage point offering views of primarily natural settings containing recognized scenic features or landscapes of special importance. As stated above in Section 3.2.1 Environmental Setting, there are no officially designated scenic vistas in the vicinity of the Project site. Additionally, there are no designated vista points in the vicinity of the Project site. To evaluate potential impacts to scenic vistas, the concepts of view blockage, interruption, and degradation are considered. If views from public vantage points across the Project site viewshed encompass recognized scenic features, the visibility and characteristics of Project components are assessed to determine whether they may result in view obstruction (i.e., blockage of scenic resources), view interruption (i.e., visual intrusion caused by contrasting elements), or degradation (i.e., a decline in the overall scenic quality).

Scenic Highways

Scenic Highways include those State facilities that have been officially designated or nominated for official designation through eligible status by Caltrans. If the Project site is located within the viewshed of a Scenic Highway, then the potential for impacts to Scenic Highways is informed by the presence of existing scenic resources on the Project site, Project plans to avoid/protect or disturb existing scenic resources, and the visibility of scenic resource disturbance from an officially designated or eligible state Scenic Highway. Pursuant to CEQA Guidelines Appendix G, scenic resources include trees, rock outcroppings, and historic buildings, and may also include locally recognized scenic resources including oak trees, vineyards, and rolling hills.

Neither I-10 nor SR 177 is designated or eligible as a Scenic Highway; however, I-10 is identified by Riverside County as County-eligible for designation as a Scenic Highway (Riverside County 2015a). No views of the Project site are available from a state Scenic Highway.

Federal Highway Administration Methodology

Visual resources is generally defined as the natural and built landscape that is visible from public views. As described above, visual character is a combination of the natural landscape (e.g., topography, vegetation, landforms) and anthropogenic features (e.g., roads, buildings, structures). The visual quality impact analysis is based on field observations along with photographs from the Project site, maps, visual simulations of Project components, and other relevant data in the record. The impact analysis identifies potential temporary (short-term) and permanent (long-term) impacts on scenic vistas or the visual character and quality of the Project area as seen from various public viewpoints in the vicinity.

Visual simulations and renderings have been prepared and depict the Project facilities from the four selected KOPs.

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Once all effects are analyzed, determinations are made as to the significance of any potential impacts according to the criteria set out in the CEQA Guidelines Appendix G and Riverside County's Environmental Assessment Checklist.

Visual Character and Quality

Impacts to existing visual character and quality are determined through a comparison of pre- and post-development conditions on the Project site. Specifically, the Project is examined for potential contrast with existing on-site features and features in the surrounding area.

Viewers and Exposure

The primary potentially affected viewer groups within the Project area are motorists on I-10. Motorist viewers experience the Project area within the context of a setting that includes I-10 and related transportation infrastructure, existing transmission and distribution facilities, solar power-generation developments, and other nearby developments and facilities.

Project Lighting

Permanent lighting would be provided within the substation(s), around operation and maintenance building, around the *battery energy storage system* (BESS), and at the solar development site entry gate. Lighting within the operation and maintenance building and BESS would be controlled by a switch and/or timer and would be off unless needed. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Exterior lights at the substation yard, operation and maintenance building, and BESS would be low lighting controlled by a switch or sensor to allow operation and maintenance personnel to reach the infrastructure safely at night, if needed.

All structures would be below the 200-foot height standard that triggers Federal Aviation Administration Part 77 Obstruction Evaluation Consultation, so no aviation lighting on power poles or other facilities is required.

Glare Analysis

Reflective surfaces that could result in substantial adverse effects associated with glare from the Project are limited to the proposed PV modules. Ancillary components of the Project that include glass or metallic surfaces (e.g., fences and gates, inverter stations and transformers, collector system structures, substation structures, the O&M building, BESS structures, gen-tie structures, and overhead conductor) could reflect sunlight to varying degrees; however, these features would be dispersed throughout the Project site, they would occupy a small area compared to the solar panels, and their reflective surfaces would not align in mass to reflect substantial durations and intensities of glare. Therefore, the glare analysis for the Project is focused on sunlight that would be reflected from the PV modules.

The glare analysis study area for identifying representative observers comprises a 15-mile buffer surrounding the Project site.

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ForgeSolar Solar Glare Hazard Analysis Tool

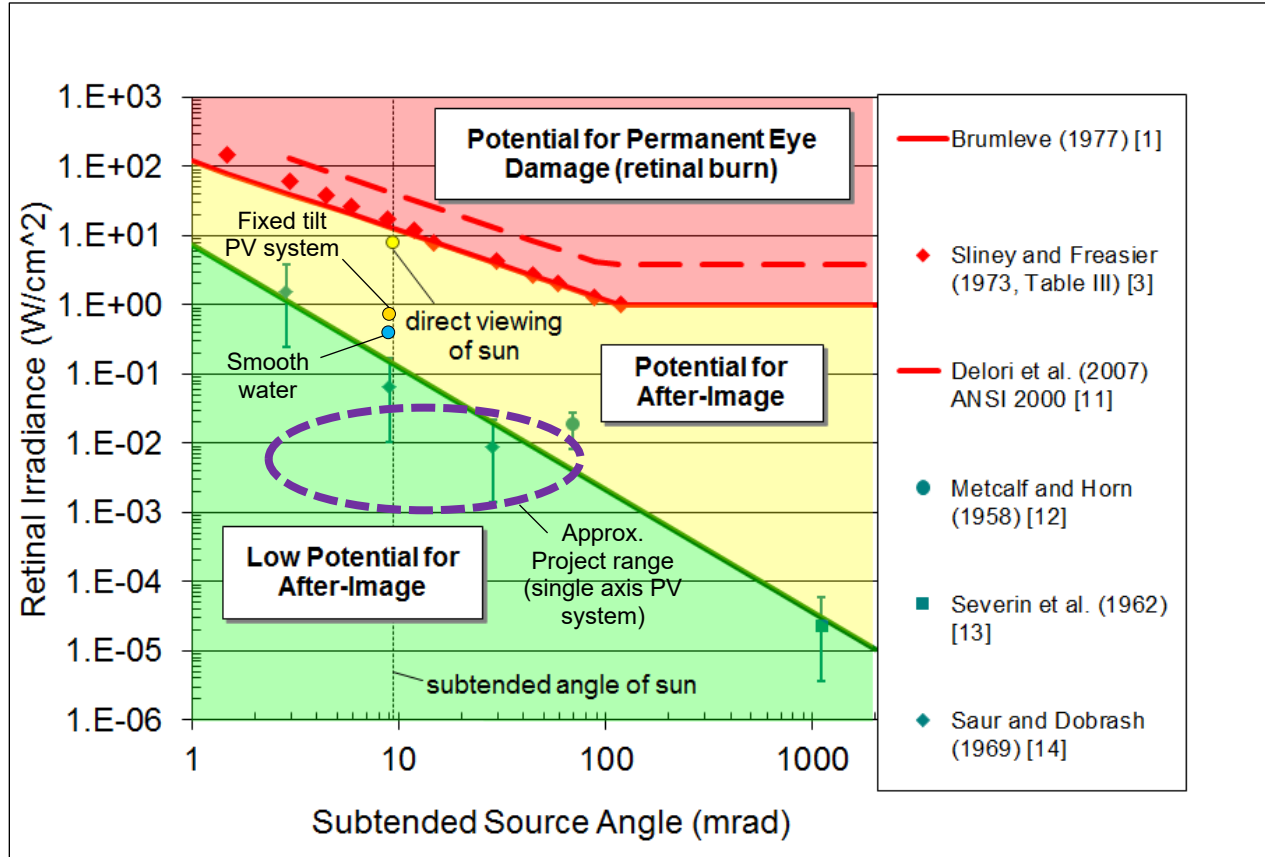
An analysis of the Project glare potential was completed using the ForgeSolar Solar Glare Hazard Analysis Tool (SGHAT, Appendix B: Glare Analysis). The SGHAT is designed to model and predict potential glare impacts associated with PV modules, and it provides the approximate level of glare and duration (annual minutes) of exposure that may be experienced at designated observation points, travel routes, and flight paths as well as the potential ocular impacts. The ocular impact of solar glare is categorized as follows (Ho, Ghanbari, and Diver 2011):

- “Green” glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
- “Yellow” glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
- “Red” glare is representative of glare conditions with potential for permanent eye damage (retinal burn). Glare at this level may be associated concentrated solar projects and does not result from PV solar projects.

The glare hazard plot shown in Figure 3.2-7 defines ocular impact as a function of retinal irradiance and subtended source angle and illustrates the three color hazard categories described above (Ho, Ghanbari, and Diver 2011). As shown in Figure 3.2-7, a direct view of the sun is identified within the upper range of the yellow glare category. For comparison purposes, the reflection of the sun off smooth water and a representative 25-degree fixed-tilt flat-plate polycrystalline PV module, which follow the same subtended angle of the sun but are at the lower range of the yellow glare category under conservative assumptions, are also shown in Figure 3.2-7 (Riley and Olson 2011).

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Figure 3.2-7 Glare Hazard Plot



Source: (Ho, Ghanbari, and Diver 2011; Riley and Olson 2011)

Model Parameters and Observers

Glare conditions were modeled for the following:

- Solar development areas. The limits of solar panel development are represented by four areas: PV 01, PV 02, PV 03a, and PV 03b. PV 01 and 02 represent the adjacent Redonda Solar Project and PV 03a and 03b represent the Project. The PV modules used in this analysis are single-axis rotating racks with a maximum height of 15 feet above ground, a maximum tracking angle of 60 degrees, and an anti-reflective coating. Additional information regarding the orientation and tilt of the solar panels, reflectance of project components, and viewer assumptions are defined in the model parameters. Three separate glare models were processed for the Project due to the SGHAT's geographic distribution limitations that require all solar development areas in a single model to be within 5 kilometers of each other.
- Discrete observation points (OPs). KOPs, referred to in SGHAT as discrete OPs or user-prescribed observation points, represent public viewpoints in the study area from which the Project site is visible. Each discrete OP represents a viewer standing at 6 feet tall. Discrete OPs include KOPs 1, 2, 7, and 9 and representative receptor

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locations in the vicinity of the Project site., see Figure 3.2-8 for the locations of the modeled glare.

- Vehicle travel routes. The I-10 travel corridor is located immediately south of the Project site and comprises of two lanes traveling in the eastbound direction and two lanes traveling in the westbound direction. A 16.5-mile-long section of the highway within a 5-mile buffer surrounding the Project site was evaluated for glare. Six observer routes are included, each representing approximately 5 miles of the highway in each travel direction (I10a EB and WB, I10b EB and WB, and I10c EB and WB). An eye height of 9.4 feet was used to represent the views from large trucks to identify a worst-case glare scenario. Glare seen from a typical vehicle eye height (approximate 4 feet) is expected to be less due to a reduction in line-of-sight opportunity to the PV modules emitting glare.
- Aviation flight paths. Glare conditions were modeled for Military Training Routes (MTRs) that occur within an area extending to approximately 15 miles from the Project site, including VR296, VR289, VR1265, VR1266, VR1267, and VR1268, which also serve to represent other possible air navigation routes that occur in the region beyond military operations, see Figure 3.2-8 for the routes modeled. Both the lower and upper above ground level (AGL) elevation positions were modeled for the MTRs.
- Airports. No airports or other aviation infrastructure were identified within 15 miles of the Project; therefore, none are included as observers. The closest airport, Blythe Airport, is located over 30 miles east of the Project.

Figure 3.2-8 Forge Glare Modeling Locations

Created 20 Aug, 2024
Updated 20 Aug, 2024
Time-step 1 minute
Timezone offset UTC-8
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m²
Category 500 kW to 1 MW
Site ID 127272.21768

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2



Project Structures on BLM-Administered Lands

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of

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construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For aesthetics, the Checklists ask if a project would:

- Have a substantial adverse effect on a scenic vista. (Criteria Requiring No Further Evaluation)
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (Criteria Requiring No Further Evaluation)
- In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point); in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality (Impact Aesthetics-1).
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (Impact Aesthetics-2).

Regarding impacts to visual character or quality, the Project site is located in unincorporated Desert Center, which, as of 2023, is included in the Desert Center Census Designated Place (CDP), with a population of approximately 167 persons (U.S. Census Bureau 2024). Desert Center is surrounded by unincorporated desert lands and is not located within an urban growth boundary. Therefore, consistent with California Public Resources Code section 21071, the Project site is within a nonurbanized setting and, thus, the applicable significance threshold is whether the Project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Have a substantial effect upon a scenic highway corridor within which it is located (Impact Aesthetics-3).
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view. (Criteria Requiring No Further Evaluation)
- Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655. (Criteria Requiring No Further Evaluation)
- Expose residential property to unacceptable light levels. (Criteria Requiring No Further Evaluation)

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Criteria Requiring No Further Evaluation

Due to nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

- **Have a substantial adverse effect on a scenic vista.** The Riverside County General Plan does not designate the Project site as an important visual resource, and no scenic vistas have been identified within the aesthetics resources study area. Therefore, no impact would occur under this criterion. Views from nearby scenic areas, such as the nearby desert landscape and surrounding mountain area addressed in Impact Aesthetics-1. Potential impacts to views from I-10, which is identified by the County of Riverside General Plan Circulation Element as County-eligible for designation as a Scenic Highway, are addressed under Impact Aesthetics-1.
- **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.** There are no scenic resources located within the Project site, and no designated state Scenic Highways occur in the Project area. The nearest designated state Scenic Highways are SR 74, south of Palm Desert, approximately 65 miles west of the Project site, and SR 62 from Morongo Valley to the Arizona border, approximately 25 miles north of the Project site. Therefore, no impact would occur under this criterion. Potential impacts to views from I-10, which is identified in the County of Riverside General Plan Circulation Element as eligible for designation as a Scenic Highway (Riverside County 2015a), are addressed under Impact Aesthetics-1.
- **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view.** There are no scenic resources located within the Project site, and no designated state Scenic Highways occur in the Project area. The nearest designated state Scenic Highways are SR 74, south of Palm Desert, approximately 65 miles west of the Project site, and SR 62 from Morongo Valley to the Arizona border, approximately 25 miles north of the Project site. Therefore, no impact would occur under this criterion. Potential impacts to views from I-10, which is identified in the County of Riverside General Plan Circulation Element as eligible for designation as a Scenic Highway (Riverside County 2015a), are addressed under Impact Aesthetics-1.
- **Interfere with nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655.** The Project site is located approximately 95 miles northeast of the Palomar Observatory, which is well beyond the observatory's areas of sensitivity—Zone A (15-mile radius) and Zone B (45-mile radius). The Project is expected to involve minimal nighttime lighting during both construction and operation, with such use being limited in scope and duration. Given the substantial distance from the observatory, lighting associated with the Project

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would not result in any impacts to astronomical observation or research at the Mt. Palomar Observatory.

- **Expose residential property to unacceptable light levels.** The closest off-site sensitive receptor to the Project site is a residence located approximately 7.5 miles northwest of the Project site along the west side of SR 177, and all lights associated with the Project would be downward facing and pointing into the Project. Therefore, no impact would occur under this criterion. Potential impacts to the Project's night lighting effects are discussed under Impact Aesthetics-3.

3.2.4 Impacts and Mitigation Measures

Impact Aesthetics-1 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings?

The Project would result in a minimal decrease of visual character or quality due to the introduction of noticeable visual contrast, including changes in spatial characteristics, visual scale, form, line, color, and texture. Degradation would also result from the Project's visual dominance and the blockage of views to higher-value landscape features, such as mountains and ridgelines. Impacts associated with construction, operation, and maintenance are described below. Decommissioning impacts are expected to be similar to those associated with construction and are therefore not addressed further.

Construction

Construction of the Project over an approximate 15-month period would result in temporary direct and indirect visual impacts associated with the presence of construction equipment, vehicles, materials, and workforce within the Project area. Visual contrast would also result from vegetation removal, intermittent nighttime lighting, fugitive dust emissions, and increased construction-related vehicle traffic on surrounding roadways.

Temporary construction activities such as grading, solar array assembly, transmission structure installation, conductor stringing, intermittent nighttime lighting, and staging would involve the use of heavy equipment and temporary laydown areas. These construction activities would be visible from I-10 and minimally from SR 177, Desert Center, and Lake Tamarisk Desert Resort. While construction would temporarily alter the visual character of the area, these impacts would be short-term and reversible. Therefore, visual impacts associated with construction activities would be less than significant.

Construction activities requiring ground surface disturbance and vegetation removal may result in visible color, texture, and line contrasts that would continue beyond construction. Revegetation in desert environments is typically difficult, slow, and of limited success. However, most disturbed areas would be occupied by permanent facilities, and views from foreground/middleground viewshed areas of the disturbed areas would be made from similar at-grade elevations; therefore, much of the contrast associated with unnatural vegetative patterns and/or lines would be screened from view by intervening vegetation, the new facilities, and

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distance, as shown in the visual simulations prepared for KOPs 1, 2, 7, and 9. Additionally, the Project site and surrounding area consist of fallow agricultural land, which lacks strong scenic or natural landscape character, or existing solar facilities which share similar characteristics as the Project. Because the site is already disturbed and visually distinct from the broader natural landscape, construction activities involving ground surface disturbance would be less visually prominent. This being the case, visibility of construction activities for the Project would not result in substantial contrast with existing conditions, nor would it significantly degrade the visual character or quality of the surrounding area.

Temporarily disturbed areas of the Project that will not be occupied by permanent facilities could result in a drastic visual contrast to the surrounding area and cause moderate to high levels of visual change from certain viewing locations if these areas are not revegetated. The Project would implement Mitigation Measure (MM) BIO-6, which requires revegetation of temporarily disturbed areas and would thereby limit permanent visual impacts and avoid significantly degrade a high-value or pristine visual setting. With the implementation of MM BIO-6, impacts would be less than significant.

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Figure 3.2-9 KOP 1 – I-10 (Eastbound) Simulation



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Figure 3.2-10 KOP 2 – I-10 (Eastbound) Simulations



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Figure 3.2-11 KOP 7 – I-10 (Westbound) Simulation



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Figure 3.2-12 KOP 9 – Corn Springs Road Simulation



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Figure 3.2-13 KOP 11 Lake Tamarisk Desert Resort Simulation



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Construction traffic on unpaved roads could generate fugitive dust, resulting in temporary visual impacts such as localized haze and reduced visibility. If not properly regulated, these dust clouds could create moderate levels of visual contrast and distraction. Implementation of MM Air-2, which requires implementation of a Fugitive Dust Control Plan, would minimize dust generation through stabilization of unpaved surfaces and materials. With MM Air-2 in place, impacts would be less than significant.

Increased vehicle trips along I-10 due to Project construction would not be readily discernible to the casual observer given existing traffic volumes. Any perceived change would be short term and would not degrade visual quality. This indirect visual impact would therefore be less than significant.

Operation and Maintenance

As described in Section 3.2.1 and depicted in Figure 3.2-1, four representative KOPs were selected from the identified sensitive viewpoints and corridors to assess the Project's operation and maintenance impacts on the existing visual character and scenic quality of the landscape. Operation and maintenance of the Project would directly affect the surrounding area. These effects are addressed below for each selected KOP.

KOP 1 – I-10 (Eastbound)

Figure 3.2-2 presents the existing view from KOP 1 along eastbound I-10. As shown in the visual simulation (Figure 3.2-9), the majority of the Project would not be visually noticeable due to screening provided by intervening structures, mostly associated with existing energy infrastructure and vegetation. However, the associated gen-tie line, comprising intermittent vertical steel poles, would be visible in the middleground. These features would be similar in character to existing surrounding development and would only be briefly noticeable to motorists, who are generally focused on the roadway ahead. Because the majority of Project components would not be visible from this vantage point, less-than-significant impacts to visual character or view quality would occur at KOP 1.

KOP 2– I-10 (Eastbound)

Figure 3.2-3 presents the existing view from KOP 2 on eastbound I-10. As shown in the visual simulation (Figure 3.2-10), the Project's features (primarily solar array and fencing) would generally be visible in the foreground, with limited obstruction from existing vegetation. The solar array also would form a low, near-continuous dark line across a portion of the middleground landscape. However, the Project would not block views of the background, which includes the Chuckwalla Valley landscape and surrounding mountainous terrain, which contribute to scenic vistas. The open landscape along this portion of I-10 would enable extended view durations of the Project for travelers on I-10 crossing Chuckwalla Valley. Portions of the Project's solar arrays would be prominently visible as continuous, linear, horizontal, medium- to dark-gray to bluish-black patches on the valley floor partially screened from I-10 views by intervening vegetation.

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In the context of an existing landscape that includes not only the natural landforms, vegetative patterns, and earth-tone colors and textures of a desert valley but also the industrial characteristics of several solar projects in the immediate vicinity of the Project site, the Project would result in varying degrees of visual change. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays, would contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains). The Project's form and line would be similar to the adjacent solar facilities and gen-tie lines already established in the landscape as well as some of the darker date palm farms adjacent to the Project. The Project's dark array panels would be noticeable against the lighter earth tones of the valley's soils and rock but would be similar in nature to the existing solar facilities. The Project would constitute a foreground, visually co-dominant feature in the landscape and would attract the attention of the casual observer. In context of the existing Chuckwalla Valley visual landscape, impacts to visual character and view quality would be significant and unmitigable.

KOP 7– I-10 (Westbound)

Figure 3.2-4 presents the existing view from KOP 7 along westbound I-10. As illustrated in the visual simulation (Figure 3.2-11), the Project components (primarily solar arrays and fencing) would be largely visible across the foreground, middleground, and background, with minimal visual screening provided by existing vegetation. Similar to KOP 2, KOP 7 offers an expansive vantage viewpoint where a greater portion of the Project site can be seen within the landscape. The solar arrays would appear as a low, dark, linear element extending across the middleground terrain without obstructing the distant views of the Chuckwalla Valley and its surrounding mountain ranges that define the area's visual character. Portions of the Project's solar arrays would be prominently visible as continuous, linear, horizontal, medium- to dark-gray to bluish-black patches on the valley floor partially screened from I-10 views by intervening vegetation.

In the context of an existing landscape that includes not only the natural landforms, vegetative patterns, and earth-tone colors and textures of a desert valley but also the industrial characteristics of several solar projects in the immediate vicinity of the Project site, the Project would result in varying degrees of visual change. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays, would contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains). The Project's form and line would be similar to the adjacent solar facilities and gen-tie lines already established in the landscape as well as some of the darker date palm farms adjacent to the Project. The Project's dark array panels would be noticeable against the lighter earth tones of the valley's soils and rock but would be similar in nature to the existing solar facilities. The Project would constitute a foreground, visually co-dominant feature in the landscape and would attract the attention of the casual observer. In context of the existing Chuckwalla Valley visual landscape and the size of the Project, impacts to visual character and view quality would be significant and unmitigable.

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KOP 9– I-10 (Corn Springs Road)

Figure 3.2-5 presents the existing view from KOP 9 along Corn Springs Road. As shown in the visual simulation (Figure 3.2-12), the Project site would be minimally visible due to the substantial viewing distance and screening provided by natural terrain and existing development. The associated gen-tie line (intermittent, vertical steel poles) and substations would be barely discernible from KOP 9. Because the Project components would not be visible from this viewpoint, no impacts to visual character or view quality would occur.

As depicted in Figure 3.2-5, the introduction of solar array and ancillary components on the Project site would result in muted, somewhat obscured color and line contrasts in the landscape. The Project substation and BESS are within the KOP 9 viewshed but, due to distance from I-10 and the horizontal footprint of the solar arrays, the visual prominence and contrasts of these facilities would be diminished. Based on the degree of visual change depicted in the photographic simulations and when experienced over a limited duration within the context of existing solar development in western Coachella Valley, impacts would be less than significant.

The landscape of the Chuckwalla Valley has been noticeably altered over time by the development of commercial solar facilities. In addition to the numerous rows of solar arrays, these developments include electrical substations, gen-tie lines, and access roads along with regional transmission lines already present in the valley, all of which have contributed to changes in visual character or quality of the landscape. While the Project's solar arrays and ancillary components would introduce new visual elements and create some contrast in color and line, particularly when viewed from elevated vantage points, these changes would be similar in nature to those associated with existing nearby solar facilities. This being the case, operation and maintenance of the Project would not cause substantial view interruption or degradation to the existing area. Furthermore, as experienced by motorists traveling on I-10, views of the solar arrays and other Project components during operation and maintenance would occur over a limited duration. Once the Project is decommissioned, potential impacts resulting from decommissioning and reclamation activities would generally be similar to those anticipated during the construction phase. Based on the representative visual analysis and simulations provided for KOPs 1, 2, 7, and 9, the operation and maintenance of the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, impacts to scenic vistas and impacts would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The SCE Red Bluff Substation is visible on KOP 1, existing visual condition, on the south side of the I-10. As seen in the exiting view, the Red Bluff Substation displays complex industrial views with numerous existing transmission poles and bus stations. The Devers Substation is similar in nature to the Red Bluff Substation. The Arica/Victory Pass Substation is similar in nature to the Red Bluff Substation but smaller. Adding new electric infrastructure within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, or Project Substation footprint would not be noticeable because it would match the existing vertical lines and colors within the substation. The

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existing visual character and quality of public views would remain the same and impacts would be less than significant.

Significance Determination before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Bio-6 (see Section 3.5) and Mitigation Measure Air-2 (see Section 3.4).

Significance Determination after Mitigation

Significant and unavoidable for the Solar Project. Less than significant for the SCE Activities.

Impact Aesthetics-2 Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Construction and Decommissioning

Construction and decommissioning of the Project would not result in a new source of substantial light or glare. As previously described, construction is expected to occur for up to 12 hours per day, Monday through Friday, excluding federal holidays. A typical workday would consist of a single shift, beginning as early as 5:00 a.m. under extreme weather conditions and ending as late as 7:00 p.m. Additional work hours, including nighttime and weekend work (Saturdays and Sundays), may be required to address schedule delays or complete critical construction activities. Nighttime work would involve the use of mobile or temporary lighting to safely facilitate construction during dark hours. Similarly, temporary lighting may be needed during site closure, decommissioning, and reclamation activities.

All nighttime lighting would be directed downward, shielded to the greatest extent feasible, and limited to only what is necessary to safely complete the work. The combination of downward directed, shielded temporary fixtures and limited use duration is intended to reduce excessive brightness or glare and minimize the potential for light trespass onto adjacent properties. These measures would also ensure compliance with County of Riverside Ordinance 915 (Regulating Outdoor Lighting). Therefore, lighting and glare impacts during construction and decommissioning would be less than significant.

Operation and Maintenance

The Project would include permanent lighting at specific components such as the substation(s), the operations and maintenance building, the BESS (if centralized), and at the solar site entry gate. This lighting would be controlled by switches and/or timers and would remain off unless needed. Exterior lighting at the substation yard, operation and maintenance building, and BESS would consist of low-intensity fixtures, activated by switches or sensors to allow personnel to safely access infrastructure at night, if necessary. All exterior and facility lighting, including yard and interior lights, would be fully shielded to direct light downward and keep illumination contained within the boundaries of the Project site, using the minimum intensity necessary for safe operation. Night lighting would be reduced or controlled through the use of directional fixtures,

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motion or ambient light sensors, shielding, and/or reduced lumen intensity to minimize light spillover to surrounding properties.

The annual predicted glare for the Project based on the model observers are shown in Table 3.2-2 and Figure 3.2-14.

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Table 3.2-2 Annual Minutes of Glare Predicted for Model Observers by PV Array Area

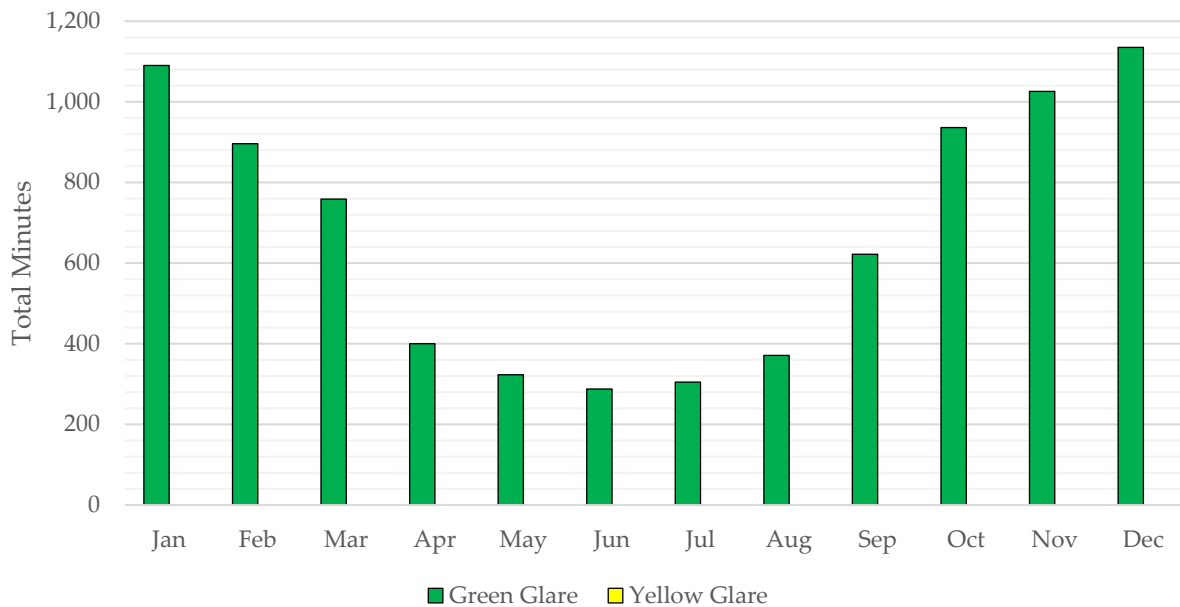
Model observers and solar array areas	PV 1		PV 2		PV 3		PV 4		PV 5	
	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)
Route: I-10 Eastbound	67	none	none	none	none	none	none	none	none	none
Route: I-10 Westbound	none	none	none	none	none	none	none	none	none	none
Route: VR1265 - 1500 ft AGL	4,608	none	5,024	none	4,947	none	4,576	none	4,591	none
Route: VR1265 - 200 ft AGL	2,775	none	3,269	none	3,232	none	2,730	none	3,029	none
Route: VR1266 - 1500 ft AGL	none	none	none	none	none	none	none	none	none	none
Route: VR1266 - 200 ft AGL	none	none	none	none	none	none	none	none	none	none
Route: VR1267 and VR1268 - 1500 ft AGL	4,383	none	4,980	none	4,948	none	4,650	none	4,719	none
Route: VR1267 and VR1268 - 200 ft AGL	3,359	none	3,913	none	3,899	none	3,486	none	3,670	none
Route: VR289 - 200 ft AGL	966	none	794	none	828	none	876	none	836	none
Route: VR289 - 4000 ft AGL	1,957	none	1,754	none	1,732	none	1,807	none	1,738	none
Route: VR296 - 200 ft AGL	3,551	none	3,589	none	3,525	none	3,293	none	3,230	none
Route: VR296 - 2500 ft AGL	6,393	none	6,082	none	6,123	none	5,854	none	5,840	none
KOP 1	none	none	none	none	none	none	none	none	none	none
KOP 2	none	none	none	none	none	none	none	none	none	none

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Model observers and solar array areas	PV 1		PV 2		PV 3		PV 4		PV 5	
	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)	Green (min.)	Yellow (min.)
KOP 3	none	none	none	none	none	none	none	none	none	none
KOP 4	none	none	none	none	none	none	none	none	none	none
KOP 5	none	none	none	none	none	none	none	none	none	none
KOP 6	none	none	none	none	none	none	none	none	none	none
KOP 7	none	none	none	none	none	none	none	none	none	none
KOP 8	none	none	none	none	none	none	none	none	none	none
KOP 9	none	none	none	none	none	none	none	none	none	none
KOP 10	none	none	none	none	none	none	none	none	none	none
KOP 11	none	none	none	none	none	none	none	none	none	none
KOP 12	none	none	none	none	none	none	none	none	none	none
Total	28,059	none	29,405	none	29,234	none	27,272	none	27,653	none

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Figure 3.2-14 Maximum Monthly Distinct Glare Predicted for a Single PV Array Area



According to the ForgeSolar glare analysis, the Project would generate only green-level glare (indicating a low potential to cause an after-image) for all 24 modeled observers. No yellow-level glare (potential to cause an after-image) or red-level glare (potential to cause retinal burn) is predicted. Maximum durations of green-level glare would vary by month, ranging from 288 minutes to 1,135 minutes. While green-level glare may draw some attention to the Project site during limited periods, it is not expected to result in significant visual impacts or pose hazards to motorists.

Due to the very short durations of potential exposure, significant impacts associated with green level glare are not anticipated. Because the Project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area, the impact would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The SCE Activities would be built with galvanized steel that would fade overtime to match the existing infrastructure and would not produce a substantial new source of glare. No night-time lighting would be required because none of the infrastructure would be over 200 feet tall. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Mitigation Measures

None required.

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Impact Aesthetics-3 Would the project have a substantial effect upon a scenic highway corridor within which it is located?

Construction

While I-10 is not listed in the State Scenic Highway System, I-10 is identified by Riverside County as a County-eligible Scenic Highway and is therefore considered a County Scenic Highway for the purposes of this analysis, and impacts are accordingly assessed below.

Project impacts on the views of motorists traveling on I-10 would generally be mild. Construction vehicles and equipment within the Project site would be difficult to detect from I-10, and gradual visual change in the landscape would be partially blocked by intervening vegetation. Project activities would generally be within the peripheral viewing angle of motorists, and temporary construction effects would be experienced over a brief duration of time. Therefore, construction of the Project would result in less-than-significant impacts to the County-eligible Scenic Highway.

Operation and Maintenance

During operation and maintenance, the introduction of solar arrays and associated components on the Project site would result in muted and somewhat obscured color and line contrasts within the landscape. As shown in Figure 3.2-9 to Figure 3.2-12, the visual prominence and contrasts associated with the Project components would not substantially affect views from I-10. Furthermore, as experienced by motorists traveling along I-10, views of the solar arrays and other Project components would occur over a limited duration. Once the Project is decommissioned, potential impacts resulting from decommissioning and reclamation activities would generally be similar to those anticipated during the construction phase. Therefore, operation and maintenance of the Project would result in less-than-significant impacts to the County-eligible Scenic Highway.

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Existing views of the Red Bluff Substation, Devers Substation, and Arica/Victory Pass Substation would remain the same as they currently are because the new infrastructure would match the existing lines and colors within the Substations. Views of the Project Substation would remain as simulated for the same reasons. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Mitigation Measures

None required.

3.2.5 Cumulative Analysis

Numerous existing modifications are visible along the I-10 corridor and in the Desert Center area of the Chuckwalla Valley (transmission lines; substations; pipelines; solar projects; 4-wheel drive tracks; widely scattered commercial buildings, dilapidated structures, and roadside signs; and a few agricultural operations). Distant views and the grand scale of the open desert panoramas still

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impart an overall general impression of a relatively unimpaired, isolated desert landscape. The cumulative scenario includes large solar projects, the closest being the adjacent Redonda Solar Project as well as the more-distant Easley, Sapphire, and Bajada solar projects. The pervasiveness of the existing and proposed/approved solar projects would have adverse cumulative impacts. If all the projects were implemented, they would further degrade the visual character of the existing landscape, resulting in the further conversion of a desert landscape into a more industrialized appearance. Due to topography and the desert climate, visual screening of cumulative solar facilities is not feasible.

In some viewing cases, the visibility and apparent scale of the projects are (for existing) or would be (for proposed) diminished somewhat by favorable topographic relationships and vegetative screening. For other viewing opportunities, some projects appear (existing) or would appear (proposed) reduced in visual prominence due to their viewing distances and low angle of view. In other cases, projects blend (existing) or would blend (proposed) in with the vegetation or horizon line of the valley floor, and the rugged mountains would remain the dominant visual features in the landscape.

The Project would be minimally visible from elevated locations due to its distance from the Joshua Tree National Park (6 miles), Chuckwalla Mountain higher elevations (5 miles), and Palen-McCoy Wilderness (5 miles) and because the Project site is situated between and adjacent to existing solar facilities that would block some of the views. Nonetheless, the existing, approved, and proposed solar projects would contribute to significant cumulative visual impacts when viewed by sensitive viewing populations along I-10 and from sensitive viewers using the surrounding mountains and wilderness. The Project's contribution to the impacts would be from the introduction of new features appearing as low, dark, linear elements. For many travelers along I-10, the scenic experience would be substantially degraded due to the regular occurrence of solar facilities and related effects in the landscape and a significant cumulative impact to aesthetics.

While the many existing, approved, and proposed cumulative solar projects and associated infrastructure would have permanent lights, all cumulative projects are required to use timers and switches on their lights and to minimize the amount of time they are on to the extent possible. The Project would similarly be required to include switches and timers on the proposed lights to reduce any nighttime lighting. This being the case, the Project would not combine with the existing cumulative projects to result in a cumulatively significant impact due to night lighting.

Southern California Edison Activities

Construction and operation of the SCE Activities would combine with the overall cumulative projects discussed above, and contribute to significant cumulative visual impacts when viewed by sensitive viewing populations along I-10 and from sensitive viewers when using the mountains and wilderness. The SCE Activities contribution to the significant cumulative impact is less than considerable because all of the infrastructure would be located within the existing Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and within the Project Substation and would match the existing infrastructure in color and form and would not draw the attention of the sensitive viewing populations.

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Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measure Bio-6 (see Section 3.5) and Mitigation Measure Air-2 (see Section 3.4).

Significance Determination after Mitigation

Project's contribution to the cumulative impact would be cumulatively considerable and the impact would remain cumulatively significant. SCE Activities contribution to a cumulatively significant impact would be less than cumulatively considerable.

3.2.6 References

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3.3 Agriculture and Forestry Resources

This section presents the environmental setting and analysis of impacts to agriculture and forestry resources resulting from the Project. This section includes existing agriculture and forestry resources information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.3.1 Environmental Setting

Regional Setting

Agriculture plays a significant role in supporting Riverside County's local economy. According to the 2022 Riverside County Agricultural Production Report, the County's total gross agricultural production value for 2022 was estimated at \$1,490,459,000 (Riverside County Agricultural Commissioner 2022). The top ten commodities produced in the Riverside County in 2022 are listed in Table 3.3-1, below.

Table 3.3-1 Top 10 Commodities for Riverside County 2022

2022 ranking	Commodity	Total value (USD)
1st	Nursery stock	\$318,683,000
2nd	Milk	\$177,450,000
3rd	Alfalfa	\$97,690,000
4th	Dates	\$84,100,000
5th	Avocados	\$77,000,000
6th	Table grapes	\$76,846,000
7th	Eggs	\$76,830,000
8th	Lemons	\$68,890,000
9th	Bell peppers	\$68,391,000
10th	Turf grass	\$34,700,000

SOURCE: (Riverside County Agricultural Commissioner 2022)

The most recent agricultural land conversion data available for Riverside County are from the 2-year period from 2016 to 2018 and is listed below in Table 3.3-2.

3.3 AGRICULTURE AND FORESTRY RESOURCES

Table 3.3-2 Riverside County Agricultural Land Conversion 2016 to 2018

Land use	Category total acreage inventoried		2016 to 2018 acreage changes			
	2016	2018	Acres lost (-)	Acres gained (+)	Total acreage changed	Net acreage changed
Prime Farmland	117,486	116,926	-2,204	1,644	3,848	-560
Farmland of Statewide Importance	43,757	43,610	629	482	1,111	-147
Unique Farmland	32,566	32,121	1,206	761	1,967	-445
Farmland of Local Importance	226,029	221,201	7,881	3,053	10,934	-4,828
Grazing Land	110,202	109,857	456	111	567	-345
Agricultural Land Subtotal	530,040	523,715	12,376	6,051	18,427	-6,325

SOURCE: (CDOC 2018)

Local Setting

The Project site is surrounded by various land uses, including previously developed or developing solar facilities, transmission lines, fallow and active agriculture, and rural residences. Agricultural use within the Project site generally consists of fallow or retired agricultural land, except for a small portion of the northernmost parcel that has a pond used for agriculture as well 2 acres of palm dates. The Project site is located on privately owned land designated as OS-RUR (Open Space – Rural) and zoned W-2-10 (Controlled Development Areas). Lands zoned W-2-10 permit farming of crops and livestock. The parcels on which the Project is situated are owned by the agricultural companies Woodspur Farming LLC and Jewel Date Co. Inc. The southern portions of the Project were used for citrus and date palm farming from approximately the 1950s until approximately 2015 when the land was allowed to go fallow due to lack of a market. Although the Project site is located on parcels with existing farmland, it is not situated on lands classified as Farmland under the California Department of Conservation’s (CDOC) Farmland Mapping and Monitoring Program (FMMP) categories. Additionally, although the Project is located within Riverside County, a participating jurisdiction under the California Land Conservation (Williamson) Act, the Project site is not located within an Agricultural Preserve, nor are there any Agricultural Preserves in the immediate vicinity (Riverside County 2025). The Project area is not subject to a Williamson Act contract. None of the Project elements on BLM-administered land are on land use currently or previously for agriculture.

Forest Land

The Project site is not designated as forest land or zoned as forest land or timberland or for timberland production. Additionally, there are no lands in the vicinity of the Project site that are zoned for forest land, timberland, or timberland production (Riverside County 2025).

3.3 AGRICULTURE AND FORESTRY RESOURCES

3.3.2 Regulatory Framework

Federal, State, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Farmland Protection Policy Act.

The Farmland Protection Policy Act (7 U.S. Code [USC] §§ 4201 et seq.; see also 7 Code of Federal Regulations [CFR] part 658) is overseen by the U.S. Department of Agriculture's (USDA's) Natural Resources Conservation Service (NRCS). The Farmland Protection Policy Act is intended to "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The Act applies to projects and programs that are sponsored or financed as a whole or in part by the federal government.

U.S. Bureau of Land Management

Portions of the Project would be located on BLM-administered land within the California Desert Conservation Area (CDCA) plan area. The Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA) amended the CDCA and is a collaborative, interagency landscape-scale planning effort and program covering 22.5 million acres in seven California counties— Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The DRECP LUPA applies to nearly 10.8 million acres of BLM-managed federal lands within the aforementioned seven California counties. The portion of the Project that would be located on BLM land is designated as a Development Focus Area targeted for renewable energy development. Part of the vision for the DRECP is to facilitate the timely and streamlined permitting of renewable energy projects (BLM 2016). Because a portion of the Project site (i.e., the proposed medium voltage collection line segment, gen-tie alignment, and access roads) is located on federal land under management of BLM, the BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq. Much of the land surrounding the Project site is part of the DRECP.

State

California Land Conservation Act of 1965 (Williamson Act).

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, 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 for periods of 10 to 20 years (CDOC n.d.-b). Until the passage of SB 574 in 2021, the CDOC and counties were required to collect and publish program enrollment data in biennial reports, the most recent, and final, publication being the Williamson Act Status Report 2020–2021 (CDOC 2022). Under the new Williamson Act reporting requirements (section 5127.5), each city or county provides to the CDOC on or before January 30 of each year, GIS data files of all agricultural preserves and Williamson Act contracted land in existence at the end of the preceding year. That information is now made available through the California Williamson Act Enrollment Finder.

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The CDOC provides guidance and oversight to local governments to ensure consistency with the government code. Starting in 1972, the State provided counties with partial replacement of foregone local property tax revenues (Open Space Subvention Act). These payments were suspended in 2009 due to State-level budget constraints.

Department of Conservation Farmland Mapping and Monitoring Program

The CDOC classifies land according to agricultural suitability through the Farmland Mapping and Monitoring Program (FMMP) based on land uses, irrigation, and soil conditions. FMMP categories applicable to CEQA are defined below (CDOC n.d.-a).

- **Prime Farmland.** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. Land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland like Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used to produce the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

Local

Riverside County General Plan

The County of Riverside General Plan Land Use Element (Riverside County 2021) identifies and preserves areas where agricultural uses are the long-term desirable use and to minimize the conflicts between agricultural and urban/suburban uses. The Land Use Element contains the following goals and policies that are relevant to the analysis of agricultural resources for the Project:

Policy LU 7.1:

Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.

Policy LU 7.4:

Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.

Policy 20.1:

3.3 AGRICULTURE AND FORESTRY RESOURCES

Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.

Policy LU 20.2:

Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses.

Policy LU 20.4:

Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production. Note that this policy is also replicated in the County's Multipurpose Open Space Element (see Policy OS 7.3 below).

Policy LU 20.5:

Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.

The Riverside County General Plan Multipurpose Open Space Element (Riverside County 2015) promotes protection of agricultural lands and landscapes as historical, cultural, and scenic resources. The Multipurpose Open Space Element contains the following policy relevant to the analysis of agricultural resources for the Project:

Policy OS 7.3:

Encourage conservation of productive agricultural lands and preservation of prime agricultural lands. Desert Center Area Plan.

The Riverside County General Plan Desert Center Area Plan, as part of the Land Use Element (Riverside County 2021), is intended to enhance and/or preserve the identity, character, and features unique to the Desert Center area. The Desert Center Area Plan contains the following policy relevant to the analysis of agricultural resources for the Project.

Policy DCAP 3.1:

Protect farmland and agricultural resources in Desert Center through adherence to the Agricultural Resources section of the General Plan Multipurpose Open Space Element and the Agriculture section of the General Plan Land Use Element, as well as the provisions of the agriculture land use designation.

Riverside County Agricultural Preserve Ordinance – Ordinance No. 509.

The Riverside County Agricultural Preserve Ordinance provides for the administration of lands placed in agricultural preserves, including procedures for initiating, filing, and processing

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requests to establish, enlarge, disestablish, or diminish agricultural preserves, pursuant to the California Land Conservation Act.

Riverside County Ordinance No. 348.4705

Zoning Ordinance No. 348.4705 permits solar power-generating facilities in several districts, including agricultural districts, with a use permit. Ordinance No. 348.4705 was enacted at the same time as and implements General Plan Policy LU 15.15, which states: “Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside.” This ordinance is consistent with Riverside County’s participation in DRECP.

Riverside County Ordinance No. 625, the “Right to Farm” Ordinance

Ordinance No. 625 factors into Riverside County’s standard significance thresholds. It was enacted to conserve, protect, and encourage the development, improvement, and continued viability of agricultural land. The intent of the ordinance is to reduce the loss to the county of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Nothing in the ordinance is to be construed to limit the right of any owner of real property to request that the county consider a change in the zoning classification.

The Project involves the installation of solar power-generation facilities on parcels where both agriculture and renewable energy power-generation projects are permitted uses. These parcels are surrounded by federal land administered by the BLM that has been designated for the development of solar energy projects. Given that the surrounding land is designated for solar power-generation projects and that solar power-generation projects are an allowable land use by the County on the affected parcels, the Project is consistent with the policies listed above.

3.3.3 Methodology for Analysis

The agriculture and forestry resources analysis focuses on the potential for the implementation of the Project to adversely affect agricultural resources in several ways: temporary disruption or disturbance of agricultural land uses and activities during construction; conversion of agricultural land to non-agricultural uses during construction and operation; introduction of incompatible land uses or activities during operation; or other physical environmental changes that could lead to the loss or conversion of agricultural land.

The analysis is primarily based on comparing the Project site, defined as the area where all construction-related disturbance would occur, with data sources such as the CDOC FMMP Important Farmland Series Maps, review of aerial photographs, Williamson Act contract maps, and the Riverside County General Plan Land Use and zoning maps. Existing agricultural uses within the Project area were also evaluated as part of the analysis.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the

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DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For agriculture and forestry resources, the Checklists ask if the Project would:

- Conflict with existing zoning for agricultural use, or a Williamson Act contract. (Impact AG-1)
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (Criteria Requiring No Further Evaluation)
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). (Criteria Requiring No Further Evaluation)
- Result in the loss of forest land or conversion of forest land to non-forest use. (Criteria Requiring No Further Evaluation)
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (Criteria Requiring No Further Evaluation)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would: :

- Conflict with existing agricultural zoning, agricultural use, or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve. (Impact AG-1)
- Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"). (Impact AG-2)

Criteria Requiring No Further Evaluation

Due to the nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

- **Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources**

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Agency, to non-agricultural use? The Project site is not designated as Farmland under the CDOC FMMP; therefore, there are no lands classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Project area. This being the case, the Project would not result in the conversion of these farmland types to non-agricultural use.

- **Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?** There are no forest lands or timberlands within the Project site; therefore, the Project would not conflict with existing zoning for, or result in the rezoning of, forest land, timberland, or timberland zoned Timberland Production.
- **Would the project result in the loss of forest land or conversion of forest land to non-forest use?** The Project site is situated on land zoned for agricultural production and rural open space. The site is not forested and would not be used for timber production. Additionally, the Project site is not located within a Timberland Production Zone and therefore is not considered timberland. Overall, the Project site does not meet the definition of “forest land,” and the Project site is not located on land zoned as forest land or timberland, and the Project would not result in the loss or conversion of forest land to non-forest use.
- **Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?** The Project site is not designated as Farmland under the CDOC FMMP; therefore, there are no lands classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Project area. This being the case, the Project would not result in a direct or indirect conversion of these farmland types to non-agricultural use.

3.3.4 Impacts and Mitigation Measures

Impact AG-1: Would the project conflict with existing agricultural zoning, agricultural use, or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?

Agricultural Zoning and Use

Under existing conditions, the Project site is located on private land designated as OS-RUR (Open Space – Rural) and zoned W-2-10 (Controlled Development Areas). As described in Section 3.3.1 Local Setting, the Project site is currently comprised of parcels owned by agricultural companies Woodspur Farming LLC and Jewel Date Co., Inc., and is actively used for agricultural purposes.

In accordance with County Ordinance No. 348, solar power-generation facilities on lots of 10 acres or larger are permitted through a Conditional Use Permit (CUP) within the W-2-10 Controlled Development Areas zoning designations (Riverside County 2021). The Applicant is seeking a Conditional Use Permit for the construction, operation, maintenance, and decommissioning of

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the proposed solar facility and BESS and a Public Use Permit for portions of the gen-tie line that would traverse County roads. Therefore, the Project does not conflict with existing zoning for agricultural use.

This impact would be less than significant, and no mitigation is required.

Williamson Act and Agricultural Preserve

The Project site is not located on land under a Williamson Act contract or within a designated Agricultural Preserve. The nearest Agricultural Preserve lands are located approximately 7.5 miles northwest of the Project site (Riverside County 2025). Therefore, the Project would not impact land subject to a Williamson Act contract or within a Riverside County Agricultural Preserve.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation which are existing industrial uses or analyzed above under the Project. The SCE Activities would not conflict with existing agricultural zoning, agricultural use, or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve. No impact would occur.

Significance Determination before Mitigation

Less than significant

Impact AG-2: Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")

Construction and Operation

The Project is located within 300 feet of several parcels zoned W-2-10 (Controlled Development Area). The Project would not result in the conversion of adjacent farmland to non-agricultural use over the Project's 40-year lifespan. The Project would not introduce a non-agricultural use that is incompatible with ongoing or future agricultural operations on nearby properties.

Additionally, Section 5 of Riverside County Ordinance No. 625 (Right-to-Farm Ordinance) states the following:

[n]o agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than three (3) years if it was not a nuisance at the time it began.

Vehicle emissions during construction and decommissioning would be temporary and would not significantly affect the lifecycle of plants. Project operations would not involve emissions that would impact off-site agricultural activities.

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Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, none of which are within 300 feet of an agriculturally zoned property. No impact would occur.

Significance Determination before Mitigation

Less than significant

3.3.5 Cumulative Impacts

Implementation of the Project, in combination with other projects in the Desert Center area, could involve the use of land zoned for agricultural purposes for non-agricultural development or result in the development of non-agricultural uses within 300 feet of agriculturally zoned property. However, such developments, including the Project, are permitted through the issuance of CUPs and are consistent with existing zoning regulations.

Development within the County has resulted in the conversion of land utilized for agriculture to other land uses. This agricultural conversion has been a continuing trend in the County and resulted in a net loss of 6,325 acres of agricultural land between 2016 and 2018 (see Table 3.32). The Project could contribute to a cumulative effect on agriculture with other past, present, and reasonably foreseeable future projects.

Neither the Project nor other reasonably foreseeable future projects would convert land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The majority of current and reasonably foreseeable projects in the surrounding area are located on land identified as Development Focus Areas (DFAs) under the Desert Renewable Energy Conservation Plan (DRECP). While the trend of solar development in the Desert Center region could incrementally contribute to cumulative agricultural impacts, this trend is anticipated and accounted for through DFA land use designations.

Furthermore, active agriculture in the Desert Center area is already limited, has been declining for the last several decades, and once the Project and other similar projects are decommissioned, the sites would be available for a return to agricultural use.

There are no forest lands or timber resources in the Project area.

Overall, the Project, when considered with nearby projects, would not result in a cumulatively significant impact on agriculture or forestry resources. The Desert Center region is not classified under recognized agricultural land evaluation approaches such as the CDOC's FMMP's Important Farmland Map series and solar development is consistent with the DCREP and County zoning. The Project would not make a considerable contribution to such impacts and would not involve other changes in the environment that would lead to the conversion of agricultural land to non-agricultural use.

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Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, and would have no impacts to agriculture. Therefore, they would not contribute to any cumulatively significant impacts on agriculture or forestry resources. No impact would occur.

Significance Determination before Mitigation

Less than significant

Mitigation Measures for Cumulative Impacts

None required

3.3.6 References

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3.4 Air Quality

This section presents the environmental setting and analysis of impacts to air quality resulting from the Project. This section includes existing air quality information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.4.1 Environmental Setting

The Project site is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD's jurisdiction comprises three air basins: the South Coast Air Basin (SCAB) in the western portion of the district, the Salton Sea Air Basin (SSAB) in the central portion of the district, and the Mojave Desert Air Basin (MDAB) within the eastern portion of the SCAQMD's jurisdiction. The Project site is within the MDAB, which encompasses desert portions of Kern, Los Angeles, San Bernardino, and Riverside counties.

Meteorological and Topographical Conditions

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and Pacific Ocean), determine the effect of air pollutant emissions on local air quality.

Geographically, the MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. The region is characterized by hot, dry summers and cool winters with little precipitation. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), the passes of which form the main channels for these air masses. The Chuckwalla/Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) the primary channel of which is the San Geronio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains (RCH Group 2024).

During the summer, the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). However, the Chuckwalla Valley portion of the MDAB receives an average of 1.9 inches of rainfall per year. The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, indicating that at least 3 months have

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maximum average temperatures over 100 degrees Fahrenheit. The region is characterized by extreme fluctuations of daily temperatures, strong seasonal winds, and clear skies. January is the coldest month, with a mean low temperature of 37 degrees Fahrenheit. July is the hottest month, with a mean high temperature of 108 degrees Fahrenheit (RCH Group 2024).

Wind directions are predominantly from the south and north, with a low frequency of calm wind speed conditions (approximately 1.1 percent). The average annual wind speed is 8.7 miles per hour (3.9 meters per second). In this region, wind speeds tend to be higher during the summer months and during the daytime (RCH Group 2024).

Pollutants and Effects

Criteria Air Pollutants

Ozone

Ozone (or O₃) is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. O₃ is not emitted directly into the atmosphere (*primary air pollutant*) but is a *secondary air pollutant*, meaning that it is produced in the atmosphere through a complex series of photochemical reactions involving VOC and NO_x. VOC and NO_x are known as *precursor compounds* for O₃. Substantial ozone production generally requires O₃ precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. O₃ is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of VOC and NO_x under the influence of wind and sunlight. O₃ concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

Carbon Monoxide

Carbon monoxide (CO) is a nonreactive pollutant that is a product of incomplete combustion of organic material and is mostly associated with motor vehicle traffic and, in wintertime, with wood-burning stoves and fireplaces. High CO concentrations develop primarily during winter, when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s, when CO levels were regularly exceeded throughout California, but in more recent years, CO emissions inventories and modeling are not a priority in most California air districts due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

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Nitrogen Oxides

When combustion temperatures are extremely high, as in aircraft, truck, and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO₂) are the most significant air pollutants generally referred to as NO_x. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO₂, and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO₂ can lead to respiratory illnesses such as bronchitis and pneumonia.

Volatile Organic Compounds

The term *volatile organic compound* (VOC) refers to any compound of carbon, excluding carbon monoxide, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions and, thus, functions as a precursor of ozone formation. VOCs includes a variety of chemicals, some of which may have short- and long-term adverse health effects. VOCs are emitted by a wide array of products numbering in the thousands. Examples include paints and lacquers, paint strippers, cleaning supplies, and building materials and furnishings as well as fuel storage and use.

VOCs can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; and damage to liver, kidney, and central nervous system. Some VOCs can cause cancer in animals; some are suspected or known to cause cancer in humans. The ability of VOCs to cause health effects varies greatly from those that are highly toxic to those with no known health effects. As with other pollutants, the extent and nature of the health effect will depend on many factors, including level of exposure and length of time exposed. Eye and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment are among the immediate symptoms people report soon after exposure to some VOCs.

Particulate Matter

PM₁₀ and PM_{2.5} consist of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, wood-burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities, and mining, are more local in nature while others, such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect.

Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprising large particles (diameter greater than 10 micrometers) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance than as a health hazard. The remaining fractions, PM₁₀ and PM_{2.5}, are a health concern particularly at levels above the federal and California ambient air quality standards. PM_{2.5} (including diesel exhaust particles)

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is thought to have greater effects on health because these particles are so small and, thus, penetrate to the deepest parts of the lungs.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health. The California Air Resources Board (CARB) has estimated that achieving the ambient air quality standards for PM₁₀ could reduce premature mortality rates by 6,500 cases per year (CARB 2002).

Sulfur Dioxide

Sulfur dioxide (SO₂) is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of atmospheric sulfate and particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead

Lead has a range of adverse neurotoxin health effects and historically was released into the atmosphere via leaded gasoline products. The phase-out of lead-gasoline in California has resulted in dramatically decreased levels of atmospheric lead. Metal processing is currently the primary source of lead emissions. The highest concentrations of lead in air are generally found near lead smelters and general aviation airports, where piston aircraft use leaded fuel. Other stationary sources that generate lead emissions include waste incinerators, utilities, and lead-acid battery manufacturers.

Sulfates

Sulfates are the fully oxidized ionic form of sulfur produced when sulfur dioxide is fully oxidized in the atmosphere. Sulfates are produced by emissions from automobiles, power plants, and industrial activity and contribute to general atmospheric haziness. Typical health effects associated with exposure to sulfates include respiratory illness and an increased risk of cardiopulmonary disease.

Vinyl Chloride

Vinyl chloride is an artificially created colorless gas with a mild, slightly sweet odor. The gas is used in the manufacture of vinyl products, including polyvinyl chloride plastic. Vinyl chloride emissions are produced from the vinyl manufacturing process as well as from the breakdown of vinyl products in landfills and hazardous waste sites. The health effects associated with vinyl chloride include dizziness, headaches, and drowsiness from short-term exposure and liver damage and cancer resulting from long-term exposure.

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Hydrogen Sulfide

Hydrogen sulfide (H₂S) is a naturally occurring, colorless gas that at low concentrations produces a distinctive rotten egg odor. At higher concentrations, olfactory fatigue prevents detection of odor. The gas is produced through the bacteriological breakdown of organic materials as well as during oil and gas production and geothermal power generation. Health effects associated with H₂S include exposure to a disagreeable odor, coughing, irritation to eyes, and impairment of the respiratory system.

Visibility Reducing Particles

Visibility reducing particles are particulate matter composed of many different substances that are suspended in the atmosphere and contribute to haze and diminished visibility.

Toxic Air Contaminants

Toxic air contaminants (TACs) are regulated under both State and federal laws. Federal laws use the term *hazardous air pollutants* (HAPs) to refer to the 189 substances are regulated under the 1990 Federal Clean Air Act Amendments, and the two terms (TACs and HAPs) refer to essentially the same compounds, with TACs including all federal HAPs as well as additional compounds identified by the State of California.

In 1983, the California legislature adopted Assembly Bill 1807 (AB 1807), or the Toxic Air Contaminant Identification and Control Act, which establishes a process for identifying TACs and authorizes CARB to develop retrofit air toxics control measures on a statewide basis. Under AB 1807, CARB has identified approximately 200 TACs, including the 189 federal HAPs. Air toxics in California are also regulated under AB 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987. Under AB 2588, individual facilities emitting TACs must quantify and report those emissions to the local air district. The facilities are then prioritized by the local districts based on the quantity and toxicity of these emissions and on their proximity to areas where the public may be exposed. In establishing priorities, the air districts are to consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the air district determines may indicate that the facility may pose a significant risk. High-priority facilities are required to perform a Health Risk Screening Assessment and, if specific risk thresholds are exceeded, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the health risk levels, emitting facilities can be required to implement varying levels of risk-reduction measures.

SCAQMD has conducted several comprehensive studies on air toxics called the Multiple Air Toxics Exposure Study (MATES-III, MATES-IV, and MATES-V). The monitoring program found that the average cancer risk in the region from carcinogenic air pollutants has been decreasing since 2005 (SCAQMD 2008, 2015, 2021). Importantly, the Project site is out of the region in which MATES was conducted (generally, within the urban areas of the western portion of SCAQMD), and its associated health impacts would be expected to be much less than those reported and would be confined to the area along I-10.

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Sensitive Receptors

California Health and Safety Code section 42705.5(a)(5) states that “[s]ensitive receptor locations may include hospitals, schools, day care centers and such other locations as the air district board or CARB may determine.” SCAQMD defines sensitive receptors as follows:

Sensitive Receptors: Any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing (SCAQMD 2021).

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to local ambient air quality conditions. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from recreational experience. Off-site workers are also considered sensitive receptors by SCAQMD. The Project site is located in a rural area of Riverside County with low population density. There are no sensitive receptors within 0.25 mile (2,640 feet) of the Project site. The nearest sensitive receptor is a residence located approximately 4.9 miles northwest of the Project site, in the community of Desert Center.

Regional Setting

Mojave Desert Air Basin Attainment Designation

Under the 1990 Clean Air Act, the EPA makes national area designations for six criteria pollutants: ozone, PM₁₀, PM_{2.5}, CO, NO₂, and SO₂. Air basins are federally classified as *attainment* or *nonattainment* for a specific criterial pollutant based on whether the basin meets the NAAQS for that pollutant. An attainment area has ambient concentrations of a criteria air pollutant that either meets or falls below the NAAQS and is therefore considered in compliance with federal air quality standards. An area is designated as nonattainment for a criteria air pollutant if ambient concentrations of that pollutant exceed the NAAQS. If there is insufficient data available to determine whether an area meets the NAAQS, the area is designated as “unclassifiable” and may be treated as attainment for the purpose of impacts analysis. Similar to the NAAQS, the California Clean Air Act designates areas as attainment or nonattainment based on the California Ambient Air Quality Standards (CAAQS). The State and federal attainment statuses for the MDAB are listed in Table 3.4-1.

Table 3.4-1 Mojave Desert Air Basin Attainment Status

Criteria air pollutant	Designation/classification	
	Federal designation	California designation
Ozone	Unclassifiable/attainment	Nonattainment
NO ₂	Unclassifiable/attainment	Attainment

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Criteria air pollutant	Designation/classification	
CO	Unclassifiable/attainment	Unclassified
SO ₂	Unclassifiable/attainment	Attainment
PM ₁₀	Unclassified	Nonattainment
PM _{2.5}	Unclassifiable/attainment	Attainment
Lead (Pb)	No national standard	Attainment
Sulfates (SO ₄)	No national standard	Attainment
Hydrogen sulfide (H ₂ S)	No national standard	Unclassified
Visibility-reducing particles	No national standard	Unclassified

Source: (SCAQMD 2018)

Project Setting

Local Ambient Air Quality Data

SCAQMD maintains a network of air quality monitoring stations within the Project site vicinity to monitor ambient concentration of criteria pollutants and compliance with applicable ambient air quality standards. The nearest monitoring station to the Project site is located in Blythe, at 445 West Murphy Street. The Blythe monitoring station measures ozone approximately 35 miles to the east of the Project site. Since CO, PM₁₀, and PM_{2.5} are not monitored at the monitoring station in Blythe, measurements were obtained from the monitoring station in Palm Springs. The monitoring station in Palm Springs measures ozone, CO, PM₁₀, and PM_{2.5} at FS-590 Racquet Club Avenue, approximately 73 miles to the west of the Project site. Table 3.4-2 lists the most recent three years of ambient monitoring data.

The 24-hour and annual PM₁₀ standards were exceeded in 2022, 2023, and 2024. The annual PM_{2.5} standard was exceeded in 2024. PM₁₀ and PM_{2.5} concentrations may have been adversely affected by wildfires and windblown fugitive dust. No other standards were exceeded during the three-year period. The MDAB has federal designations of unclassifiable/attainment for all pollutants, but state nonattainment of ozone and PM₁₀, which is reflected in the ambient monitoring data.

Table 3.4-2 Ambient Air Pollutant Concentration Monitoring Data in the Project Region

Form of standard	Standard (CAAQS/NAAQS)	2022	2023	2024
Ozone				
Highest 1-hour average (ppm) ^b	0.090/-	0.066	0.071	0.063
Highest 8-hour average (ppm) ^b	0.070	0.063	0.065	0.060
Nitrogen dioxide				
Highest 1-hour average (ppm) ^b	0.180/0.100	0.0375	0.0354	0.0365
Annual average (ppm) ^b	0.030/0.053	0.0063	0.0055	0.0064

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Form of standard	Standard (CAAQS/NAAQS)	2022	2023	2024
Carbon monoxide				
Highest 1-hour average (ppm) ^b	20/35	1.1	0.9	3.4
Highest 8-hour average (ppm) ^b	9/9	0.5	0.8	1.1
Particulate matter (PM₁₀)				
Highest 24-hour average (µg/m ³) ^b	50/150	432	529	251
Annual average (µg/m ³) ^b	20/-	25.3	24.2	25.6
Particulate matter (PM_{2.5})				
Highest 24-hour average (µg/m ³) ^b	-/35	31.2	26.2	36.0
Annual average (µg/m ³) ^b	12/9	6.33	5.92	7.45

Notes:

Values in **bold** are in excess of at least one applicable standard.

a. Generally, state standards/national standards are not to be exceeded more than once per year

ppm = parts per million

µg/m³ = micrograms per cubic meter.

Source (EPA 2015)

3.4.2 Regulatory Framework

Federal, State, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Clean Air Act

The Federal Clean Air Act, enacted in 1970, established the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants. SCAQMD and CARB share with the EPA the responsibility to establish regulations, enforce air pollution control requirements, and develop the necessary air quality management to achieve the NAAQS. The EPA implements most provisions of the federal Clean Air Act and reviews local and state air quality management plans and regulations to ensure attainment of the NAAQS.

Federal General Conformity

The EPA promulgated the General Conformity Rule to evaluate emissions from projects that are not highway or transit related. Under this rule, a General Conformity Determination is not required if estimated emissions of criteria pollutants (or pollutant precursors) for which an project area is designated nonattainment/maintenance fall below *de minimis* thresholds, which are the emissions quantities at which it can be presumed that a project's emissions would not cause or contribute to new violations of air quality standards. If a project is in an attainment area, the General Conformity Rule does not apply.

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State

California Clean Air Act

The California Clean Air Act is implemented by the CARB. This act establishes broad authority for California to regulate emissions from mobile sources and requires regions to develop and enforce strategies to attain the California Ambient Air Quality Standards (CAAQS). Each regional air district is responsible for demonstrating how these standards are met.

USEPA/CARB Off-road Mobile Sources Emission Reduction Program

The California Clean Air Act mandates that CARB achieve the maximum possible degree of emissions reductions from all off-road mobile sources to attain the CAAQS. Off-road mobile sources include construction equipment. The earliest standards (Tier 1) for large compression-ignition engines used in off-road mobile sources became effective in California in 1996; the Tier 3 standards went into effect for most engine classes in 2006; and Tier 4 or Tier 4 Interim (4i) standards apply to all off-road diesel engines model year 2012 or newer. These standards for new equipment provide comprehensive regulation and control to reduce NO_x and *diesel particulate matter* (DPM) emissions from diesel use throughout the state.

CARB In-use Off-Road Diesel Fueled Fleets Regulation

The regulations for in-use off-road diesel equipment are designed to reduce emissions of nitrogen oxides (NO_x) and DPM. Depending on the size of the fleet of equipment, the owner would need to ensure that the average emissions performance of the fleet meets certain state-wide standards. In lieu of improving the emissions performance of the fleet, electric systems can be installed to replace diesel equipment in the fleet average calculations. Presently, all equipment owners are subject to a 5-minute idling restriction in the Rule (13 California Code of Regulations chapter 10 § 2449).

CARB Portable Equipment Registration Program (PERP)

This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program. This program allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

CARB Airborne Toxic Control Measures (ATCM)

Diesel engines on portable equipment and vehicles are subject to various airborne toxic control measures (ATCMs) that dictate how diesel sources must be controlled statewide to protect public health. For example, the ATCM to limit diesel-fueled commercial motor vehicle idling (CCR title 13 §2485) generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than 5 consecutive minutes or periods aggregating more than 5 minutes in any one hour. Diesel engines used in portable equipment fleets are subject to stringent diesel particulate matter emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (CCR title 17 § 93116)

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Local

South Coast Air Quality Management District

In addition to supporting CARB and EPA air quality programs, SCAQMD also develops plans and implements control measures for regulated pollutants in the Mojave Desert Air Basin (MDAB). SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the MDAB. SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment (SCAQMD 2022).

The 2022 AQMP also outlines policies and practices intended to achieve attainment levels for criteria pollutants and avoid future levels that exceed applicable standards. The control measures contained in the 2022 AQMP can be categorized as follows (SCAQMD 2022):

- Ozone measures: These measures provide for necessary actions to attain the 2015 8-hour ozone NAAQS in 2037, including actions to reduce NO_x and VOC emissions from both stationary (point and area) and mobile sources, as included in SCAQMD's proposed stationary and mobile source measures as well as CARB's 2022 State Strategy for the State Implementation Plan (CARB 2022). The mobile source measures include actions to be taken by SCAQMD, CARB, and the EPA.
- Contingency measures: These measures are to be automatically implemented if the air basin fails to achieve the ozone standard by the latest statutory attainment date or a reasonable further progress requirements.
- Transportation control measures: These measures are generally designed to reduce vehicle miles traveled (VMTs) as included in Southern California Association of Governments' (SCAG's) 2020–2045 regional transportation plan, Connect SoCal 2020 (SCAG 2020).
- Some of the control measures achieve emissions reductions by taking advantage of existing programs while some control measures focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes needed to complement regulations.

Table 3.4-3 summarizes the SCAQMD rules relevant to controlling Project emissions.

Table 3.4-3 SCAQMD Rules and Regulations

Applicable rule	Description
Rule 401- Visible Emissions	Limits visible emissions.
Rule 402 – Nuisance	Prohibits the discharge air contaminants or other material which cause injury, detriment, nuisance, or annoyance to the public or which endanger the comfort, response, health or safety of the public or which cause injury or damage to business or property.

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Applicable rule	Description
Rule 403 – Fugitive Dust	Requires the submittal of a Large Operation Notification form to SCAQMD and requires compliance with best available control measures listed in the rule. The rule limits fugitive emissions from certain bulk storage, earthmoving, construction and demolition, and manmade conditions that may cause wind erosion.
Rule 404 – Particulate Matter Concentration	The rule limits particulate matter emissions as a function of the exhaust flow rate from the regulated device.
Rule 463 – Organic Liquids Storage	Sets standards for the storage of organic liquids with a true vapor pressure of 0.5 pounds per square inch or greater and standards for above-ground tanks used for gasoline storage with a capacity over 250 gallons.
Rule 1110.2 – Emissions from Gaseous and Liquid-Fueled Internal Combustion Engines	The purpose of this rule is to reduce Nox, VOCs, and CO from engines.
Regulation XIII – New Source Review	Establishes the pre-construction review requirements, including Best Available Control Technology and emission offset requirements for new, modified or relocated facilities to ensure that these facilities do not interfere with progress in attainment of the NAAQS.

Riverside County General Plan

The County of Riverside County General Plan Air Quality Element aims to balance land use, circulation, and other resources with their potential impacts on air quality. The Air Quality Element contains a number of goals and policies relevant to the analysis of air quality for the Project, including the following (County of Riverside 2018):

Policy AQ 2.2:

Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

Policy AQ 3.4:

Encourage employee rideshares and transit incentives for employers with more than 25 employees at a single location.

Policy AQ 4.1:

Require the use of all feasible building materials/methods which reduce emissions.

Policy AQ 4.5:

Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures;

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- Preventive maintenance;
- Operator training; and
- Emergency response planning

Policy AQ 4.6:

Require stationary air pollution sources to comply with applicable air district rules and control measures.

Policy AQ 4.7:

To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.

Policy AQ 4.9:

Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

Policy AQ 4.10:

Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended.

Policy AQ 5.4:

Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy AQ 16.1:

Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.

Policy AQ 20.19:

Facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations.

3.4.3 Methodology for Analysis

Evaluation of potential air quality-related impacts is based on the Savira Solar Project - Air Quality Technical Report, prepared by RCH Group (Appendix C; (RCH Group 2024). Intermittent, short-term emissions from construction activities were evaluated based on the

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SCAQMD Air Quality Handbook. The analysis focuses on daily and annual emissions from off-road equipment, haul trucks, and motor vehicles. The air quality analysis was conducted to determine the air quality impacts, in terms of air pollutant emissions, using the significance thresholds identified by SCAQMD (SCAQMD 2023). The air quality impacts analysis includes a review of criteria pollutant¹ and precursor emissions. Models used to estimate air quality impacts included the CARB EMFAC emissions inventory model (CARB 2021),² the CARB OFFROAD emissions inventory model (CARB 2017),³ and the EPA's AP 42 Compilation of Air Pollutant Emission Factors (USEPA 2024).⁴

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For air quality, the Checklists ask if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan (Impact Air-1)
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (Impact Air-2)
- Expose sensitive receptors to substantial pollutant concentrations (Impact Air-3)
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (Impact Air-4)

¹ Criteria air pollutants refer to those air pollutants for which the EPA and CARB have established NAAQS and CAAQS, respectively under the federal Clean Air Act and California Clean Air Act.

² EMFAC is the latest emissions inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit.

³ OFFROAD is the latest emission inventory model that calculates emissions inventories and emissions rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit.

⁴ The EPA's AP 42 Compilation of Air Pollutant Emission Factors contains emission factors for stationary point and area emission sources such as those associated with vehicle travel on paved roads and unpaved surfaces, and material handling and storage.

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The County of Riverside’s Environmental Assessment Form includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations (Impact Air-3).

SCAQMD Emissions Thresholds

The significance thresholds and analysis methodologies in the SCAQMD’s CEQA Air Quality Handbook were used in evaluating Project impacts for project-related emissions (SCAQMD 2023). These significance thresholds, under which the Project was evaluated, are described within the following section. SCAQMD has identified thresholds to determine the significance of regional air quality emissions for construction activities and project operation, as listed in Table 3.4-4.

Table 3.4-4 South Coast Air Quality Management District Project-level Emissions Significance Thresholds

Pollutant	Construction (lbs./day)	Operation (lbs./day)
VOC	75	55
NO _x	100	55
CO	550	550
SO ₂	150	150
PM ₁₀	150	150
PM _{2.5}	55	55
Lead	3	3

Source (SCAQMD 2023)

If a project’s estimated emissions exceed these significance thresholds, SCAQMD provides ambient concentration thresholds to be used to evaluate the significance of modeled downwind concentrations caused by project emissions of criteria pollutants. For emissions from sites that are near sensitive receptors and are less than five acres, SCAQMD has developed the *localized significance thresholds* (LSTs) to evaluate whether emissions of air pollutants from a project would result in significant localized adverse air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The LSTs may be used by lead agencies as a way of indicating whether a project’s emissions could result in exceedance of the ambient air quality standards at a given distance from the site boundary. The LSTs vary by each *source receptor area* within the SCAQMD jurisdiction due to varying meteorological conditions for each and by the size of the Project site. The Project site is located in SRA 31, East Riverside County. Table 3.4-1 lists the LSTs recommended by

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SCAQMD for the Project site location (i.e., East Riverside County) and a project site size of 5 acres (SCAQMD 2008, 2021).

Table 3.4-5 SCAQMD Localized Significance Thresholds for Project Emissions (Construction and Operation) by Distance from Site Boundary

	100 meters	200 meters	500 meters
NO _x (lbs./day)	425	547	875
PM ₁₀ (lbs./day)	67	112	248
PM _{2.5} (lbs./day)	19	37	128
CO (lbs./day)	5,331	10,178	31,115

Source (SCAQMD 2009)

If any of the LSTs are exceeded, then refined dispersion modeling is to be conducted to determine the significance of the project's emissions. The project would result in a significant construction and/or operational air quality impact if refined dispersion modeling demonstrates that a project's emissions would cause or contribute to exceedance of the ambient concentration significance thresholds listed below in Table 3.4-6.

Table 3.4-6 SCAQMD Ambient Air Quality Significance Thresholds for Criteria Pollutants

Pollutant	Averaging period	Pollutant concentration threshold
CO	1-hour /8-hour	SCAQMD is in attainment (federal and state); project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO ₂	1-hour	SCAQMD is in attainment (federal and state); project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm (state)
	Annual	0.03 ppm (state) and 0.0534 ppm (federal)
PM ₁₀	24-hour	10.4 µg/m ³ (construction) and 2.5 µg/m ³ (operation)
	Annual	1.0 µg/m ³ (construction and operation)
PM _{2.5}	24-hour	10.4 µg/m ³ (construction) and 2.5 µg/m ³ (operation)
SO ₂	1-hour	0.25 ppm (State) and 0.075 ppm (federal)
	24-hour	0.04 ppm (State)
Lead	30-day Average	1.5 µg/m ³ (State)
	Rolling 3-month Average	0.15 µg/m ³ (federal)

Source (SCAQMD 2023)

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Per SCAQMD guidance, the evaluated ambient concentrations of CO, NO₂, and SO₂ would be the total of the Project's modeled contribution plus background concentrations (see Table 3.4-3). The total concentration is then compared to the significance thresholds. For CO, NO₂, and SO₂, these significance thresholds are reflective of the CAAQS and NAAQS. Per SCAQMD guidance, the Project's contribution of PM₁₀ and PM_{2.5} would be compared to the significance thresholds without adding background concentrations.

3.4.4 Impacts and Mitigation Measures

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

SCAQMD's 2022 AQMP is the applicable air quality plan for reducing air quality pollutant emissions within the MDAB. Consistency is determined by evaluating whether the Project would support the primary goals of the 2022 AQMP, include applicable control measures contained in the 2022 AQMP, and not conflict with or obstruct implementation of any 2022 AQMP control measures. Construction, operation and maintenance, and decommissioning of the Project would comply with all applicable rules, regulations, and programs.

The SCAQMD 2022 AQMP identifies control measures and strategies to be implemented to attain the CAAQS and NAAQS in the MDAB. The 2022 AQMP contains 48 control measures, which aim to reduce emissions from combustion sources, biogenic sources, fugitive dust, and stationary sources. The Project would incorporate the applicable control measures from the 2022 AQMP and would not conflict with or obstruct implementation of any control measures. Additionally, the Project would comply with all applicable SCAQMD rules and regulations relevant to the Project.

The Project would not directly or indirectly promote population growth or increase trips in the region. Construction of the Project would require approximately 200 workers that would commute from nearby communities. Workers required for construction would be temporary and would cease once construction is complete. The Project would require up to 10 employees for operation and maintenance activities including, administrative and management personnel, operators, and security and maintenance personnel. The limited number of employees for operation and maintenance of the Project would not result in population growth or a substantial increase in vehicle trips in the region. Accordingly, Project construction and operation would not conflict with or obstruct implementation of the applicable air quality plan. The impact would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. The substations would not contain any stationary sources of air emissions, and the construction would be minimal and short-term. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

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Mitigation Measures

None required.

Impact AIR-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Project site is in an area designated as nonattainment for State-level ozone and PM₁₀ standards. Emissions generated from the Project could exceed SQCAMD's criteria pollutant emissions significance thresholds for ozone precursors and PM₁₀. Project-level thresholds for criteria pollutants emissions are used to determine whether the Project would result in a cumulatively considerable net increase in criteria air pollutants. If the Project's emissions exceed the applicable SCAQMD significance thresholds, the Project would result in a cumulatively considerable net increase in a criteria air pollutant.

Construction and Decommissioning

Emissions generated from the Project would include fugitive dust and criteria air pollutants. Sources of fugitive dust are primarily from ground-disturbing activities, material handling, and travel on unpaved surfaces. Combustion exhaust emissions of criteria air pollutants would be primarily from operation of heavy off-road equipment, haul trucks, and construction worker vehicle trips. Fugitive dust emissions would include particulate matter (PM₁₀ and PM_{2.5}) from soil eroded by ground-disturbing activities and by travel on unpaved surfaces and on paved road surfaces. Exhaust emissions would include ozone precursors (VOC or ROG and NO_x), CO, and particulate matter (PM₁₀ and PM_{2.5}). Decommissioning activities would create a temporary phase of similar emissions to dismantle solar panels and other components after the end of the Project's useful life of 40 years.

To minimize the amount of fugitive dust from unpaved surfaces and emissions from other ground-disturbing activities during the Project construction and decommissioning, all construction activity would be required to comply with local air district rules regarding dust control (including SCAQMD Rule 403). Diesel and gasoline-powered construction and decommissioning equipment would be classified as portable or as mobile sources (i.e., off-road equipment, trucks, and helicopters during installation of the gen-tie). These sources are subject to statewide registration and fleet requirements. On-road vehicle emissions would occur primarily off site. The on-road sources would include heavy-duty trucks to deliver equipment, concrete, water, and other materials and light-duty vehicles carrying crews and medium-duty deliveries. Motor vehicle exhaust emissions would occur outside of the proposed work sites as the traffic would occur primarily over the region-serving transportation network.

Table 3.4-7 provides the estimated maximum daily construction emissions that would be associated with the Project. The Project emissions without mitigation would exceed the SCAQMD's maximum daily emissions thresholds for PM₁₀ due to combustion equipment and fugitive-dust-generating activities. This being the case, impacts related to construction would be potentially significant, and mitigation is required.

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Table 3.4-7 Estimated Maximum Daily Construction Emissions without Mitigation (pounds)

	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂
Construction year 2026	8.48	121	63.7	325	35.1	0.41
Construction year 2027	7.46	110	53.4	298	32.3	0.38
Significance threshold	75	550	100	150	55	150
Significant (yes or no)?	No	No	No	Yes	No	No

Source: (RCH Group 2024)

Mitigation measures would be implemented to address off-road equipment emissions, fugitive dust emissions, and emissions from construction worker vehicle trips to reduce PM₁₀ emissions during construction. Mitigation Measure Air-1 requires idling for diesel heavy construction equipment to be limited to no more than 5 minutes, proper maintenance of all construction equipment and vehicles, and that all construction diesel engines meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines. Fugitive dust emissions would be reduced through implementation of Mitigation Measure Air-2, which requires the preparation and implementation of a Fugitive Dust Control Plan. The Fugitive Dust Control Plan would include measures to minimize fugitive dust emissions during construction, operation and maintenance, and decommissioning of the Project. Additionally, Mitigation Measure Air-3 includes a list of fugitive dust palliatives that may be used in place of water for the Project. Table 3.4-8 presents the estimated maximum daily construction emissions with Mitigation Measures Air-1 through Air-4 incorporated.

Table 3.4-8 Estimated Maximum Daily Construction Emissions with Mitigation (pounds)

Construction year	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂
Construction year 2026	5.95	185	33.4	34.1	4.29	0.41
Construction year 2027	5.38	165	30.7	31.6	4.01	0.38
Significance threshold	75	550	100	150	55	150
Significant (yes or no)?	No	No	No	No	No	No

Source (RCH Group 2024)

As shown in Table 3.4-8, the emissions from construction of the Project with mitigation incorporated would not exceed the SCAQMD significance thresholds for any criteria air pollutant. Because decommissioning would result in a temporary phase of emissions similar to project construction, decommissioning emissions would be expected to be similar to or less than those estimated to occur during construction. As with construction, the same Mitigation Measures would be associated with construction and decommissioning would be less than significant.

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Operation and Maintenance

Operation and maintenance emissions would be generated by mobile sources and from area sources necessary for routine upkeep of the Project. Mobile sources of emissions during operation would include vehicle use by staff and materials and equipment deliveries. Occasional testing of the backup generator would cause stationary source emissions. Emissions during operation and maintenance of the Project would be minimal due to the limited number of workers on site. Table 3.4-9 provides the estimated maximum daily operational emissions associated with the Project and compares those emissions to the SCAQMD's significance thresholds. As shown in Table 3.4-9, operational emissions would not exceed SCAQMD's significance thresholds.

Table 3.4-9 Estimated Maximum Daily Operational Emissions

	VOC (lbs.)	CO (lbs.)	NO _x (lbs.)	PM ₁₀ (lbs.)	PM _{2.5} (lbs.)	SO ₂ (lbs.)
Total	0.21	3.73	2.22	0.22	0.18	1.36
Significance threshold	55	550	55	150	55	150
Significant (yes or no)?	No	No	No	No	No	No

Source: (RCH Group 2024)

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Although work on the upgrades would generate criteria air pollutants, it would be minimal and short-term and likely not overlap with the construction of the Project. Impacts would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Air-1: Control On-Site Off-Road Equipment Emissions

The applicant, when entering construction contracts or when procuring off-road equipment or vehicles for on-site construction activities, shall ensure that only recent model year equipment or vehicles are obtained, as feasible. The following measures shall be included with contract or procurement specifications:

- All construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, with a rating of 50 hp or higher, shall meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b)(1), unless a good faith effort demonstrates that such engine is not available for a particular item of equipment. If a Tier 4 engine is not available for any off-road equipment larger than 50 hp, a Tier 3 engine shall be used or that equipment shall be equipped with retrofit controls to reduce exhaust emissions of NO_x and DPM to

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no more than Tier 3 levels unless certified by the engine manufacturers that the use of such devices is not practical for specific engine types.

- All diesel-fueled engines used in the construction of the facility shall have clearly visible tags showing that the engine meets the standards of this measure.
- All equipment and trucks for construction activities shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
- All diesel heavy construction equipment shall not idle for more than five minutes. Vehicles that need to idle as part of their normal operation (such as concrete trucks) are exempted from this requirement.

Mitigation Measure Air-2: Fugitive Dust Control Plan

The applicant, its contractor, or its subcontractor shall prepare and implement a Fugitive Dust Control Plan to address fugitive dust emissions during project construction, operation, maintenance, and decommissioning. The plan shall include measures to minimize fugitive dust emissions from the commencement of construction activities through operations, maintenance, and decommissioning. In the case where the contractor obtains permit coverage under SCAQMD Rule 403, that permit, and associated plan will be incorporated into the final Fugitive Dust Control Plan prepared by the applicant. During construction, the applicant, its contractor, and subcontractors shall take every reasonable precaution to prevent all airborne fugitive dust plumes from leaving the project site, to prevent visible particulate matter from being deposited upon public roadways and shall adhere to the SCAQMD rules. The plan shall be subject to review and approval by the SCAQMD (Rule 403).

The following measures shall be included within the Fugitive Dust Control Plan:

- Prior to commencing construction, the applicant, its contractor, or its subcontractor shall designate and retain for the duration of construction a Dust Control Supervisor. The Dust Control Supervisor shall have successfully completed the SCAQMD Rule 403 dust control compliance training class. The Dust Control Supervisor shall have full access to all areas of construction on the project site, gen-tie line, and other linear facilities and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions.
- During construction, all unpaved roads, disturbed areas (e.g., areas of scraping, excavation, backfilling, grading, and compacting), and loose materials generated during construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent or watered two times daily or as frequently as necessary to minimize fugitive dust generation. Non-water-based soil stabilizers shall be as efficient as or more efficient for fugitive dust control than CARB-approved soil stabilizers and shall not increase any other environmental impacts, including loss of vegetation, adverse odors, or emissions of ozone precursor ROG or VOC. The

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proposed soil stabilizing products shall be listed in the Plan and are subject to review and approval by Riverside County, BLM, and California Department of Fish and Wildlife (CDFW). Any soil stabilizers proposed shall be consistent with those recommended in the Stormwater Pollution Prevention Plan (SWPPP) and shall also be approved for use by the project's Restoration Specialist to ensure that the products would not impede restoration goals.

- The main access roads through the site shall be stabilized using soil binders, gravel, or equivalent methods, to provide a stabilized surface that is similar for the purposes of dust control to paving, that may or may not include a crushed rock (gravel or similar material with fines removed) top layer, prior to commencing construction. Delivery, laydown, and staging areas for construction or operations and maintenance supplies shall be paved or stabilized prior to taking initial deliveries.
- Grading and earthwork activities, including vegetation removal, cut and fill movement, and soil compacting, shall be phased across the site to minimize the amount of exposed or disturbed areas on any single day.
- No vehicle shall exceed 15 miles per hour on unpaved areas within the site, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions or conflict with other permit conditions.
- Visible speed limit signs shall be posted at the construction site entrances.
- All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.
- All unpaved exits from the construction site shall be graveled or treated to prevent track-out onto public roadways. No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. All track out from an active operation shall be removed immediately if it extends over 25 feet or if under 25 feet, at the end of each workday.
- All paved roads within the construction site shall be swept daily or as needed (less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.
- At least the first 500 feet of any paved public roadway exiting the construction site or exiting other unpaved roads to access the construction site, or staging areas shall be swept as needed when dirt or runoff resulting from the construction activities is visible on the paved public roadway.
- Consistent with SCAQMD Rule 403(g)(2), regarding exemptions, contingency control measures may be implemented during "high wind" conditions, when instantaneous wind speeds exceed 25 miles per hour. The contingency measures for high wind events shall include those measures set forth in Table 3 to Rule 403.
- Install a gravel apron to reduce mud/dirt track out from unpaved truck exit routes.
- Construct three-sided enclosures for storage piles.

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Mitigation Measure Air-3: Fugitive Dust Palliatives

If dust palliatives are used in place of water for the project, the total amount of water needed during construction would be reduced. The applicant may opt to use such palliatives, as authorized by the County for the project. The soil binder/dust palliatives that are proposed for the project, and which have been previously allowed in the region are:

- Road Bond 1000
- For roads and heavy traffic areas: Soil Sement
- For non-traffic areas on finer soils: Formulated Soil Binder FSB 1000
- For non-traffic areas on sandier/rockier soils: Plas-TEX Soil Stabilizer

Alternatives as approved by the County

Significance Determination after Mitigation

Less than significant

Impact AIR-3: Would the project expose sensitive receptors located within 1 mile of the project site to substantial pollutant concentrations?

Construction and Decommissioning

Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive receptor is a residence located approximately 4.9 miles northwest of the Project site.

SCAQMD recommends an LST analysis to determine potential impacts to nearby sensitive receptors during construction of the Project. Project impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology. Off-site emissions from vendor trucks, haul trucks, and worker vehicle trips are not included in the LST analysis. According to the Final Localized Significance Threshold Methodology, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2008). Hauling of construction materials associated with project construction is not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways because emissions from the trucks would be relatively brief in nature and would cease once the trucks pass through the main streets.

Construction activities associated with the Project would result in temporary sources of on-site fugitive dust and construction equipment emissions. SCAQMD's LSTs for SRA 31 are compared to the maximum daily on-site construction emissions generated by the Project. The LSTs for SRA 31 are presented in Table 3.4-10 alongside the maximum daily on-site construction emissions for

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the Project. As reflected in Table 3.4-11, project construction emissions would not exceed SRA 31 LSTs. Because decommissioning would result in a temporary phase of emissions similar to project construction, decommissioning emissions would also not be expected to exceed SRA 31 LSTs.

Table 3.4-10 2026 Project Construction Emissions and SCAQMD Localized Significance Thresholds for SRA 31

	100-meter LST	200-meter LST	500-meter LST	Mitigated emissions	Unmitigated emissions
NO _x (lbs./day)	425	547	875	59.2	28.9
PM ₁₀ (lbs./day)	67	112	248	15.7	7.04
PM _{2.5} (lbs./day)	19	37	128	4.18	1.41
CO (lbs./day)	5,331	10,178	31,115	68.9	134

Source (RCH Group 2024; SCAQMD 2009)

Table 3.4-11 2027 Project Construction Emissions and SCAQMD Localized Significance Thresholds for SRA 31

	100 meters	200 meters	500 meters	Mitigated emissions	Unmitigated emissions
NO _x (lbs./day)	425	547	875	49.5	26.8
PM ₁₀ (lbs./day)	67	112	248	15.2	6.97
PM _{2.5} (lbs./day)	19	37	128	3.78	1.34
CO (lbs./day)	5,331	10,178	31,115	63.5	119

Source (RCH Group 2024; SCAQMD 2009)

Hazardous Air Pollutants (HAPs)

In addition to criteria air pollutants, HAPs are also evaluated. HAPs (e.g., acetaldehyde, formaldehyde, benzene, toluene, and xylene) are gaseous organic and inorganic chemicals and particulate matter that the EPA has identified to have known or suspected potential to cause cancer or other serious health effects. HAPs are emitted by a wide range of sources, including construction equipment and industrial facilities. The Clean Air Act mandates that the EPA regulates HAP emissions. While there are currently no ambient (i.e., outdoor) standards for HAP emission levels, standards do exist for the level of HAP emissions emitted by stationary sources. HAP emissions are calculated based on speciation factors which are essentially the percentage of an individual HAP within the total VOC emissions from construction equipment and vehicles. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use Off-Road Diesel Vehicles (Title 13 California Code of Regulations,

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Chapter 9, Section 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.

- All commercial diesel vehicles are subject to Title 13 section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The greatest potential for HAP emissions during construction would be DPM emissions from heavy equipment operations and heavy-duty trucks during construction of the Project and the associated health impacts to sensitive receptors. There are no sensitive receptors within 0.5 mile of the Project site. The Palm Nursery is located adjacent to the Project site but does not employ workers on a continuous basis. As stated above, the nearest sensitive receptor is located 4.9 miles northwest of the Project site. The maximum daily PM₁₀ or PM_{2.5} emissions generated by construction equipment operation and from hauling of soil during grading (exhaust particulate matter, or DPM), combined with fugitive dust generated by equipment operation, would fall well below the SCAQMD significance thresholds after mitigation.

Table 3.4-12 shows the estimated annual HAP emissions for all construction-related emissions for the Project with and without combustion controls. Because the calculated emission rates for HAP emissions were miniscule, the potential for increased acute and/or long-term health impacts resulting from HAP emissions from the reasonably foreseeable development activities are expected to be insignificant. The potential to emit HAP would be less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined. Therefore, the Project would not be a major source of HAP emissions. Because decommissioning would result in a temporary phase of emissions similar to project construction, decommissioning is also not expected to be a major source of HAP emissions. Additionally, there are no sensitive receptors such as residences and schools within 0.5 mile of the Project site. Thus, a health risk assessment was not conducted, and health impacts would be less than significant.

Table 3.4-12 Annual Construction Emissions of HAPs

Pollutant	Without controls		With controls	
	2026	2027	2026	2027
1,3-butadiene (tons)	0.0008	0.0006	0.0006	0.0004
2,2,4-trimethylpentane (tons)	0.0035	0.0026	0.0025	0.0018
Acetaldehyde (tons)	0.0446	0.0330	0.0322	0.0235
Acrolein (tons)	0.0082	0.0060	0.0059	0.0043
Benzene (tons)	0.0217	0.0161	0.0157	0.0114
Ethylbenzene (tons)	0.0021	0.0015	0.0015	0.0011

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	Without controls		With controls	
Formaldehyde (tons)	0.1245	0.0922	0.0898	0.0656
Hexane (tons)	0.0002	0.0001	0.0001	0.0001
Naphthalene (tons)	0.0020	0.0014	0.0014	0.0010
Propionaldehyde (tons)	0.1061	0.0786	0.0766	0.0559
Toluene (tons)	0.0158	0.0117	0.0114	0.0083
Xylene (tons)	0.0065	0.0048	0.0047	0.0034
Polycyclic organic matter (tons)	0.0020	0.0015	0.0014	0.0011
Total (tons)	0.3380	0.2502	0.2438	0.1780

Source: (RCH Group 2024)

Health Impacts of Carbon Monoxide

As discussed above, exposure to CO results in reduced levels of oxygen reaching the brain, heart, and other body tissues. A CO “hot spot” would occur if an exceedance of the state 1-hour standard of 20 parts per million (ppm) or the 8-hour standard of 9 ppm were to occur. The SCAQMD is currently in attainment for CO, but a CO hot spot could occur in areas of traffic congestion. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards. In order to establish a more accurate record of baseline CO concentrations affecting Los Angeles, a CO “hot spot” analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards.

The Bay Area Air Quality Management District (BAAQMD) concludes that, under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact. The Project would result in an average of 400 daily vehicle trips, and a maximum of 662 daily vehicle trips during construction activities. Decommissioning vehicle trips would be similar to and likely lower than those expected for construction. Therefore, the Project would not generate traffic volumes that would exceed the BAAQMD vehicle trip threshold. Project-generated impacts associated with CO hotspots would be less than significant.

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Valley Fever

Soils in some areas of California host microscopic fungus that causes Valley fever, which lives in the top two to 12 inches of soil in many parts of the state. When soil is disturbed by activities such as digging, driving, or high winds, fungal spores can become airborne and potentially be inhaled. People who become sick with Valley fever (also called coccidioidomycosis) can experience respiratory symptoms including cough, fever, chest pain, and tiredness. Most people (about six in ten) who are infected with Valley fever have no symptoms, and their bodies will fight off the infection naturally. Workers in Riverside County are at a relatively lower risk for Valley fever than in other areas of California. However, based on yearly data published by the Infectious Diseases Branch of the California Department of Public Health, California has experienced a trend of higher numbers of cases, with statewide average incidence rates between 18.2 to 22.9 per 100,000 of population during the 5 most-recent years of records from 2017 to 2021. Therefore, construction workers for the Project may be exposed to Valley fever from ground disturbing activities. Additionally, fugitive dust may expose nearby sensitive receptors to Valley fever. The primary ways to reduce the risk of Valley fever are to avoid exposure to dusty air or dust storms, prevent dirt or dust from becoming airborne, and, if working at a dusty site is unavoidable, wear respiratory protection with particulate filters rated as N95 or higher. The Project would be subject to the dust control measures outlined in SCAQMD Rule 401 and Rule 403. Mitigation Measure Air-2 requires the preparation of a Fugitive Dust Control Plan that would include measures to limit fugitive dust emissions during Project construction, operation and maintenance, and decommissioning. These mandatory controls would avoid exposing construction and decommissioning workers and the off-site population to substantial concentrations of dust and thereby ensure that the impact of potential exposure to Valley fever would be less than significant.

Visibility and Federal Class I Areas

Federal lands, including National Parks, are granted special air quality protection under the federal Clean Air Act. Class I areas are provided the greatest protection under the Clean Air Act. The nearest boundary of the Joshua Tree National Park Class I area is located approximately 7 miles west of the Project. Ambient air quality impacts of the project including increased concentrations of airborne dust, including PM₁₀ and PM_{2.5}, and NO_x emissions could impact visibility. However, the sources of emissions during construction and decommissioning would occur near the ground level, where dust would have a limited ability to notably affect distant vistas, and emissions would be widely dispersed across the Project site. The near-ground release and intermittent nature of construction sources ensures that the concentration near the Joshua Tree National Park would be much lower than the localized effects near the Project. Additionally, all cumulative projects are anticipated to avoid visible plumes and control dust as required by SCAQMD Rule 401 and Rule 403. Projects subject to the CEQA process would also implement additional mitigation measures where needed to control dust. Controlling construction and decommissioning emissions as required by local rules and regulations and through mitigation measures identified above ensures that users of the JTNP would not experience substantial concentrations of pollutants. The impact would be less than significant.

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Operation and Maintenance

During operation, the Project would include minimal sources of TAC emissions, including use of pressure washers once annually for panel washing and use of water trucks for periodic water deliveries to the site. Given the minor increase in emissions and distance to the closest receptor (i.e., over 4.9 miles), operational activities are not expected to be a significant source of DPM or associated potential health impacts. Therefore, the impact would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. The upgrades would result in construction emissions; however, the work would be short-term and minimal and would not result in significant impacts to sensitive receptors.

Significance Determination before Mitigation

Less than significant

Mitigation Measures

None required.

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

The occurrence and severity of odor impacts depend on nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Generally, odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions, which hamper vertical mixing and dispersion. While offensive odors from stationary and mobile sources rarely cause any physical harm, they remain unpleasant and can lead to public distress.

Construction and Decommissioning

Land uses generally associated with odor complaints include agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not comprise any land uses that would produce objectionable odors. Sources of potential odors associated with the Project may include construction equipment exhaust, the application of asphalt and architectural coatings during construction activities, and the temporary storage of typical solid waste associated with the Project's operational uses. Construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Waste generated by the Project would be managed in accordance with the Project's Hazardous Materials and Waste Management Plan and the county's solid waste regulations. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals. Odors associated with the construction of the Project would be less than significant.

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Operation and Maintenance

Operation of the Project would not generate emissions that could lead to objectionable odors. Odors from operational equipment and vehicle exhaust would be minimal and would not affect a substantial number of people. Therefore, the Project would have less-than -significant impacts related to odors.

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Operational impacts of the substation improvements may generate minimal odors or pollutant concentrations. However, the impacts would be minimal and short-term and would not result in significant impacts.

Significance Determination before Mitigation

Less than significant

Mitigation Measures

None required

3.4.5 Cumulative Analysis

The geographic area affected by the Project and its potential to contribute to cumulative impacts is based on the topography surrounding the Projects' area and the natural boundaries affecting air resources. For air quality, the geographic scope of cumulative effects includes consideration of regional air emissions across the entire jurisdiction of the SCAQMD.

Air quality impacts are largely cumulative in nature. As discussed above, the SCAQMD is currently in state nonattainment for O₃ and PM₁₀. The Project would generate emissions of ozone precursors (i.e., ROG and NO_x) and PM₁₀, PM_{2.5}, contributing to the ambient concentrations for which the basin is in nonattainment. Cumulative projects that involve construction or operation that involves use of heavy equipment, grading, or use of diesel-powered equipment would also contribute to the emissions within the air basin. The SCAQMD CEQA Air Quality Handbook states: "From an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the SCAQMD" (SCAQMD n.d.) According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's significance thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants.

Construction, operation, and decommissioning of the Project could occur concurrently with other cumulative projects in the SCAQMD. Cumulative impacts would exist when either direct air quality impacts or multiple construction projects occur within the same area simultaneously. If a project were to produce air quality emissions simultaneously to a nearby construction project, the addition of both project emissions to the environment could exceed significance thresholds. Construction of the Project would have less-than-significant impacts with mitigation. If a nearby

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project was to be under construction at the same time, that project would need to generate enough additional emissions in proximity to the Project site such that emissions would exceed thresholds. The Project could be constructed concurrently with the Redonda Solar Project, which is adjacent and southwest of the Project site.

Table 3.4-13 provides the estimated maximum cumulative daily emissions from the Savira plus the Redonda and Bajada Solar Projects and compares those emissions to the SCAQMD's significance thresholds. The unmitigated maximum daily emissions of NO_x, PM₁₀, and PM_{2.5} exceed the SCAQMD's significance thresholds due to combustion equipment and fugitive dust producing activities such as unpaved road travel. The mitigated maximum daily emissions would not exceed the SCAQMD's significance thresholds. The construction impacts on air quality would be temporary, occur during limited time periods, and affect a small geographical area.

Table 3.4-13 Estimated Cumulative Maximum Daily Construction Emissions (pounds) – Savira Plus Redonda and Bajada

Construction year	VOC	CO	Nox	PM ₁₀	PM _{2.5}	SO ₂
Unmitigated						
2026	24.4	341	180	607	68.5	1.15
2027	17.1	271	124	554	61.0	0.95
2028	13.5	204	80.6	872	90.3	0.72
2029	9.67	191	58.5	871	90.1	0.69
Significance threshold	75	550	100	150	55	150
Significant (Yes or No)?	No	No	Yes	Yes	Yes	No
Mitigated						
2026	17.2	541	95.7	65.5	9.20	1.29
2027	12.3	385	73.9	59.9	8.04	1.08
2028	11.2	342	61.7	87.7	10.2	0.72
2029	7.85	256	47.0	87.7	10.2	0.69
Significance threshold	75	550	100	150	55	150
Significant (yes or no)?	No	No	No	No	No	No

Source (RCH Group 2024)

Table 3.4-14 provides the estimated average cumulative daily emissions for the Savira and Redonda Solar Projects and compares those emissions to the SCAQMD's significance thresholds (for informational purposes only). The unmitigated average cumulative daily emissions of NO_x, PM₁₀, and PM_{2.5} exceed the SCAQMD's significance thresholds. The mitigated average cumulative daily emissions would not exceed the SCAQMD's significance thresholds.

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Table 3.4-14 Estimated Cumulative Average Daily Construction Emissions (pounds) – Savira Plus Redonda and Bajada

Construction year	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂
Unmitigated						
2026	9.87	131	72.5	197	22.9	0.42
2027	5.72	81.4	42.6	145	16.4	0.28
2028	8.01	128	48.2	450	47.4	0.45
2029	2.45	55.4	15.4	272	28.0	0.20
Significance threshold	75	550	100	150	55	150
Significant (yes or no)?	No	No	Yes	Yes	Yes	No
Mitigated						
2026	7.12	212	42.5	21.9	3.23	0.47
2027	4.07	116	25.6	16.6	2.30	0.33
2028	6.76	206	40.8	48.0	5.85	0.45
2029	2.01	66.3	12.2	27.3	3.13	0.20
Significance threshold	75	550	100	150	55	150
Significant (yes or no)?	No	No	No	No	No	No

Source (RCH Group 2024)

Implementation of Mitigation Measures Air-1, Air-2, and Air-3 would reduce potential the Project's construction-related daily emissions. Cumulative projects such as the Redonda Project would be expected to implement similar mitigation requirements to ensure compliance with SCAQMD Rules. During construction the mitigated Project's maximum daily emissions would not exceed SCAQMD's significance thresholds (see Table 3.4-7 and Table 3.4-8), cumulative air quality impacts from the construction of nearby projects would be less than significant with mitigation and the Project's contribution to impacts would not be cumulatively considerable.

Southern California Edison Activities

The SCE Activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Construction and operation of the substation improvements would be short term and result in minimal air quality impacts. The Project's implementation of mitigation measures would ensure that the additional impacts created from the substation upgrades would not contribute to cumulative air quality impacts.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Refer to Mitigation Measure Air-1, Mitigation Measure Air-2, and Mitigation Measure Air-3.

Significance Determination after Mitigation

Cumulative air quality impacts from the construction of nearby projects would be less than significant with mitigation and the Project's contribution to impacts would not be cumulatively considerable.

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3.5 Biological Resources

This section presents the environmental setting and analysis of impacts to biological resources resulting from the Project. This section describes existing biological resources in and surrounding the Project site and applicable regulations, analyses the potential impacts, and provides mitigation measures to reduce or avoid significant effects.

3.5.1 Environmental Setting

Regional Setting

This description of the biological resources of the Project is based on the Biological Resources Technical Report, Savira Solar Project (Savira BRTR) and the Aquatic Resources Report, Savira Solar Project prepared by Ironwood Consulting in May 2026 (Ironwood Consulting, Inc. 2026b, 2026a; both documents located in Appendix D).

The Project consists of a solar site located on private land and two linear features — a gen-tie line and an access road—located on Bureau of Land Management (BLM) -managed land. The proposed gen-tie line alignment and access road are situated on federal land designated as a Development Focus Area (DFA) for solar, wind, and geothermal development under the Desert Renewable Energy Conservation Plan (DRECP). The overall Project site lies within the Chuckwalla Valley ecoregion subarea of the DRECP area. The DRECP Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement (FEIS) identify the surrounding federal lands as a DFA, as designated in the Record of Decision signed by BLM on September 14, 2016.

The gen-tie and access road are located within the (BLM) California Desert Conservation Area (CDCA) Plan area. The Project site is also within the U.S. Fish and Wildlife Service's (USFWS') designated Colorado Desert Recovery Unit for the Mojave desert tortoise (Appendix D). Project activities would be located outside of designated critical habitat for the desert tortoise.

The Project site is located in the Colorado Desert, east of Palm Springs, within the Chuckwalla Valley in unincorporated Riverside County, California, between the towns of Desert Center and Blythe. The Project site is situated immediately north of Interstate 10 (I-10) and spans portions of the Corn Spring and Sidewinder Well U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project site comprises approximately 535 acres of private land in eastern Riverside County. The topography of the Project site generally slopes downward toward the northeast at gradient of less than 2 percent. Elevations within the Project site range from approximately 600 feet above mean sea level (amsl) in the northeast corner of the Project site and approximately 750 feet amsl in the southwest corner.

The Project site does not overlap any landscape blocks identified in the California Desert Linkage Network. The nearest landscape block is the Palen-McCoy Wilderness Area, located approximately 1.35 miles northeast of the site. The Project site also does not overlap any Areas of

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Critical Environmental Concern (ACEC); the Palen Dry Lake ACEC and Palen Ford ACEC are located northeast of the Project site. Nearby land uses include existing solar facilities, transmission infrastructure, fallow agricultural land, and active agricultural operations.

Anthropogenic features and land use near the Project site include agricultural (date palm farm), trash dumping, renewable energy, energy transmission, historical military operations, and recreational development.

Ironwood biologists conducted full-coverage wildlife surveys and focused special-status plant surveys within the Project site during the spring, summer, and fall of 2024 and non-breeding season burrowing owl surveys extended into the winter 2024/2025 season (Appendix D). Wildlife surveys were conducted using belt transects spaced approximately 10 meters (32.8 feet) apart to ensure full coverage of the Project site.

Vegetation and Habitat

The term *habitat* refers to the environmental and ecological conditions where a species is found. Wildlife habitat is typically described in terms of vegetation though a more comprehensive definition also includes the availability or proximity of water, nesting or denning sites, shade, foraging perches, cover from predators, suitable soils for burrowing or hiding, limited noise and disturbance, and other species-specific requirements. Vegetation reflects many aspects of habitat, including regional climate, physical structure, biological productivity, and food availability. Accordingly, vegetation is a useful overarching indicator of habitat and serves as a primary factor in the assessment of habitat suitability in this section as well as the analysis of potential impacts to wildlife habitat in Section 3.5.3. Where additional habitat details are relevant, they are provided in the discussion of special-status wildlife species below.

Most of the vegetation on the Project site consists of creosote bush scrub and non-native grassland. A small area of Desert Dry Wash Woodland vegetation community was mapped on the Project site, which is identified as sensitive due to the association with alluvial processes (Appendix D).

Vegetation communities found within the Project are shown in Figure 3.5-1, Table 3.5-1, and are as follows:

- **Sonoran Creosote Bush Scrub.** Sonoran Creosote Bush Scrub occurs on well-drained, secondary soils of slopes, fans, and valleys and is the basic creosote bush scrub habitat of the Colorado Desert. Sonoran Creosote Bush Scrub occurs in the western segment of the Project site.
- **Non-native grassland.** Non-native grassland occurs in disturbed areas across a variety of topographic settings and substrates and is dominated by red brome and Mediterranean grass. This vegetation type is present in the northern parcels of the Project site, particularly near the active date palm farm where past agricultural activity has disturbed the landscape.
- **Desert Dry Wash Woodland/Microphyll Woodland.** Desert dry wash woodland occurs in braided desert washes and is characterized by an open canopy of desert

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ironwood and blue palo verde. This microphyll woodland community is mapped on the western side of the Project site and is considered sensitive by CDFW.

Table 3.5-1 Vegetation Communities

Vegetation	Acres
Sonoran Creosote Bush Scrub	171
Non-native grasslands	203
Desert Dry Wash Woodland	3.3
Deciduous Orchards	134
Lacustrine	16.5
Urban	4
Total	535

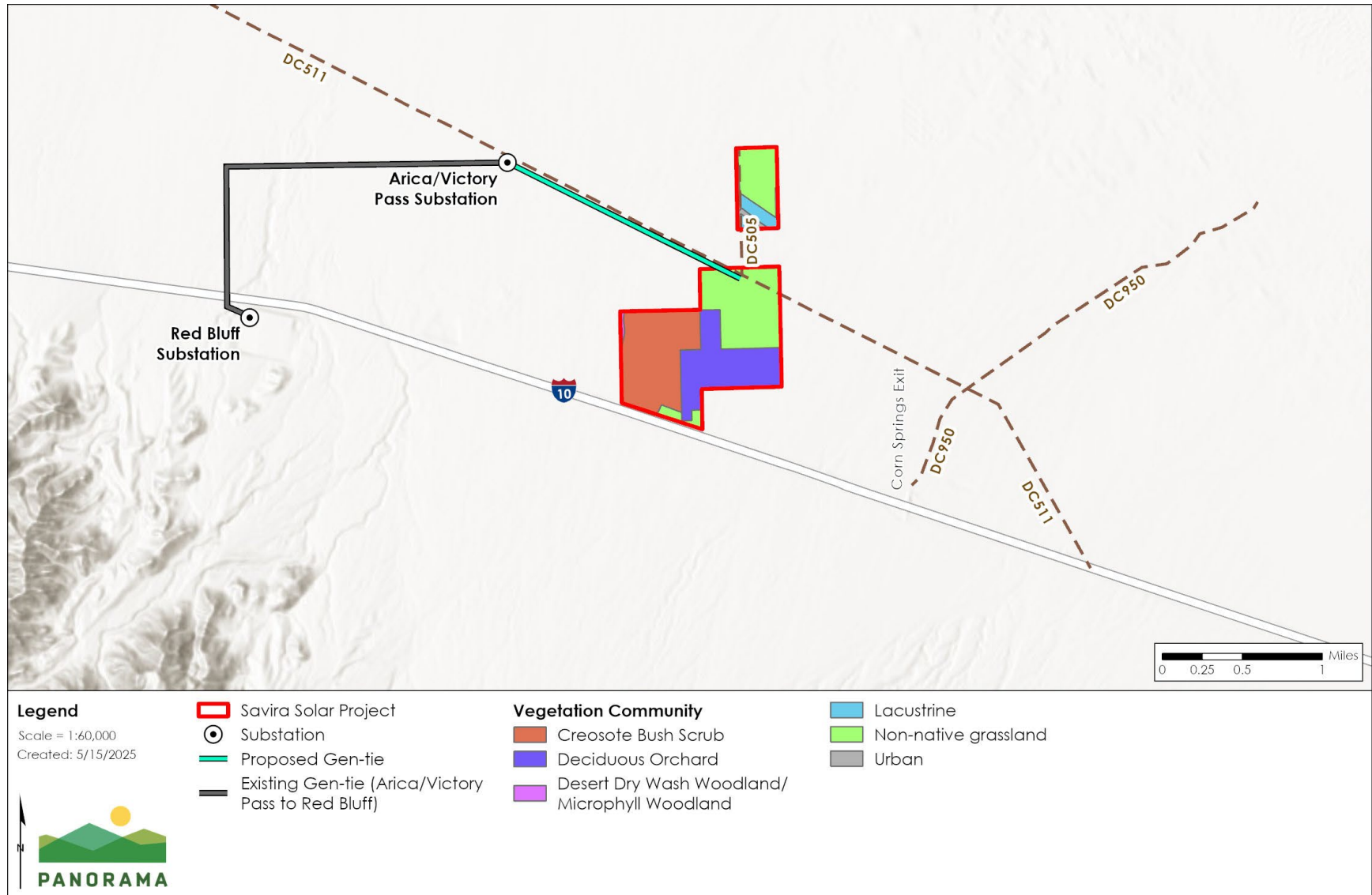
- **Other land covers:**

- **Deciduous orchards/vineyards.** Deciduous orchards/vineyards consist of abandoned agricultural land where there used to be a date palm farm as well as a portion of an active date palm farm along the eastern edge of the northern Project site.
- **Lacustrine.** Lacustrine vegetation communities are those that are associated with ponded water. Within the Project site, this community is mapped where a man-made detention pond is maintained with limited to no vegetation for agricultural purposes. This area may be subject to jurisdictional state waters regulated by CDFW and RWQCB.
- **Urban.** North of the man-made retention pond, a staging area for agricultural equipment, vehicles, tractors, and a few storage buildings occurs that is labeled as urban.

No desert pavement, a unique geomorphic condition resulting in tightly interlocking gravel substrates with cryptogamic crusts, occurs on the site.

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Figure 3.5-1 Project Vegetation



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Jurisdictional Waters

The Project site is located within the Colorado River Hydrologic Region (HR). The Colorado River HR covers approximately 13 million acres (20,000 square miles) in southeastern California and is the most arid HR in California, with annual precipitation averaging less than 4 inches. Desert washes within this region are almost always dry but may contract and expand in size due to variations in flows, which can range from high-discharge floods to extended periods when surface flow is absent. The Project site lies between the alluvial fans emanating from the Eagle Mountains to the west, Chuckwalla Mountains to the south, and Palen Mountains to the north (Ironwood Consulting, Inc. 2026b).

The Project site is situated in the lower alluvial fan that is characterized by less stabilized soils consisting of finer sand and silt as compared with the upper alluvial fan that supports more stabilized, rocky soils with well-defined channels. The topography of the Project site is relatively flat with gradients of less than two percent. Alluvial processes across the Project site generally flow from southwest to northeast. Agricultural practices and developments, such as the I-10, have greatly modified natural hydrology.

Waters of the United States

Jurisdictional waters of the United States (WOTUS), as defined under the Clean Water Act, include interstate waters and their tributaries but exclude ephemeral channels. As described above, the Project site is located within a closed hydrologic basin (Big Wash and Hayfield Lake–Lake Tamarisk HUC 10 areas), which drains to isolated features such as Palen Dry Lake and Ford Dry Lake. These basins are not connected to any traditional navigable waters or territorial seas. This being the case, no waters of the United States, including jurisdictional wetlands or tributaries, are present within the Project area.

The U.S. Army Corps of Engineers has determined that no jurisdictional waters of the United States were found within other projects in the same basin (Arica Solar Project, Victory Pass Solar Project, Desert Sunlight, Desert Harvest, Palen, and Athos solar projects). Waters of the United States do not occur within the Project site, and regulations under the Clean Water Act are not applicable.

Waters of the State.

Waters of the state are defined to include “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code section 13050(e)). Unlike waters of the United States, no surface connection to larger water bodies is required under the state definition.

Streams

Ironwood performed field investigations (surveys) for aquatic resources, including wetlands and other open waters, between April 15 and April 30, 2024. Results of the fieldwork are presented in Table 3.5-1 (Appendix D; Ironwood Consulting, Inc. 2026a).

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Table 3.5-2 Aquatic Resources and Acreage Potentially within each Jurisdiction

Aquatic Resource	Acreage under U.S. Army Corps of Engineers jurisdiction	Acreage under RWQCB jurisdiction	Acreage under CDFW 1602 jurisdiction
Unvegetated Ephemeral Wash	0	5.93 (ordinary high-water mark)	13.00 (bank to bank)
Dry Desert Wash Woodland/Microphyll Woodland	0	3.31	3.31
Detention pond	0	3.31	3.31
Excavated depression	0	0.65	0.65

SOURCE: Appendix D

Unvegetated Ephemeral Wash was mapped based on the presence of active channels, primarily within creosote bush scrub habitat. In the lower alluvial fan, where the Project site is located, active channels exhibited signs of frequent avulsion (i.e., shifts in flow direction following surface water events) resulting from brief, high-intensity runoff. This avulsion process creates a dynamic network of active and inactive channels. Active channels displayed clear indicators such as scour marks, cut banks, levee ridges, wrack lines, and organic drift while inactive channels and swales appeared as discontinuous, shallow depressions lacking evidence of recent flow.

In the Chuckwalla Valley, Desert Dry Wash Woodland, specifically Blue Palo Verde–Ironwood Woodland, is the dominant riparian vegetation community. This vegetation community is associated with braided wash channels that are also shaped by frequent avulsion. Areas mapped as Desert Dry Wash Woodland include both ephemeral streambeds and riparian interfluves within a matrix of wash-dependent vegetation. Due to the density and close proximity of braided channels in the region, all mapped Desert Dry Wash Woodland/Microphyll Woodland occurs on the western side of the Project site.

Special-Status Plants

In spring 2024 and fall 2024, Ironwood Consulting conducted focused special-status plant surveys on the entire Project site plus a 150-meter buffer at 20-meter intervals. The field methods were consistent with protocols recommended by the USFWS, CDFW, California Native Plant Society, and BLM. The Biological Resources Technical Report (BRTR) provides a compilation of special-status plants with the potential to occur within the Project site and vicinity. The BRTR evaluates the probability of occurrence for each species at the Project site based on habitat, elevational and geographic ranges, and field survey results. The complete methods and results of the surveys are provided in the Savira Solar BRTR (Appendix D).

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In this analysis, special-status plants include those species classified as one or more of the following:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA)
- Listed as threatened or endangered, or candidate for listing, under California Endangered Species Act (CESA), or listed as rare under the California Native Plant Protection Act
- Designated by BLM as a BLM sensitive plant which are all plant species that are currently on List 1B of the California Native Plant Society Inventory of Rare and Endangered Plants of California along with others that have been designated by the California State Director (the California Native Plant Society list is now known as the California Rare Plant Rank list, or CRPR)
- Meet the definition of an endangered, rare, or threatened species under CEQA Guidelines Section 15380¹
- Considered special-status species in local or regional plans, policies, or regulations, such as the NECO Plan/Environmental Impact Statement, DRECP, or by CDFW or USFWS

All special-status plant species that are anticipated to have a moderate to high potential to occur on the Project site or were observed during 2024 field surveys are described in Appendix D. Special-status plants that were observed within the Project site or that have high potential to occur are discussed further in the paragraphs below.

No plant species listed as endangered or threatened, or that is a candidate for such listing, under the federal ESA or CESA, or that is listed as endangered or rare under the Native Plant Protection Act (NPPA), were observed or are expected to occur on the Project site or in the surrounding area. However, several special-status plant species were either observed or have a high potential to occur on the Project site during surveys. A sand transport corridor runs through the Chuckwalla Valley, north of the Project. No special-status plant species were observed or have a moderate or high potential to occur within the gen-tie line alignment.

Special-status species detected within the Project site or that have a moderate to high occurrence potential are described below.

Emory's Crucifixion Thorn: CRPR 2B.2

Emory's crucifixion thorn (*Castela emoryi*) has approximately 177 recorded occurrences in California, with several records located in Riverside County near or within Desert Center. Suitable habitat for this species is present within wash areas of the Project site. Although one individual was previously reported on the site, Emory's crucifixion thorn was not observed

¹ For this EIR, this is generally interpreted as all plants ranked as CRPR 1b and, in some cases, may include CRPR 2, 3, or 4 plant occurrences, which may be regionally significant if the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate; therefore, all CRPR 1, 2, 3, and 4 plants are addressed in the EIR.

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during the field surveys conducted for the Project. As a large and conspicuous shrub that can be identified year-round, even during poor rainfall years, Emory's crucifixion thorn is unlikely to have been overlooked.

Glandular Ditaxis: CRPR 2B.2

Glandular ditaxis (*Ditaxis claryana*) is an annual or short-lived perennial species that occurs in Sonoran Desert scrub and typically blooms in the fall following the onset of the rainy season. There are approximately 49 recorded occurrences in California, including one within Desert Center and one near Corn Spring, south of I-10. Although suitable habitat is present on the Project site, glandular ditaxis was not observed during the field surveys conducted for the Project.

California Ditaxis: CRPR 3.2

California ditaxis (*Ditaxis serrata* var. *californica*) is a Sonoran Desert scrub species typically found in sandy washes and alluvial fans within foothills and lower desert slopes, ranging from approximately 100 to 3,000 feet (30 to 914 meters) amsl. California ditaxis is known to occur in San Bernardino, Riverside, Imperial, and San Diego counties in California as well as in Sonora, Mexico. Although suitable habitat is present on the Project site, California ditaxis was not observed during the field surveys conducted for the Project.

Spiny Abrojo: CRPR 4.3

Spiny abrojo (*Condalia globosa* var. *pubescens*) is a perennial shrub that occurs in Sonoran Desert scrub and has a limited distribution in California but is not considered threatened. The species also occurs in Arizona and Mexico. In California, spiny abrojo is known only from Imperial and Riverside counties, with the closest documented occurrence located within the undeveloped Oberon Renewable Energy Project area (Ironwood Consulting, Inc. 2026b). Although suitable habitat is present on the Project site, spiny abrojo was not observed during the field surveys conducted for the Project.

Cacti, Yucca, and Native Trees

Native cacti, succulents, and trees are generally not ranked as special-status plant species; however, their collection and removal are regulated under the California Native Plant Protection Act (Fish and Game Code §§ 1900–1913) and the California Desert Native Plant Act of 1981 (Food and Agricultural Code § 80001 et seq.; Fish and Game Code §§ 1925–1926). Any vegetation proposed for salvage or removal from the BLM land, such as cactus or yucca, may be subject to sale at appraised value in accordance with CFR 43:5420.0-6, particularly if salvaged or transplanted off site. One native cactus species, fishhook cactus (*Mammillaria tetrancistra*), was observed within the Project site on private land (Appendix D).

Additionally, ocotillo (*Fouquieria splendens* ssp. *splendens*) and three species of native trees were found within the Project site on private land:

- Desert ironwood (*Olneya tesota*)
- Blue palo verde (*Parkinsonia florida*)
- Honey mesquite (*Prosopis glandulosa*).

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Invasive plant species, as defined by organizations such as Cal-IPC, CDFA, and the USDA, are non-native species that pose threats to natural communities, wildlife habitat, and ecosystem function. For the purposes of this report, plants listed by Cal-IPC, the USDA Federal Noxious Weeds List, or the CDFA Noxious Weeds List are considered invasive. The following invasive plant species were identified on the Project site during field surveys and are provided in Table 3.5-2.

Table 3.5-3 Invasive Plants Identified on the Project site during Field Surveys

Common Name	Scientific Name	Cal-IPC Rating	USDA Federal Noxious Weed List	California (CCR 4500) Noxious Weeds List	CDFA Weed Pest Rating
Sahara mustard	<i>Brassica tournefortii</i>	High	—	—	C
Bermuda grass	<i>Cynodon dactylon</i>	Moderate	—	—	—
Annual beard grass	<i>Polypogon monspeliensis</i>	Limited	—	—	—
Russian thistle	<i>Salsola tragus</i>	Limited	—	X	B
Mediterranean grass	<i>Schismus arabicus</i>	Limited	—	—	—
Common Mediterranean grass	<i>Schismus barbatus</i>	Limited	—	—	—
Tumble mustard	<i>Sisymbrium irio</i>	Limited	—	—	—
Sow thistle	<i>Sonchus arvensis</i>			X	
Tamarisk	<i>Tamarix sp.</i>	High	—	—	B

Note:

*Nomenclature is derived from Jepson eFlora, an online version containing keys derived from The Jepson Manual, Vascular Plants of California second edition or CalFlora, a nonprofit database providing information on California plants.

Cal-IPC Ratings

High: Invasive plants with a Cal-IPC High rating have severe ecological effects in wildlands. These species' reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment, and most are widely distributed.

Moderate: Invasive plants with a Cal-IPC Moderate rating have substantial, but generally not severe, ecological effects. These species' reproductive biology and other attributes are conducive to moderate to high rates of dispersal. Establishment of "moderate" species is generally dependent upon ecological disturbance; distribution may range from limited to widespread.

Limited: Invasive plants with a Cal-IPC Limited rating are invasive, but their ecological effects are minor on a statewide level or there was not enough information to justify a higher rating. These species' reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic (Cal-IPC, 2024).

CDFA Weed Pest Ratings

B: A pest of known economic or environmental detriment and, if present in California, it is of limited distribution. B-rated pests are eligible to enter the state if the receiving county has agreed to accept them. If found in the state, they are subject to state endorsed holding action and eradication only to provide for containment, as when found

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in a nursery. At the discretion of the individual county agricultural commissioner, they are subject to eradication, containment, suppression, control, or other holding action.

C: A pest of known economic or environmental detriment and, if present in California, it is usually widespread. C-rated organisms are eligible to enter the state as long as the commodities with which they are associated conform to pest cleanliness standards when found in nursery stock shipments. If found in the state, they are subject to regulations designed to retard spread or to suppress at the discretion of the individual county agricultural commissioner. There is no state enforced action other than providing for pest cleanliness.

Special-status Wildlife

For the purpose of this analysis, special-status wildlife includes those species that meet one or more of the following criteria:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the federal ESA
- Listed as threatened or endangered, or candidate for listing, under the CESA
- California (CDFW) “fully protected” species
- Meet the definition of an endangered, rare, or threatened species under CEQA Guidelines section 15380
- Considered special-status species in local or regional plans, policies, or regulations, such as the NECO Plan/Environmental Impact Statement, DRECP, or by CDFW or USFWS

Ironwood conducted wildlife surveys in spring and fall 2024 within the full extent of the Project footprint. Wildlife surveys were conducted to identify individuals or sign of special-status species and regionally significant species. In addition to focused surveys for individual species, the surveys were designed to evaluate habitat suitability for special-status wildlife, including the presence or absence of unique habitat features such as potential breeding pools for Couch’s spadefoot toad (*Scaphiopus couchii*) or roosting features for special-status bats.

Surveys in 2024 conformed to full-coverage desert tortoise protocol, using 10-meter transect spacing across the Project site. The burrowing owl survey program included one full-coverage breeding season survey and three follow-up inspections, following the California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFG 2012) and the California Burrowing Owl Consortium’s Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1997). Four additional surveys were conducted during the non-breeding season. All burrows encountered were assessed for wildlife use, including sign of desert tortoise, burrowing owl, desert kit fox, and American badger.

No desert tortoise sign or individuals were observed; however, habitat in the southern portion of the site has a moderate modelled occupancy value (0.6–0.7). Observations of canid burrows suggest potential future use by desert kit fox. American badger was not detected; however, suitable habitat and burrows were present and it was observed on the wildlife camera data. Four burrows with sign (e.g., feathers, whitewash, pellets) were recorded, two in the spring and two in the fall, confirming likely residency within the site and vicinity.

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Couch's spadefoot toad was not observed. Potential ephemeral pooling areas were noted, but no standing water was present during surveys, and ponding appeared too shallow to support breeding. The species has low potential to occur. Mojave fringe-toed lizard was not observed and is unlikely to occur due to the minimal presence of loose, aeolian sands required for its habitat.

Although no targeted bat surveys were conducted, prior acoustic data from nearby solar projects were reviewed. Suitable foraging habitat for several bat species is present though roosting opportunities are limited on site. Species such as pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*) may forage in the area but are unlikely to roost within the Project site because it roosts in caves, mines, abandoned dwellings, and large basal hollows of large trees which are not present on the Project site.

All wildlife species observed during surveys, regardless of status, were documented, as summarized in Appendix D. A detailed discussion of all special-status wildlife species with moderate to high potential to occur, or that were observed during field surveys, is provided in Appendix D.

Amphibians and Reptiles

Mojave Desert Tortoise: ST, FT, FOC

Mojave desert tortoises (*Gopherus agassizii*) live north and west of the Colorado River in the Mojave Desert of California, southern Nevada, northwestern Arizona, and southwestern Utah, and in the Sonoran (Colorado) Desert in southern California. Desert tortoises inhabit a variety of habitats from flats and slopes dominated by Creosote Bush – White Bursage communities, where perennial plant diversity is relatively high, to a variety of habitats at higher elevations. Tortoises are found most often on gentle slopes with sandy-gravel soils that are soft enough for burrow construction but firm enough to prevent burrow collapse. Tortoises typically prefer habitats with abundant annual forbs, grasses, and cacti, which constitute their primary food sources.

A model developed by Nussear et al. 2009 provides a statistical probability of desert tortoise occurrence, which has been consistently used to evaluate potential habitat. The model predicts occupancy values ranging from very low (0.0) to very high (1.0), with values ≥ 0.5 generally indicating suitable habitat for the desert tortoise. Lands scoring < 0.5 are considered to have a low to moderate probability of occupancy.

The majority of the Project site has a predicted occupancy value of 0.6. Predicted occupancy values range from 0.4 in the northern segment of the site to 0.69 in a small southwestern segment. Occupancy generally increases toward the Chuckwalla Mountains Wilderness to the south and the Palen Mountains to the north. These areas with higher occupancy values are also closest to designated desert tortoise conservation areas. However, the model does not account for habitat degradation from anthropogenic disturbances such as I-10 and fallow agriculture, which would lower actual habitat suitability.

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No desert tortoise sign or live individuals were observed during field surveys on the Project site. Based on field survey results, the presence of degraded habitat, and proximity to major disturbances, Mojave desert tortoise is not expected to occur on the Project site.

Mojave Fringe-Toed Lizard: SSC, BLMS

The Mojave fringe-toed lizard (*Uma scoparia*) occupies arid, sandy, sparsely vegetated habitats and is closely associated with aeolian sand habitats and creosote scrub. Nearly all records for this species are associated with sand deposits formed by blown sands along the Amargosa, Mojave, and Colorado rivers. The Mojave fringe-toed lizard hibernates from November to February and is active from March through September, breeding from April to July. No individuals were observed during field surveys, and the site is outside of the modeled distribution for the species. Based on the lack of suitable habitat and absence of observations, Mojave fringe-toed lizard is not expected to occur on the Project site.

Couch's Spadefoot Toad: SSC, BLMS

Couch's spadefoot toad (*Scaphiopus couchii*) is often found in shortgrass plains, mesquite savannah, creosote bush desert, thorn forest, and other areas of low rainfall. It is considered an opportunistic species because it only appears when rainfall forms temporary pools and potholes with water lasting longer than 10 to 12 days, which are required for breeding, hatching, and metamorphosis. Runoff basins at the base of sand dunes are also used for reproduction. In California, Couch's spadefoot toad is known to occur in the low desert region, particularly along the Colorado River corridor, including areas in the Chuckwalla and Palen Valleys and the Palo Verde Valley. When inactive, the species burrows underground or occupies rodent burrows.

Couch's spadefoot toad was not observed on the Project site during field surveys. Although some areas within the Project site may accumulate water during rainfall events, the observed depressions are likely too shallow to support breeding of this species. No standing water was observed during field surveys. Based on the lack of suitable breeding habitat and absence of observations, the potential for Couch's spadefoot toad to occur on the Project site is considered low.

Insects

Crotch's Bumble Bee: SE (candidate)

Crotch's bumble bee (*Bombus crotchii*) inhabits grasslands and shrublands throughout southwestern California. It is a generalist forager and has been associated with a variety of native plants, including species in the *Fabaceae*, *Apocynaceae*, *Lamiaceae*, *Hydrophyllaceae*, *Asclepiadoideae*, and *Asteraceae* families. It has also been observed foraging on plants such as *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia*.

The Project site is located east of the current known range of Crotch's bumble bee. The nearest known records to the Project site include historical observations near Corn Springs and Palm Springs. Although the Project site is within the broader historical range for the species, it is located outside of the species' current range, which begins east of the Project site near the Salton Sea. No Crotch's bumble bee were observed during wildlife or plant surveys conducted for the Project.

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Monarch Butterfly: FT (proposed), BLMS

Monarch butterfly (*Danaus plexippus*), found throughout North America, is proposed for listing as a threatened species under the federal ESA. Potential breeding areas include a variety of habitats that support milkweed (*Asclepias* spp.). Female monarchs lay eggs primarily on milkweed plants, which provide essential nutrition for larvae and chemical compounds that deter predators. Metamorphosis from egg to adult occurs over approximately one month, depending on ambient temperature. Adults mate within a few days after emergence and typically live between 2 to 5 weeks. Migration begins in the spring and continues through summer, with fall migration leading to overwintering sites. Migration routes generally follow watercourses with riparian vegetation, which support adequate nectar sources and roosting vegetation.

Most of the Project site is located within moderately suitable habitat for monarchs and milkweed although adjacent development, herbicide and pesticide use, and climate conditions likely reduce habitat suitability. No milkweed or monarchs were observed during field surveys. The Project site is an unlikely breeding or overwintering area; however, monarchs may be observed foraging during migration.

Western Burrowing Owl: CESA candidate, SSC, BCC, BLMS, FOC

The western burrowing owl (*Athene cunicularia hypugaea*) inhabits arid lands throughout much of the western United States and southern interior of western Canada. Suitable habitat for western burrowing owl includes open areas with available burrowing opportunities, such as agricultural fields (active and fallow), creosote scrub, desert saltbush, ephemeral washes, and ruderal areas.

Western burrowing owls nest and roost in abandoned burrows, particularly those created by ground squirrels, kit foxes, desert tortoises, and other wildlife. They have a strong affinity for previously occupied nesting and wintering sites and often return to sites where reproduction was previously successful. Although they depend on other species to dig suitable burrows, burrowing owls may also use anthropogenic surrogate burrows, including rubble piles and drainage pipes. In southern California, the breeding season generally occurs from February to August, with peak breeding activity from April through July.

In the Colorado Desert, burrowing owls generally occur at low densities in scattered locations but may be found at higher densities near agricultural lands where rodent and insect prey is more abundant. Burrowing owls are opportunistic feeders, consuming a diet primarily composed of beetles, grasshoppers, and other large arthropods, particularly during the breeding season. Small mammals such as mice and voles are important food items, along with occasional predation on reptiles, amphibians, bats, and small birds such as sparrows and horned larks.

No live burrowing owls were observed during field surveys on the Project site; however, four burrows with evidence of owl use were observed.

Golden Eagle: CFP, WL, CDF-S, BCC, BLMS, FOC

Golden eagle is typically a year-round resident throughout most of its western United States range. It breeds from late January through August, with peak activity from March through July. Habitat for golden eagles typically includes rolling foothills, mountain areas, and deserts. Golden

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eagles require open terrain for hunting and prefer grasslands, deserts, savannas, and early successional stages of forest and shrub habitats. Their primary prey consists of rabbits and rodents, but they will also take other mammals, birds, reptiles, and some carrion. They generally nest in rugged, open habitats with canyons and escarpments, often using overhanging ledges, cliffs, or large trees for cover.

The Project site lacks suitable cliff nesting habitat for golden eagles. Although suitable open foraging habitat is present, no golden eagles were observed during field surveys on the Project site.

Le Conte's Thrasher: SSC, BLMS, BCC

In California, Le Conte's thrasher (*Toxostoma lecontei*) is a resident species in the San Joaquin Valley and the Mojave and Colorado Deserts of California. This pale gray bird occurs in desert flats, washes, and alluvial fans with sandy and/or alkaline soils and scattered shrubs. Preferred nesting substrates include thorny shrubs and small desert trees, and nesting rarely occurs in monotypic creosote scrub habitat or Sonoran Desert woodlands. Breeding activity occurs from January to early June, with peak breeding from mid-March to mid-April.

Le Conte's thrashers forage for food by digging and probing in the soil. Their diet consists primarily of arthropods, small lizards and snakes, and seeds and fruit, with beetles, caterpillars, scorpions, and spiders making up a large portion of their diet. Suitable foraging habitat for Le Conte's thrasher occurs throughout the Project site, and suitable nesting habitat occurs in the desert dry wash woodland areas of the Project site and gen-tie. Le Conte's thrasher was not observed during field surveys.

Prairie Falcon: WL

The prairie falcon (*Falco mexicanus*) inhabits dry environments in the western portion of North America, from southern Canada to central Mexico. It occurs in open habitats at elevations up to approximately 10,991 feet (3,350 meters) and is primarily associated with perennial grasslands, savannas, rangeland, some agricultural fields, and desert scrub areas. Prairie falcons require cliffs or bluffs for nesting; however, they will occasionally nest in trees, on power line structures, on buildings, or inside caves or stone quarries. Their primary prey includes ground squirrels and horned larks, but they will also hunt lizards, other small birds, and small rodents.

The Project site contains suitable open foraging habitat for prairie falcons but does not provide suitable cliff or bluff nesting habitat. One prairie falcon was observed flying over the Project site during field surveys.

Loggerhead Shrike: SSC (nesting)

Loggerhead shrikes (*Lanius ludovicianus*) is a small predatory bird that is a common year-round resident throughout most of the southern portion of its range, including southern California. In southern California, loggerhead shrikes are generally more common in interior desert regions than along the coast. They occur within lowland, open habitat types, including creosote scrub, other desert habitats, sage scrub, non-native grasslands, chaparral, riparian areas, croplands, and

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landscapes characterized by open, scattered trees and shrubs. Loss of habitat to agriculture, development, and invasive species has contributed to declines in some areas.

Loggerhead shrikes initiate their breeding season in February and may raise a second brood as late as July, often re-nesting if earlier nests fail. They prey upon large insects, small birds, amphibians, reptiles, and small rodents, typically foraging over open ground with short vegetation. They are known for impaling prey items on thorns, barbed wire, or sharp twigs to cache for later feeding.

Suitable foraging and nesting habitat for loggerhead shrike is found throughout the Project site. Several individuals were observed perching, flying, and singing during field surveys conducted on the Project site.

Gila Woodpecker: SE, BLMS, BCC

The Gila woodpecker (*Melanerpes uropygialis*) is predominantly a permanent resident across parts of southeast California, southern Nevada, central Arizona, extreme southwest New Mexico, and northern Mexico. In southern California, it occurs uncommonly to fairly commonly along the Colorado River and locally near Brawley in Imperial County. Suitable habitats for Gila woodpecker include riparian woodlands, uplands with concentrations of large columnar cacti, old-growth xeric-riparian wash woodlands, and urban or suburban residential areas.

In California, the species primarily inhabits cottonwood-willow riparian woodlands. In dry desert wash woodlands, Gila woodpeckers excavate cavity nests in large blue palo verde trees and may also nest in ornamental trees such as palms. Availability of large suitable trees is a limiting factor for breeding habitat. Potentially suitable habitat within the Project site is found in desert washes with palo verde or ironwood trees large enough to support cavity nests. However, the probability of this species nesting on the Project site is low because few trees of sufficient size are present and the site lies near the western margin of the Gila woodpecker's range. Gila woodpeckers are loud and conspicuous and are readily detected during surveys when present. No live individuals or appropriately sized tree cavities were observed during field surveys.

American Peregrine Falcon: CDF-S

The American peregrine falcon (*Falco peregrinus anatum*) is primarily found in central and northern California, with wintering habitat and more recently some nesting occurrences in southern California. Migrants occur along the coast and in the western Sierra Nevada during spring and fall migration periods. It breeds mainly in woodlands, forests, and coastal habitats, favoring open landscapes with cliffs for nesting.

In the southern desert region, peregrine falcons are generally irregular visitors during migratory and winter seasons but have been observed nesting in desert mountain ranges near the Colorado River in recent years. Their diet consists primarily of birds and bats, with waterfowl and shorebirds making up a large portion of their prey. Nest sites are often within foraging range of large water bodies.

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Suitable migratory and foraging habitat for American peregrine falcon is present throughout the Project site, but no suitable nesting habitat is available. American peregrine falcons were not observed during field surveys on the Project site.

Crissal Thrasher: SSC, BLMS

The Crissal thrasher (*Toxostoma crissale*) is a year-round resident of southeastern deserts, occupying dense shrubs in desert riparian and desert wash habitats, including mesquite, ironwood, and acacia. It primarily forages on the ground, feeding on invertebrates, berries, and seeds.

The Project site provides limited but suitable nesting and foraging habitat for Crissal thrasher, primarily associated with dry wash woodlands. Crissal thrasher was not observed during field surveys on the Project site.

Elf Owl: SE, BLMS

Elf owl (*Micrathene whitneyi*) inhabits lowland areas that provide dense cover and good nesting cavities. It is most commonly found farther east and north, in deserts with tall saguaro cacti or large mesquites, and in canyons with sycamores or large oaks. The Project site is located near the western margin of the elf owl's geographic range.

The elf owl is a migratory species, arriving in California by March and breeding from April through mid-July. It is a secondary cavity nester, typically occupying abandoned woodpecker cavities in trees or cacti. Gila woodpeckers, which occasionally nest in blue palo verde and palms, can create suitable nesting cavities for elf owls. Trees within the desert dry wash woodland habitat on the Project site could provide marginal nesting habitat. However, no suitable tree cavities or live elf owls were observed during field surveys.

Southwestern Willow Flycatcher: SE, FE, FSS

The southwestern willow flycatcher (*Empidonax traillii extimus*) is one of several subspecies of willow flycatcher and is listed as endangered at both the state and federal levels. Willow flycatchers breed in dense riparian habitats in the southwestern United States and winter in southern Mexico, Central America, and northern South America.

The closest known breeding habitat for southwestern willow flycatcher is located approximately 25 miles from the Project site along the Colorado River and near the Salton Sea. Recent studies indicate that southwestern willow flycatchers do not migrate over the area where the Project site is located. Other subspecies of willow flycatcher, which are not listed as threatened or endangered, may pass through the area during migration. The Project site does not support suitable breeding habitat for southwestern willow flycatcher and is not located within its known migration route.

Special-status Seasonal Migrant Birds

The following special-status bird species may migrate through the region during spring or fall or may spend winters in the vicinity but would not nest on or near the Project site or gen-tie line due to absence of suitable wetland or riparian nesting habitat or due to geographic range.

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Potential for occurrence on the Project site or gen-tie line is minimal, except for brief overflight or migratory stopovers.

- Bank swallow (*Riparia riparia*); ST, BLM-S. Potential foraging habitat during migratory seasons; no potential nesting habitat. Bank swallow was not observed during field surveys on the Project site.
- Ferruginous hawk (*Buteo regalis*); WL, BCC. Potential foraging habitat during winter or migratory seasons; no potential nesting habitat; Project site is outside the breeding range. Ferruginous hawks were not observed during field surveys.
- Swainson's hawk (*Buteo swainsoni*); State listed as threatened, BBC. Potential foraging habitat during migration season; no potential nesting habitat; Project site is outside the breeding range. Swainson's hawk was not observed during field surveys.
- Northern harrier (*Circus hudsonius*); SSC, BCC. Potential foraging habitat; no potential nesting habitat; Northern harrier was not observed during field surveys on the Project site.
- Short-eared owl (*Asio flammeus*); SSC, BCC. Potential foraging habitat during winter or migratory seasons; no potential nesting habitat. Short-eared owl was not observed during field surveys on the Project site.
- Vaux's swift (*Chaetura vauxi*); SSC, BCC. Potential stopover foraging occurrence during migration; no potential nesting habitat. Vaux's swift was not observed during field surveys on the Project site.
- Mountain plover (*Charadrius montanus*); SSC, BCC, BLMS, FOC. Potential foraging habitat during winter or migratory seasons; no potential nesting habitat; Project site is outside the breeding range. Mountain plover was not observed during field surveys on the Project site.
- Sonora yellow warbler (*Setophaga petechia sonorana*); SSC, BCC. Potential stopover foraging occurrence during migration; no potential nesting habitat. Sonora yellow warbler was not observed during field surveys on the Project site.
- Yellow-breasted chat (*Icteria virens*); SSC. Potential stopover foraging occurrence during migration; no potential nesting habitat. Yellow-breasted chat was not observed during field surveys on the Project site.
- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*); FE, ST, CFP. Potential stopover occurrence during dispersal; no potential nesting habitat. Yuma Ridgway's rail was not observed during field surveys on the Project site.
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*); FT, SE, BLMS, FSS, FOC. Potential stopover occurrence during migration; no potential nesting habitat. Western yellow-billed cuckoo was not observed during field surveys on the Project site.
- Least Bell's vireo (*Vireo bellii pusillus*); FE, SE. Potential stopover occurrence during migration; no potential nesting habitat. Least Bell's vireo was not observed during field surveys on the Project site.

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- California horned lark (*Eremophila alpestris actia*); WL. Potential foraging and nesting habitat present; Project site is outside the current range for the subspecies; occurrence is considered unlikely. Horned larks were frequently observed during field surveys, but California horned lark occurrence is considered low.
- Black-tailed gnatcatcher (*Polioptila melanura*); WL. Potential foraging and nesting habitat present; species was not observed during field surveys on the Project site.
- Vermilion flycatcher (*Pyrocephalus rubinus*); SSC. Potential stopover occurrence during migration; minimal potential nesting habitat in nearby desert dry wash woodland. Vermilion flycatcher was not observed during field surveys on the Project site.
- American white pelican (*Pelecanus erythrorhynchos*); SSC, BCC. Potential stopover occurrence during migration; no typical foraging or nesting habitat. American white pelican was not observed during field surveys on the Project site.
- Lucy's warbler (*Leiothlypis luciae*); SSC, BLM-S. Potential foraging and nesting habitat present; species was not observed during field surveys on the Project site.
- Lesser sandhill crane (*Grus canadensis canadensis*); SSC, and greater sandhill crane (*Grus canadensis tabida*); FP, ST. Potential stopover occurrence during migration; no typical foraging or nesting habitat. Not observed during field surveys on the Project site.

Mammals

American Badger: SSC

The American badger (*Taxidea taxus*) is associated with dry open forest, shrub, and grassland communities with adequate burrowing rodent populations and friable soils. Badgers generally occur in treeless regions, prairies, parklands, and cold desert areas. They inhabit burrows and primarily prey on small mammals that occupy burrows, often leaving claw marks along burrow edges. Suitable habitat for American badger is present throughout the Project site. Several canid burrows and complexes were observed during field surveys that could be used by American badgers, but no live individuals or definitive sign of the species were detected during surveys but a badger was seen on the wildlife camera footage.

Desert Kit Fox: FOC

Desert kit fox (*Vulpes macrotis arsipus*) is a fossorial mammal that occurs in arid open areas, shrub grassland, and desert ecosystems within the Mojave and Sonoran deserts. It typically inhabits areas with abundant small rodents, such as kangaroo rats and rabbits, but also preys on lizards and insects. Burrow complexes with multiple entrances are used for shelter, reproduction, and escape, although single burrows may also be utilized temporarily. Litters are typically born between February and April.

Suitable habitat for desert kit fox occurs within the Project site. Although canid burrows were observed during field surveys, no desert kit fox individuals or definitive sign of the species were detected. Kit fox distribution is dynamic and may change over time in response to prey availability and the presence of predators such as coyotes.

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Desert Bighorn Sheep: CFP, BLMS, FSS

The desert bighorn sheep (*Ovis canadensis nelsoni*, also called Nelson's bighorn sheep) are found throughout the desert mountain ranges of California, Nevada, northern Arizona, and Utah. Essential habitat includes steep, rocky desert mountain slopes and areas with access to surface water during dry periods. During spring, bighorn sheep move downhill to forage on bajadas and alluvial fans where annual plants are more available.

Although desert bighorn sheep occupy mountain ranges surrounding the upper Chuckwalla Valley, the Project site, located on the valley floor, provides limited value for foraging or movement. No sign or evidence of desert bighorn sheep was found during field surveys. The potential for occurrence on the Project site is considered low.

Burro Deer: CPGS, FOC

Burro deer (*Odocoileus hemionus eremicus*) is a subspecies of mule deer (*Odocoileus hemionus*) that inhabits desert dry wash woodland communities in the Colorado region of the Sonoran Desert near the Colorado River. Some individuals are year-round residents along the Colorado River while others are transient, moving between mesic and arid desert areas in response to seasonal water and forage availability. During hot summers, burro deer concentrate along the Colorado River, Coachella Canal, or other artificial water sources where microphyll woodland provides dense forage and cover. In cooler seasons, they disperse into larger washes and foothill areas.

Burro deer likely move through the Project vicinity to access artificial water sources associated with nearby agricultural and aquaculture operations. Burro deer scat and tracks were observed during field surveys on the Project site.

Special Status Bats

Bat roosts that occur in the vicinity of the Project site include McCoy Mountains, Eagles Nest Mine approximately 20 miles east of the Project site, within the Little Maria Mountains approximately 20 miles northeast of the Project site, and Paymaster Mine within the Pinto Mountains approximately 30 miles northwest of the Project site (Ironwood Consulting, Inc. 2026b). No active bat roosts were documented on the Project site during any of the surveys to date. It is not expected that any special status bat species would have a substantial likelihood to roost on the Project site since habitat features most associated with these species (e.g., rock ledges, cliffs, large tree hollows, mine shafts) do not occur on the Project site. However, roosting opportunities for more common bat species, such as the canyon bat and California myotis, are available in tree cavities, soil crevices, and rock outcroppings within Dry Desert Wash Woodland. Additionally, suitable foraging habitat for common and special status bats is found on the Project site near the adjacent palm farms, where water is available year-round. Seven special status bat species may forage on or near the Project site; as follows:

- Townsend's big-eared bat (*Corynorhinus townsendii*); SSC, BLM S. Foraging habitat in desert dry wash woodland; no roosting habitat.
- California leaf-nosed bat (*Macrotus californicus*); SSC, BLM S. Suitable foraging habitat; no roosting habitat.

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- Pallid bat (*Antrozous pallidus*); SSC, BLM S. Marginal foraging habitat in desert dry wash woodland; no roosting habitat. Surveys for Palen Solar (approximately 1 mile east) detected pallid bat in the Project site vicinity.
- Western mastiff bat (*Eumops perotis californicus*); SSC, BLM S. Suitable foraging habitat; no roosting habitat. Surveys for Palen Solar (approximately 1 mile east) detected western mastiff bat in the Project vicinity.
- Western yellow bat (*Lasiurus xanthinus*); SSC. Potential marginal roosting habitat in desert dry wash woodland; suitable foraging habitat. Surveys for Palen Solar (approximately 1 mile east) detected western yellow bat in the Project vicinity.
- Big free-tailed bat (*Nyctinomops macrotis*); SSC. Marginal foraging and roosting habitat in Desert Dry Wash Woodland. Surveys for Palen Solar (approximately 1 mile east) detected big free-tailed bat in the Project vicinity.
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*); SSC. Suitable foraging habitat; no roosting habitat. Surveys for Palen Solar (approximately 1 mile east) may have detected pocketed free-tailed bat presence, but results were not definitive.

Non-Special Status Wildlife

Non-special status wildlife with moderate to high potential to occur include big brown bat, hoary bat, California myotis, canyon bat, and Mexican free-tailed bat,

Wildlife Movement

Movement between habitat areas is a typical part of wildlife activities and may be needed for long-term population sustainability. Land use changes can impact wildlife movement across the landscape, leading to habitat fragmentation and population isolation. When habitat is converted to other uses, it reduces habitat availability for wildlife and separates or isolates the remaining habitat areas. Habitat areas may be isolated from one another by distance across unfavorable habitat or by linear barriers such as roadways or aqueducts. Barriers may be impassable for some species, such as a wide busy road for a slow-moving animal, or may be only minor interruptions to movement, such as a narrow, lightly travelled road. Fragmentation and subsequent population isolation can affect wildlife populations by limiting dispersal and genetic exchange, limiting movement within the home ranges for wide-ranging species, and limiting the opportunity for populations to occupy new habitat in response to the effects of climate change. Fragmentation also increases habitat “edge” (i.e., habitat adjacent to other land uses), leading to increased exposure to invasive species, human disturbance (e.g., vehicles, trash dumping), and an overall reduction of biodiversity and alteration or degradation of ecological processes. Existing and developing solar farms, residential/commercial developments, roads, and agriculture near the Project site contribute to the fragmentation of habitat in the area.

Accessibility between habitat areas (i.e., “connectivity”) is important to long-term genetic diversity and demography of wildlife populations. In the short term, connectivity may also be important to individual animals’ ability to occupy their home ranges if their ranges extend across a potential movement barrier. These considerations apply to greater or lesser extent to all plants and animals. Plant populations “move” over the course of generations via pollen and seed dispersal; most birds and insects travel and disperse via flight; terrestrial species, including small

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mammals, reptiles, arid land amphibians, and non-flying invertebrates, disperse across land. Therefore, landscape barriers and impediments are more important considerations for movement of terrestrial species. These considerations are especially important for rare species and wide-ranging mammals, which both tend to exist in lower population densities.

In the Chuckwalla Valley, animal movement among mountain ranges and other large habitat areas is biologically important for large mammal demography and genetics. Animals such as desert bighorn sheep may travel across the valley infrequently to reach other subpopulations in surrounding mountains. In contrast to large animal movement, desert tortoises and other less-mobile animals may live out their entire lives within a linkage area between larger habitat blocks; for these species, movement among surrounding habitat areas may take place over the course of several generations.

Movement opportunity varies for each species depending on mobility and behavioral constraints as well as landscape impediments. The California Desert Connectivity Project provides a comprehensive and detailed habitat connectivity analysis for the California deserts (Ironwood Consulting, Inc. 2026b). The Connectivity Project identified a Desert Linkage Network to maintain habitat for movement between landscape blocks. Broad habitat linkages connect these landscape blocks (i.e. wilderness areas). The landscape blocks identified in the Project site vicinity are the Eagle Mountains to the west, Coxcomb Mountains to the north, and the Palen-McCoy Mountains to the east. Broad habitat linkages were identified in the Desert Linkage Network, and the most prominent linkage in the Project vicinity extends from the southern base of the Coxcomb Mountains south along the foothills of the Eagle Mountains and across I-10 into the Chuckwalla and Orocopia mountains. This linkage measures approximately 16 miles (25.7 km) wide at its interface with I-10, with narrower extensions to the north around the base of the Eagle Mountains and to the west through the Orocopia Mountains.

Wildlife cameras set up for the duration of the spring 2024 season at eight I-10 undercrossings nearest to the Project site and captured greater road runners, coyotes, desert kit fox, American badger, burro deer, black-tailed jackrabbit, kangaroo rat, round-tailed ground squirrel, desert woodrat, desert iguana and unidentified rodent and lizard species. All the camera stations were east of the multi-species linkage.

3.5.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Land Policy and Management Act (43 USC 170–1787).

The Federal Land Policy and Management Act directs management of public lands managed by the U.S. Forest Service, National Park Service, and the Bureau of Land Management (BLM); addresses land use planning, rights-of-way (ROWS), wilderness, and multiple-use policies.

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Endangered Species Act (16 USC 1531–1543)

The Endangered Species Act (16 USC 1531–1543) establishes legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. The Endangered Species Act (ESA) is administered by the U.S. Fish and Wildlife Service (USFWS) for terrestrial species. Under the ESA, USFWS may designate critical habitat for listed species. Section 7 of the ESA requires federal agencies to consult with USFWS to ensure that their actions are not likely to jeopardize listed threatened or endangered species or to cause destruction or adverse modification of critical habitat. Under the federal ESA, the term *take* means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Migratory Bird Treaty Act (16 U.S.C. sections 703–711).

The Migratory Bird Treaty Act prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the Migratory Bird Treaty Act (MBTA), *migratory bird* is defined as “any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle” and applies to most native bird species.

Bald and Golden Eagle Protection Act (16 USC section 668).

The Bald and Golden Eagle Protection Act prohibits the take, possession, and commerce of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*). Under the Act and subsequent rules published by USFWS, *take* may include actions that injure an eagle or affect reproductive success (productivity) by substantially interfering with normal behavior or causing nest abandonment. The USFWS can authorize incidental take of bald and golden eagles for otherwise lawful activities.

Noxious Weed Act (7 USC sections 2801 et seq.).

The Noxious Weed Act provides for the management of undesirable plants on federal lands.

Executive Order 13112, Invasive Species.

Executive Order 13112, amended by amended and updated by Executive Order 13751, establishes the National Invasive Species Council and directs federal agencies to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts caused by invasive species.

Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds.

Executive Order 13186 directs federal agencies to review the effects of actions and agency plans on migratory birds according to the National Environmental Policy Act or other established environmental review processes, with emphasis on species of concern (Section 6 of the order); to identify unintentional take reasonably attributable to agency actions, focusing first on species of concern, priority habitats, and key risk factors; and to develop and use principles, standards, and practices to lessen the amount of unintentional take (Section 9).

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California Desert Conservation Area Plan, As Amended.

The California Desert Conservation Area (CDCA) Plan guides the management of approximately 12 million acres of BLM-administered lands in the California Desert District, including the Mojave and Sonoran deserts and a small portion of the Great Basin Desert. The Project site is within the CDCA Plan area. The CDCA Plan directs management policy for multiple resources, including wildlife and vegetation.

Northern and Eastern Colorado Desert Coordinated Management Plan.

The Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) provides more specific management direction for BLM lands in the Colorado Desert, including the BLM lands located within the Projects area and establishes several Desert Wildlife Management Areas, which cover much of the USFWS-designated critical habitat for the desert tortoise.

Desert Renewable Energy Conservation Plan Land Use Plan Amendment to the CDCA.

The purpose of the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA) is to conserve and manage plant and wildlife communities in the desert regions of California while facilitating federal permitting of compatible renewable energy projects. The DRECP covers over 10 million acres of BLM land. The BLM Record of Decision for the DRECP was issued in September 2016. Projects that comply with the Conservation and Management Actions (CMAs) specified in the DRECP can be approved by BLM in a DFA without the need for a LUPA. BLM describes the DRECP as a landscape level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. No state or local agency, including CDFW, has adopted or approved the DRECP. CDFW recognizes the DRECP under federal law as a land use plan for the BLM. It is also a relevant regional plan for purposes of the CDFW's lead agency review of the Project under CEQA, including the DRECP's landscape-level focus on the conservation of, among other things, unique desert ecosystems in the plan area, which includes the Project site.

State

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

CESA prohibits take of state-listed threatened or endangered species, or candidates for listing, except as authorized under the California Fish and Game Code. For purposes of CESA and the California Fish and Game Code generally, *take* means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. In contrast to the federal ESA, take under the California Fish and Game Code does not include harm to or harassment of listed species. CDFW, among other options, may authorize otherwise prohibited take of CESA listed species with the issuance of an Incidental Take Permit, consistent with sections 2081(b) and (c) of the Fish and Game Code.

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Fully Protected Designations (California Fish and Game Code sections 3511, 4700, 5050, and 5515)

The California Fish and Game Code designates 36 fish and wildlife species as “fully protected.” Take and possession of fully protected species is prohibited, except in limited circumstances. The CDFW may authorize take and possession of fully protected species—for example, with an approved Natural Community Conservation Plan or for necessary scientific research, including efforts to recover those species. Take of fully protected species may also be authorized for certain renewable energy and infrastructure projects, including utility scale solar projects.

Birds (California Fish and Game Code sections 3503, 3503.5, and 3513)

California Fish and Game Code section 3503 prohibits take, possession, or the needless destruction of the nest or egg of any bird, except as otherwise provided by the code or regulation made pursuant thereto. Section 3503.5 provides it is unlawful to take, possess, or destroy birds of prey or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by the code or related regulation. Section 3513 prohibits take or possession of any migratory nongame bird, as designated in the federal MBTA and its implementing regulations, except as provided by rules and regulations adopted by the U.S. Secretary of the Interior under the federal act.

Protected Furbearers (14 CCR section 460)

California Code of Regulations (CCR) section 460 specifies that several furbearing mammals, including desert kit fox, may not be taken at any time. CDFW, in general, may permit capture or handling of these species for scientific research, but not in other circumstances.

Native Plant Protection Act (California Fish and Game Code sections 1900–1913)

California adopted the Native Plant Protection Act (NPPA) in 1977, prior to the enactment of CESA by name in 1984. The NPPA, in general, protects endangered and rare plants designated under the act. CESA, in general, as subsequently enacted in 1984, governs the listing of and related protection of endangered plants; the take prohibition in CESA incorporates certain exceptions in Section 1913 of the NPPA. Regulations adopted by the California Fish and Game Commission provide authority to CDFW to permit incidental take of NPPA designated rare plants, subject to certain conditions.

California Desert Native Plants Act (California Food and Agriculture Code sections 80001 et seq.; California Fish and Game Code sections 1925–1926)

The provisions in the California Desert Native Plants Act (California Food and Agriculture Code, division 23) protect specific California desert native plants (i.e., species in the families *Agavaceae*, *Cacti*, *Fouquieriaceae*; species in the genera *Prosopis* and *Parkinsonia* (*Cercidium*); and the species *Acacia greggii*, *Atriplex hymenelytra*, *Dalea spinosa*, and *Olneya tesota*) from unlawful harvest on private and public lands in the California deserts of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties. Within these counties, the California Desert Native Plants Act prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt and the required tags and seals.

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Lake and Streambed Agreement (California Fish and Game Code sections 1600–1617)

The CDFW regulates project activities that would, among other things, divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake.

Porter-Cologne Water Quality Control Act of 1969 (California Water Code sections 13000 et seq.)

The Porter-Cologne Water Quality Control Act invests Regional Water Quality Control Boards with the authority to regulate waters of the state, including state coordination with federal agencies implementing the federal Clean Water Act where federally jurisdictional waters are present. The Project site is within the Colorado River Regional Water Quality Control Board area.

Local

Riverside County General Plan

The Riverside County General Plan (Riverside County 2017) contains policies addressing biological resources within the Land Use (LU) and Multipurpose Open Space (OS) elements as well as goals and policies relevant to the analysis of biological resources for the Project, as follows:

Policy LU 9.1

Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

Policy LU 9.2

Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.

Policy LU 24.1

Cooperate with the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and any other appropriate agencies in establishing programs for the voluntary protection, and where feasible, voluntary restoration of significant environmental habitats (Action Item 10).

Policy OS 6.1.

During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

Policy OS 18.1

Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs [Multiple Species Habitat

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Conservation Plans] and through implementing related Riverside County policies. [The Project site is not within an MSHCP area.]

Desert Center Area Plan

The Desert Center Area Plan is a land use plan that is part of the Riverside County General Plan. The Desert Center Area Plan reflects the limited development potential in the region. Much of the area is designated Open Space-Rural, with some Agriculture, rural residential, and other low-density residential and commercial opportunities. The Desert Center Area Plan notes that future development should focus on infill and contiguous expansion of the existing communities at Desert Center and Lake Tamarisk. The Desert Center Area Plan contains policies to preserve wildlife habitat, with the policy orientated towards continuing the pattern of clustered development that already exists, including the following (Riverside County 2015):

Policy DCAP 9.1

Encourage clustering of development for the preservation of contiguous open space.

Policy DCAP 9.2

Work to limit off-road vehicle use within the Desert Center Area Plan.

Policy DCAP 9.3

Require new development to conform with Desert Tortoise Critical Habitat designation requirements.

3.5.3 Impact Analysis

The scoping effort conducted for the Project revealed public concern regarding the impacts to biological resources. Defenders of Wildlife offered comments for consideration which included considerations on special-status species including burrowing owl, Crotch's bumble bee, desert tortoise, loggerhead shrike, and Swainson's hawk. It also discussed consideration of agency coordination, recognizing the impact as permanent, and cumulative impacts. This comment is reflected in Impact BIO-2 for special-status species and loss of habitat and Section 3.5.4 for cumulative impacts. Agency consultation is addressed in the Introduction to the EIR. The Applicant anticipates applying to an Incidental Take Permit for burrowing owl and desert tortoise as discussed in Impact BIO-2. CDFW offered comments for consideration including assessment of habitat type, a general biological inventory of potential species present or potentially present onsite, and a recent inventory of sensitive species within the Project which are addressed in Impact BIO-2. CDFW recommended surveys for burrowing owl (breeding and non-breeding season), desert tortoise, American badger, desert kit fox, and bat. Each of those species is addressed in Impact BIO-2 and were surveyed for as detailed in the BRTR. CDFW provided recommendations for a Bird and Bat Conservation Strategy. This is addressed in Mitigation Measure BIO-8. CDFW recommends plant surveys as well as updates on the general habitat and other conservation lands in the area which is addressed in Section 3.5.1. CDFW recommends discussion on direct, indirect, and cumulative impacts to biological resources which are

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addressed in Section 3.5.3. The CDFW recommends several types of mitigation measure including compensation and avoidance, which are addressed in Section 3.5.3.

3.5.4 Methodology for Analysis

The biological resources analysis focuses on the potential for the Project to result in direct, indirect, or cumulative impacts to special-status species, native habitats, and other sensitive biological resources. Potential direct impacts include mortality, injury, or displacement of special-status plants or animals; loss or degradation of native vegetation communities; interference with wildlife movement or migration; and disturbance to plants and animals from construction-related noise, light, or dust. Potential indirect impacts include erosion, sedimentation, spread of invasive species, or increased predation on native wildlife due to habitat alterations such as the creation of perch sites or other predator attractants. Both direct and indirect impacts may result from project development, operations and maintenance, or decommissioning activities.

The analysis is based on a review of biological resources data provided in the Riverside County General Plan and Desert Center Area Plan as well as field investigations and technical studies prepared for the Project, including the Savira BRTR (Appendix D). The presence of biological resources within the Project site is described in Section 3.5.1 Environmental Setting. Potential impacts are evaluated based on the extent to which the Project could affect these resources, using the impact criteria outlined in this section.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For biological resources, the Checklists ask if the Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Impact BIO-3)
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Impact BIO-5)

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- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Impact BIO-6)
- 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. (Impact BIO-4)
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Impact BIO-7)
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Impact BIO-1)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (sections 17.11 or 17.12). (Impact BIO-2)

Impact and Mitigation Measures

Impact BIO-1 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

The Project is not located within an area covered by an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other formally approved local, regional, or state habitat conservation plan. However, as noted in Section 3.5.1 Environmental Setting, the Project gen-tie line alignment and access road are located on BLM-managed lands within the CDCA and are subject to the land use designations established under the DRECP. The DRECP is considered a regional landscape-level plan that aims to streamline renewable energy development while providing for the conservation of desert ecosystems and species.

Although the DRECP does not apply to private lands within the County of Riverside, the Project's gen-tie line alignment and access road are surrounded by a DFA designated for solar, wind, and geothermal development, and would be consistent with the intent of the DRECP. The Project site lies outside any conservation areas or ACEC, with the nearest conservation lands—the Palen-McCoy Wilderness Area and the Palen Dry Lake ACEC, located more than a mile from the Project site. This being the case, the Project would not conflict with the goals or requirements of the DRECP or any approved habitat conservation plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan. Impacts would be less than significant.

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Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be entirely within the existing Substations which are consistent with the requirements of the DRECP as well as any required approved habitat conservation plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan. The impact would be less than significant.

Significance before Mitigation

Less than significant.

Mitigation Measures

None required.

Impact BIO-2 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.1e)?

The Project, including solar facility, gen-tie, medium voltage line, and access road, has the potential to impact special-status plants and wildlife species through direct removal or modification of habitat and indirect disturbance effects. As discussed in Section 3.5.1 Environmental Setting, a portion of the Project site supports native desert scrub vegetation that can provide habitat for a variety of special-status species while the majority is non-native habitat. With the implementation of mitigation measures listed below, the impacts would be reduced to less-than-significant levels.

Special-status Plants

As documented in the BRTR, CRPR-ranked special-status plant species, Emory's crucifixion thorn (*Castela emoryi*), Glandular ditaxis (*Ditaxis claryana*), California ditaxis (*Ditaxis serrata* var. *californica*), and Spiny abrojo (*Condalia globosa* var. *pubescens*) have moderate potential to occur in the Project area based on suitable habitat and proximity of nearby occurrences. No special-status plants were observed during field surveys. Project construction could result in direct impacts to undetected special-status plant individuals or seed banks through vegetation clearing, soil compaction, or other ground disturbance, which could result in a significant impact. Indirect impacts would include the introduction of weed species off the Project site due to the construction activities. MM BIO-1 would require pre-construction surveys, inspection, and monitoring and marking sensitive biological resources areas. MM BIO-2 would require an education program for all persons working on the Project which would review the potential for sensitive species to be found on the Project site. MM BIO-5 would require an Integrated Weed Management Plan which would minimize or prevent noxious, nonnative, and invasive weeds from infesting the site and surrounding habitat. MM BIO-7 (Special-Status Plant Avoidance and Minimization) requires compensatory mitigation the potential plant habitat and allows for seed collection of native plant species if found during construction. Additionally, MM-BIO-11 would require compensatory mitigation for the Project's impacts to all native habitat. Implementation of these measures would

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ensure that impacts to special-status plant species are minimized and, therefore, impacts would be less than significant.

For construction, operations, and decommissioning the access road, gen-tie line, and medium voltage line, the BLM would require biological monitoring (CMA LUPA-BIO-2), worker education (CMA LUPA-BIO-5), restore temporary disturbance areas (CMA LUPA-BIO-7), avoid impacts to water and wetland dependent species (CMA LUPA-BIO-9), and require compensation (CMA LUPA-COMP-1), among others.

Special-Status Wildlife

Direct impacts to wildlife include mortality, injury, or displacement of special-status animals; loss or degradation of native habitat; interference with wildlife movement or migration; and disturbance to wildlife and habitat from noise and light. Indirect impacts are those effects that are caused by or will result from the Project, later in time or farther removed in distance, but are still reasonably certain to occur.

Examples of indirect effects to native habitat include erosion, sedimentation, and introduction of invasive species that may cause habitat degradation or increased predation due to certain habitat alterations (e.g., creation of perch sites or “subsidies” for predators).

Construction activities would likely cause mobile vertebrate wildlife to leave or attempt to leave the site. Animals dispersing from the site could be at increased risk of predation and possible vehicle collisions as they flush from cover during site clearing. After leaving their home territories, displaced animals may be unable to find suitable food or cover in new, unfamiliar areas. Displacement effects would apply to common wildlife species and to special-status species.

Construction could cause mortality of small mammals and reptiles, including special-status species, which may be crushed by construction equipment. In most cases, adult birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) would be lost. Burrowing owls, if present during construction, would tend to shelter inside burrows where they could be vulnerable to crushing. Land use conversion could exclude special-status reptiles, birds, and mammals from portions of their territories. Facilities could present hazards to wildlife, including special-status wildlife. For example, vertical structures, such as the gen-tie line and panels, can be collision hazards for birds or bats in flight; trenches can be pitfall hazards for terrestrial wildlife; and construction materials such as open pipes or tubing can attract birds or terrestrial species, which can become trapped inside.

Noise and lighting during construction could affect wildlife in adjacent habitats by disrupting foraging, breeding, sheltering, and other activities or may cause animals to avoid otherwise suitable habitat surrounding the site. Lighting during construction may affect nocturnal wildlife species by causing alterations to foraging or movement behavior, possibly attracting some species to the site (e.g., bats may be attracted to insects at light sources) or dissuading other species from approaching the site. Various other human activities (e.g., vehicle traffic, accumulated waste, or nuisance water sources) can be injurious to special-status wildlife, either as direct hazards (vehicle strikes) or as attractants such as food or water that may put animals in harm’s way.

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Operational lighting would be the minimum needed, with nighttime lighting limited to areas required for operation, safety, or security. Nighttime lighting would be directed or shielded from major roadways or possible outside observers. Motion sensitive security lights would be installed to minimize the amount of nighttime lighting.

Insects

Crotch's bumble bee.

The Project site supports potentially suitable habitat for Crotch bumble bee; however, no bees have been observed, and the Project site is located east of the current range. Recent records are documented on the western side of Riverside County, west of Palm Springs. Because the Project is outside of the Crotch bumble bee current habitat range, impacts to this species would be less than significant.

Monarch butterfly.

As noted in the BRTR, the Project site did not have any milkweed or monarch observations and would be an unlikely breeding or overwintering area. Monarchs may use the Project site for foraging during migration. If present, monarch host plants may be destroyed during site preparation, individuals may be displaced, and caterpillars or adults may be crushed. Use of herbicides and herbicide drift could contaminate and degrade non-target host plants and expose individuals to toxic chemicals, resulting in mortality. Neither the site nor the surrounding area is known to serve a significant role in breeding or migration for the monarch species, and the surrounding Chuckwalla Valley provides vast stretches of desert land with similar or higher quality habitat the species may use. In western North America, nectar and milkweed resources are often associated with riparian corridors, which do not occur on the Project site. Impacts to monarch butterfly would be less than significant.

Mammals

Desert kit fox.

The Project site contains habitat suitable for a number of wildlife species, particularly those adapted to desert scrub environments. The BRTR identifies the desert kit fox (*Vulpes macrotis arsipus*) as having high potential to occur within the Project area but no dens or individuals were observed during surveys. Direct impacts to desert kit fox during construction, operation and maintenance, and decommissioning could include injury or mortality by vehicles during site clearing or excavation activities during construction and decommissioning or when driving around the site during operations and maintenance. Habitat loss would also occur due to construction. Indirect impacts may result from habitat fragmentation, lighting, noise, and human presence. MM BIO-1 (Biological Monitoring), MM BIO-2 (Worker Environmental Awareness Program), MM BIO-3 (Minimization of impacts to Native Vegetation), MM BIO-4 (Minimization of Impacts to Wildlife), and MM BIO-9 (Desert Kit Fox and American Badger Relocation) would ensure that appropriate monitoring, training, and species exclusion procedures are in place. These measures would minimize adverse effects and reduce potential impacts to a less-than-significant level.

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American badger.

Suitable habitat for the American badger is present throughout the Project site, particularly in undeveloped areas with friable soils. While no individuals were observed during surveys, multiple signs of use—such as an inactive burrow and a skull— and wildlife camera footage were documented in and near the Project site. Construction activities may destroy burrows or cause injury or mortality to badgers during construction, operation and maintenance, and decommissioning. Direct impacts could include injury or mortality by vehicles during site clearing, excavation, or operational activities. Habitat removal may also reduce local prey availability or cause displacement. With implementation of mitigation measures—specifically MM BIO-1 (Biological Monitoring), MM BIO-2 (Worker Environmental Awareness Program), MM BIO-4 (Minimization of Impacts to Wildlife), and MM BIO-9 (Desert Kit Fox and American Badger Relocation)—impacts would be minimized. These measures require preconstruction surveys, passive relocation if individuals are detected, and avoidance of active natal dens. Impacts to the American badger would be less than significant.

Burro Deer.

Nearby active agricultural areas as well as the man-made pond on the norther Savira parcel provide a dependable water source for burro deer. Desert Dry Wash Woodland vegetation community, which occurs in a corner of the Project site, may provide seasonal foraging or cover habitat for burro deer. Potential impacts of the Project could include loss of habitat. Project site security fencing would prevent deer from freely crossing the solar sites, which may further limit their access to water sources during construction, operation, maintenance, and decommissioning. There are culverts/underpasses at washes along I-10 where burro deer could cross from the south into or near the Project site.

Burro deer are expected to avoid construction-related disturbance. No special measures are necessary to exclude them from work areas during construction. MM BIO-1 through MM BIO-6 would minimize adverse direct and indirect impacts to special-status wildlife species and associated native vegetation. With mitigation, impacts would be less than significant

Desert Tortoise

The Project site contains moderately suitable habitat for desert tortoise per modeling but has been degraded due to anthropogenic disturbances, primarily agriculture. No desert tortoise sign was observed during surveys. If desert tortoise were to move onto the site, desert tortoise would be vulnerable to impacts such as mortality or injury due to vehicle collision, crushing by site preparation equipment, or increased predation by opportunistic predators such as common ravens that may be attracted to food and water subsidies at the Project site. New structures such as fencing, solar panels, and the gen-tie line could introduce nest or perch sites for opportunistic predators that could prey on desert tortoises. Ravens prey on juvenile desert tortoises, contributing to an overall decline in tortoise recruitment. Desert tortoises, eggs, or burrows could be harmed during clearing or grading activities, or tortoises could become entrapped within open trenches and pipes. Construction could also result in direct mortality, injury, or harassment of tortoises or loss of eggs due to vehicle strikes. Other direct effects could include individual tortoises or eggs being crushed or entombed in their burrows, disruption of tortoise behavior

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during construction or operation of facilities, and disturbance by noise or vibrations from heavy equipment.

Desert tortoises may also be attracted to the construction area by shade beneath vehicles, equipment, or staged construction materials, or the application of water to control dust, placing them at higher risk of injury or mortality.

As a state listed endangered species and a federally listed threatened species, take (such as injury or mortality, as well as handling of a desert tortoise) may only be authorized through consultation with the USFWS and CDFW. If the site is a part of a desert tortoise's home range, land use conversion could reduce local habitat availability, possibly reducing access to food, water, or other resources, and impact population density. Land use conversion also could affect habitat connectivity in the area. Without implementation of MMs, the Project could cause significant impacts including mortality or injury to desert tortoises if present in the Project area during construction, operations and maintenance, and decommissioning activities.

However, implementation of mitigation measures would reduce these impacts to a less-than-significant level. Specifically, MM BIO-1 (Biological Monitoring) would ensure that qualified monitors are present to identify and avoid impacts to tortoises during ground-disturbing activities; MM BIO-2 (Worker Environmental Awareness Program) would train all site workers to recognize and avoid desert tortoise; MM BIO-4 (Minimization of Impacts to Wildlife) outlines avoidance protocols and requirements for handling or relocation by authorized biologists; and MM BIO-10 (Desert Tortoise Protection) would require pre-construction clearance surveys, and establishment of exclusion fencing. Additionally, MM-BIO-11 would require compensatory mitigation for the Project's impacts to native habitat which would include habitat potentially used by desert tortoise. With implementation of these measures, impacts to desert tortoise would be less than significant.

Special-status Bats

The Project site provides potential foraging habitat for six special-status bat species, including limited roosting habitat for pallid bat and free-tailed bat within the dry desert wash woodland. Other special-status bats known from the region typically roost in rocky outcrops and are not expected to use the Project site for roosting. Construction activities could result in the loss of desert shrubland foraging habitat and the potential for mortality if individuals become trapped in infrastructure or are displaced. Although stationary structures such as those proposed are less likely to pose collision risks to bats, impacts may still occur through habitat loss and disturbance. Indirect impacts may include lighting, human activity, and noise that can alter bat behavior or discourage use of nearby habitat.

To avoid and minimize impacts, the Project would implement MM BIO-1 (Biological Monitoring), MM BIO-4 (Minimization of Impacts to Wildlife), MM BIO-8 (Birds and Bats Conservation Strategy), and MM BIO-11 (Compensation for Impacts to Native Vegetation). MM BIO-1 (Biological Monitoring) would ensure construction compliance and protect flagged sensitive habitat. MM BIO-4 (Minimization of Impacts to Wildlife) requires inspection of structures prior

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to demolition and safe removal of wildlife. MM BIO-8 would require a Bird and Bat Conservation Strategy (BBCS) to identify and mitigate potential bat hazards during construction and operation and maintenance and would include measures such as scheduling tree removal outside the bat maternal roosting season and documenting any bat mortality. MM BIO-11 (Compensation for Impacts to Native Vegetation) would ensure that the permanent loss of bat foraging habitat is offset through off-site mitigation. With implementation of these measures, impacts to special-status bats would be less than significant.

Special-Status and Migratory Birds

The Project has the potential to affect special-status and migratory bird species that may occur on or near the site, including those protected under the MBTA and California Fish and Game Code. As described in Section 3.5.1 Environmental Setting, the Project site supports habitat types such as creosote bush scrub and desert wash woodland, which may serve as foraging or nesting habitat for bird species. Although no active nests were observed during field surveys, the Project site contains suitable nesting habitat for a variety of migratory birds. Potential direct impacts from construction, operations and maintenance, and decommissioning include destruction of nests, eggs, or nestlings during vegetation clearing and other ground-disturbing activities, especially during the breeding season. Direct removal of vegetation and habitat on the Project site would reduce availability of foraging, cover, and nesting habitat for threatened and endangered birds and their prey. Indirect impacts may include noise, lighting, and human activity that could disrupt breeding, feeding, or migratory behaviors, with nighttime lighting potentially affecting nocturnal bird species or altering migration patterns. To address these concerns, the Project would implement MM BIO-1 (Biological Monitoring), MM BIO-2 (Worker Environmental Awareness Program), MM BIO-4 (Minimization of Impacts to Wildlife), MM BIO-8 (Minimization of Impacts to Birds and Bats), and MM BIO-11 (Compensation for Impacts to Native Vegetation). Specifically, MM BIO-4 includes requirements to minimize new light sources and restrict nighttime construction, while MM BIO-7 requires pre-construction nesting bird surveys, and MM BIO-8 requires establishment of buffer zones and development of a Bird and Bat Conservation Strategy to identify and avoid potential hazards. With implementation of these measures, impacts to special-status and migratory birds would be less than significant.

Four burrowing owl burrows were identified on the Project site but no live individuals were seen during surveys (spring and fall). Potential direct Project impacts to burrowing owl includes loss of nest sites, eggs, or young; the permanent loss of breeding and foraging habitat; and disturbance of nesting and foraging activities for burrowing owl pairs. Due to the status of burrowing owl under CESA, an Incidental Take Permit would be required. In addition to the mitigation measures called out for all special-status birds, MM BIO-12 (Burrowing Owl Avoidance and Relocation) would be required to reduce impacts to the species. With an Incidental Take Permit and MM BIO-12, impacts to burrowing owl would be less than significant.

Gen-tie Line, Access Road, and Medium Voltage Line

For construction, operations, and decommissioning the access road, gen-tie line, and medium voltage line, the BLM would require biological monitoring (CMA LUPA-BIO-2), worker education (CMA LUPA-BIO-5), restore temporary disturbance areas (CMA LUPA-BIO-7), avoid

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impacts to water and wetland dependent species (CMA LUPA-BIO-9), and require compensation (CMA LUPA-COMP-1), among others. Wildlife-specific CMAs are required for desert tortoise (CMA BIO-IFS-1 through BIO-IFS-9), potential impacts to birds and bats (CMA LUPA-BIO-17 requiring a Bird and Bat Conservation Strategy), including strategies to avoid impacts to birds and bats from new transmission facilities (CMA-LUPA-BIO-16), and avoiding impacts to wildlife in general (CMA-LUPA-BIO-14).

Vegetation Communities and Habitat

The Project would impact vegetation communities and habitat through direct removal of vegetation and soil disturbance during construction. As discussed in Section 3.5.1 Environmental Setting, the Project area supports 135 acres of Sonoran creosote bush scrub, 4 acres of desert dry wash woodland, and 396 acres of disturbed agriculture land or non-native grasslands. These habitats provide ecological functions including cover, foraging, and nesting for a variety of wildlife.

Permanent impacts would include habitat fragmentation and loss of ecological function. The Project's direct effects to vegetation resources would include loss and fragmentation of habitat and native plant communities and loss of ecological functions. However, due to most of the Project being developed on fallow agriculture, there is limited suitable habitat for special-status plants and wildlife.

Vegetation, including the native vegetation and habitat, would be removed, or cut and retained on site. Soils throughout the solar site would be affected by some form of ground disturbance, ranging from drive-and-crush vehicle access to discing. Effects to soils and vegetation, in turn, would affect special-status plants and animals that may be present by removing nesting and foraging habitat, compacting soils, and collapsing burrows. Further, to minimize impacts to soil and the roots of plants, construction activities would implement drive and crush rather than grading.

During construction, the Project would temporarily affect surrounding habitat by introducing noise, lighting, dust, and similar disturbances, possibly affecting wildlife behavior. The temporary impacts cannot be quantified because noise and disturbance would be intermittent, occurring at various parts of the Project areas at various times during construction, and each species or individual animal would react differently to the various disturbances. The principal indirect impact to native habitat and associated special-status species is the potential introduction of invasive weeds, which could degrade plant and wildlife habitat on the site and beyond the site boundaries if the weeds spread. Implementation of the relevant MMs would reduce the potential impacts to the minor loss of natural habitat on the Project site. Therefore, implementation of relevant MMs would reduce the potential adverse effects to special-status wildlife and plants from the Project.

To reduce these impacts, the Project would implement MMs BIO-1 (Biological Monitoring) through BIO-7 (Special-Status Plant Species Mitigation), and BIO-11 (Compensation for Impacts to Native Vegetation). MM BIO-3 (Minimization of Impacts to Native Vegetation) and MM BIO-

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5 (Integrated Weed Management Plan) specifically address minimization of vegetation loss and weed management.² MM BIO-6 (Vegetation Resources Management) requires revegetation of temporary impact areas, while MM BIO-4 requires dust control to protect vegetation. MM BIO-11 would require compensatory mitigation for native habitat. Collectively, these measures would minimize and mitigate the Project's impacts to vegetation communities and habitat, resulting in less-than-significant impacts.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would result in no new ground disturbance and would not occur in any native habitats because they would be within the existing substation footprint which is entirely a built environment. Operations of each substation includes measures to reduce operational impacts to wildlife such as those required under the DRECP or the Project-specific mitigation measures. Because the work in the substations would be similar in nature and type as the existing infrastructure, impacts would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Bio-1: Biological Monitoring

The Applicant shall assign at least one Designated Biologist as the primary point of contact for the County of Riverside and permitting agencies (e.g., Bureau of Land

² Implementation of the Integrated Weed Management Plan specified in MM BIO-5 would control invasive weeds through mechanical or chemical methods. Herbicides can pose risks to terrestrial and aquatic vegetation. Most aquatic herbicides, and several terrestrial herbicides, are non-selective and could adversely impact non-target vegetation. Accidental spills and herbicide drift from treatment areas could be particularly damaging to nontarget vegetation. Herbicides may also pose risks to terrestrial or aquatic animal species. Herbicides that persist on site could adversely affect animals that feed on target plants or are exposed to the herbicides (e.g., by digging or rolling in treated soil). Accidental spills and herbicide drift from treatment areas could reach non-target vegetation or habitat on public or private lands near treatment areas. MM BIO-5 requires that the Integrated Weed Management Plan specify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread, monitoring methods to identify infestations, timely implementation of suppression and containment measures, and a reporting schedule. In addition, MM BIO-5 requires the Integrated Weed Management Plan to identify herbicides that may be used for control or eradication and avoid herbicide use in or around any environmentally sensitive areas. Any herbicide use would need to comply with existing BLM plans and permits, including the Vegetation Treatments Using Herbicides (BLM 2007) and Vegetation Treatment Using Aminopyralid, Fluroxypyr, and Rimsulfuron (BLM 2016b); would require a Pesticide Use Permit approved by BLM; and would adhere to the BLM design features from the pesticide Environmental Impact Statement.

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Management, California Department of Fish and Wildlife, and Regional Water Quality Control Board, as applicable) regarding biological resource compliance. The Designated Biologist shall have demonstrated expertise with the biological resources within the Project area, as well as hold a Memorandum of Understanding (MOU) with the County of Riverside. The Designated Biologist duties will vary during the construction, operation, maintenance, and future decommissioning of the Project. Additional Biological Monitor(s), trained and supervised by the Designated Biologist, may be necessary to fulfill compliance with Mitigation Measures and permit conditions. In general, the duties of the Designated Biologist shall include:

- Communication with representatives of lead and permitting agencies, as appropriate.
- Conducting or oversee Worker Environmental Awareness Program.
- Conducting or overseeing pre-construction surveys, inspection, and monitoring duties as defined in all Mitigation Measures.
- Halting any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources.
- Clearly marking sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions.
- During construction, preparing and submitting monthly compliance reports. During operations, prepare and submit annual compliance reports for the first three (3) years of operations.

Mitigation Measure Bio -2 Worker Environmental Awareness Program (WEAP)

The Applicant shall conduct an education program for all persons employed or otherwise working in the Project area before performing any work on the Project site. The program shall consist of a presentation from the Designated Biologist or Biological Monitor(s) that includes a discussion of the biology and general behavior special-status species, information about the distribution and habitat, sensitivity of the special-status species to human activities, its legal protection, recovery efforts, penalties for violations. All construction crews and contractors shall be required to participate in WEAP training prior to starting work on the Project. Applicant shall prepare and distribute a fact sheet handout containing this information for workers. WEAP training materials shall be provided in English and Spanish. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. At a minimum, the WEAP shall:

- Be developed by or in consultation with the Designated Biologist and consist of an onsite or training center presentation with supporting written material and electronic media, including photographs of protected species, available to all participants.
- Include a review of Mitigation Measure and permit requirements.

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- Include a review of the special-status species and other sensitive resources that may occur in the Project area, as well as the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources.
- Include desert tortoise specific training that includes detailed description of the desert tortoise, distribution and general behavior of the desert tortoise, sensitivity to human activities, regulatory status including prohibitions and penalties incurred for violation, mandatory conservation measures, and procedures if a desert tortoise is observed on-site.
- Provide an explanation of the function of flagging that designates authorized work areas and specify the prohibition of construction activities.
- Discuss general environmental and safety protocols such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures.
- Discuss the federal, state, and local regulatory setting (e.g., Endangered Species Acts, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act) and the consequences of non-compliance.
- Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas.
- Provide contact information for the Designated Biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during Project-related activities.
- Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines. A record of all personnel trained shall be maintained throughout the construction period. Along with their signature, each worker shall receive a sticker for their hard hat indicating they received the training.

Mitigation Measure Bio-3 Minimization of Impacts to Native Vegetation

The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to natural, or native, vegetation:

- Prior to ground-disturbing activities, work areas (including, but not limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with construction fencing (e.g., the common orange vinyl material) or staking to clearly identify the limits of work. No paint or permanent discoloring agents shall be applied to rocks or vegetation (to indicate surveyor construction activity limits or for any other purpose). Fencing/staking shall remain in place for the duration of construction.
- All disturbances, access roads, staging areas, vehicles, and equipment shall be confined to the fenced/flagged authorized work areas.

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- To the greatest extent practicable, construction activities shall minimize disturbance to soil and native vegetation.
- Best management practices shall be implemented where applicable for prevention and control of soil erosion and to minimize the introduction and spread of invasive plant species.
- Hazardous materials including motor oil, fuel, antifreeze, hydraulic fluid, and grease shall be contained, and spills or leaks shall be promptly corrected and cleaned up according to applicable regulations.
- Vehicles and equipment shall be properly maintained to prevent spills or leaks and refueling shall not be conducted outside the authorized work areas or within 100 feet of avoided, sensitive aquatic resources.
- Upon completion of construction activities, all unused materials, equipment, staking and flagging, wattles, and refuse shall be removed and properly disposed of, including but not limited to wrapping material, cables, cords, wire, boxes, rope, broken equipment parts, twine, strapping, buckets, and metal or plastic containers.

Mitigation Measure Bio-4 Minimization of Impacts to Wildlife.

The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to wildlife:

- Wildlife avoidance: Wherever feasible, Project activities shall avoid interference with wildlife (including ground-dwelling species, birds, and bats) by allowing animals to egress from the work area on their own accord, prior to disturbance.
- Sensitive biological resources: Sensitive biological resource areas near all work activities shall be clearly communicated and/or marked (e.g., flagged or fenced off) in the field. Avoidance buffers shall be established and maintained by the Designated Biologist.
- Minimize traffic impacts: The Applicant shall specify and enforce maximum vehicle speed limits to minimize risk of wildlife collisions and fugitive dust. Vehicles shall not exceed a speed limit of 15 mph on unpaved roads in open habitat where wildlife may be affected. Dust suppression shall occur during all construction activities as needed.
- Minimize lighting impacts: Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light toward surrounding wildlife habitat. New light sources shall be minimized, and lighting shall be designed (e.g., using downcast lights) to limit the lighted area to the minimum necessary.
- Avoid use of toxic substances: Use of chemicals, fuels, lubricants, or biocides shall comply with all local, state, and federal regulations to minimize the possibility of contamination of habitat or primary or secondary poisoning of predators utilizing adjacent habitats. All uses of such compounds should observe label and other

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restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be nontoxic to wildlife and plants.

- Minimize noise and vibration impacts: The Applicant shall conform to noise requirements specified in the noise analysis of the Environmental Impact Report to minimize noise to off-site habitat.
- Water: Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by Biological Monitors to ensure they do not create longstanding ponded areas.
- Food and trash: No deliberate feeding of wildlife shall be allowed. Further, to avoid indeliberate feeding of wildlife, all food-related trash items, including wrappers, cans, bottles, and food scraps shall always be contained and properly disposed of in self-closing, sealable containers, with lids that latch to prevent wind and wildlife (e.g., ravens, coyotes) from opening the containers. All trash receptacles shall be regularly inspected, emptied, and removed from the Project site at a minimum once a week to prevent spillage and maintain sanitary conditions.
- Firearms and dogs: All personnel and any other individuals associated with the Project shall be prohibited from bringing any firearms on the Project site, except those in the possession of authorized security personnel or local, state, or federal law enforcement officials. No pets shall be permitted on the Project site except dogs that may be used to aid in official and approved monitoring procedures/protocols or service dogs under Title II and Title III of the American with Disabilities Act.
- Wildlife entrapment: All pipes, culverts, or similar structures with a diameter greater than 3 inches and less than 8 inches aboveground shall be inspected by the Designated Biologist or Biological Monitor(s) before the material is moved, buried, or capped. The Designated Biologist or Biological Monitor(s) shall inspect all open holes and trenches a minimum of once a day and just prior to backfilling. Any open excavations greater than a 1-foot depth must be covered (e.g. with plywood or steel plates with the edges barricaded) or fit with earthen escape ramps or wooden planks at least every 150 feet to allow for wildlife egress if left open overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers an animal has become trapped, they shall halt activities and notify the Designated Biologist or Biological Monitor immediately.
- Dead or injured wildlife: Dead or injured special-status wildlife species shall be reported to the lead agencies and permitting agencies, as applicable, within 48 hours of detection. The Designated Biologist or Biological Monitor shall complete a Wildlife Incident Form and safely move the carcasses out of the road or work

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area and dispose of the animal. If an animal is entrapped, the Designated Biologist or Biological Monitor shall free the animal if possible, or work with construction crews to free it, in compliance with safety requirements, or work with applicable agencies to resolve the situation. Injured wildlife will be transported to an approved wildlife rehabilitation center.

- Pest control: No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site or in support of any other Project activities. If rodent control must be conducted, the use should be restricted to interiors of buildings and zinc phosphide should be used because of the lower risk of poisoning burrowing mammals.
- California Natural Diversity Database: All observations of special status species, alive or dead, shall be recorded and reported to the California Natural Diversity Database.

Mitigation Measure Bio-5 Integrated Weed Management Plan

The Applicant shall prepare and implement an Integrated Weed Management Plan to minimize or prevent noxious, nonnative and invasive weeds from infesting the site or spreading into surrounding habitat. For Project components on BLM administered lands (i.e., gen-tie and access route), the Integrated Weed Management Plan must comply with BLM guidelines and be approved by the BLM. The Integrated Weed Management Plan shall identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds. All construction vehicles (e.g., trucks, trailers, machinery) shall be washed (either by water or pressurized air) off site before entering the Project area to limit the spread of weeds. All wattles or bales will be certified weed-free, non-entrapment, and will be removed at the completion of activities. The Integrated Weed Management Plan shall identify herbicides that may be used for control or eradication and avoid herbicide use in or around any environmentally sensitive areas. The Integrated Weed Management Plan shall also include a reporting schedule to be implemented by the Designated Biologist.

Mitigation Measure Bio-6 Vegetation Resources Management

The Applicant shall undertake the following measures during construction to minimize impacts to vegetation resources:

- The Applicant shall assign a Vegetation Specialist to oversee and implement salvage and transplantation of plant species protected pursuant to BLM policy

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(conformance with DRECP Conservation and Management Action LUPA-BIO-7) and the California Desert Native Plants Act, as applicable, and implement revegetation of temporarily disturbed areas on the gen-tie and access route. On private lands under the jurisdiction of the County of Riverside, the Applicant shall obtain a permit from the County of Riverside pursuant to the California Desert Native Plants Act for the purposes of salvage or removal of protected species during construction if required.

- Revegetation of temporarily disturbed areas shall occur within BLM administered lands (i.e., gen-tie and access road). Revegetation shall not be implemented on private lands within the Project site (i.e., the solar facility site). The nature of revegetation will differ according to each site, its pre-disturbance condition, and the nature of the construction disturbance (e.g., drive and crush versus blading). Revegetation techniques may include soil contouring, replanting of succulents, placing vertical mulch as crushed, horizontal, or vertical mulch to reduce sun and wind exposure to the soil surface and facilitate plant germination. Areas may also be watered based on the guidance of the Vegetation Specialist.

Mitigation Measure Bio-7 Special-Status Plant Species Mitigation.

To reduce potentially significant impacts to special-status plant species, the Applicant shall implement one or a combination of the following strategies:

- **Off-site compensation:** The Applicant shall provide compensation lands consisting of creosote bush scrub habitat and suitable special-status plant species habitat, if applicable, at a 1:1 ratio for occupied habitat affected by the Project. Occupied habitat acreage shall be calculated on the Project site based on including each special-status plant occurrence, if applicable, and a surrounding 100-foot buffer area. Off-site compensation lands would be considered suitable if in proximity to historical occurrence and suitable habitat is present. Off-site compensation lands shall be located within 5 miles of a historical occurrence and include creosote bush scrub.
- **Seed collection:** Mitigation may include seed collection from the affected creosote bush population on the site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The costs associated with the long-term storage, seed bulking, and propagation of the seed may be the responsibility of the Applicant for up to five (5) years. Seed and/or germinated plants can be used for restoration within the Project site, off-site mitigation lands, or other conservation lands or nearby sites as approved by the County of Riverside and applicable permitting agencies.

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Mitigation Measure Bio-8 Birds and Bats Conservation Strategy (BBCS)

The Applicant shall implement the final BBCS to avoid or minimize take of migratory birds that may nest on the site or may be vulnerable to collision with the Project components. It describes the Project components, summarizes baseline data regarding birds and bats in the Project vicinity; assesses potential risks to those species that could result from Project construction, operation, and decommissioning; and describes conservation measures to be implemented in order to minimize those risks.

Over the course of construction and O&M, fatality thresholds and future conservation measures may be subject to revision in coordination with CDFW as new information is obtained. The BBCS outlines an adaptive management process to address such revisions to monitoring.

Construction: As an Appendix to the BBCS, the Applicant shall prepare and implement a Nesting Bird Management Plan (NBMP), to include nest surveys, avoidance, and protection. The Project shall either avoid vegetation clearing during the nesting season or conduct pre-construction nest surveys of potential habitat and implement no-disturbance buffer areas around active nests. Pre-construction surveys for active nests shall be conducted by one or more biological monitors at the direction of the Lead Biologist. Nest surveys shall be conducted for all vegetation removal or ground disturbance activities throughout the nesting season, identified here as beginning January 1 for raptors and hummingbirds and February 1 for other species, and continuing through August 15. Nest surveys will be completed at each work site no more than 7 days prior to initiation of site preparation or construction activities. Nest surveys shall cover all work sites, including the solar site facility and gen-tie line alignment plus buffer areas of 1,200 feet for raptors and 250 feet for other species. If adjacent properties are not accessible to the biological monitors, the off-site nest surveys may be conducted with binoculars.

At each active nest, the biological monitor shall establish and mark a buffer area surrounding the nest where construction activities that could disrupt nesting behavior will be excluded. The BBCS may identify species-specific buffer distances or variable distances, depending on activity levels (e.g., driving past the nest to access work sites may be less disruptive than foundation construction). Alternately, buffer distances may be 1,200 feet for raptor nests and 250 feet for other species. The extent of nest protection will be based on proposed construction activities, species, human activities already underway when the nest is initiated (e.g., a house finch nest built in the eaves of an occupied structure would warrant less avoidance or protection than a loggerhead shrike nest build in native shrubland), topography, vegetation cover, and other factors. The avoidance and protection measures will remain in effect until the nest is no longer active.

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If for any reason a bird nest must be removed during the nesting season, the Applicant or its agent will notify the CDFW and retain written documentation of the correspondence. Nests will be removed only if they are inactive, or if an active nest presents a hazard.

Operation and maintenance: The BBCS specifies monitoring and conservation measures to be implemented by the Applicant to document bird mortality or injury that may result from the operation of the Project, such as downed exhausted birds on the site that are unable to take flight or collision with Project components including gen-tie line or panel collisions. The BBCS includes conservation measures and an adaptive management framework to be implemented through design and operations to minimize bird and bat fatalities at the solar facilities and gen-tie line. Provisions for a potential O&M monitoring and reporting program for bird and bat fatalities are included, based on monitoring at other active projects in the vicinity.

Mitigation Measure Bio-9 Desert Kit Fox and American Badger Relocation

The Applicant shall implement the following measures to protect desert kit fox and American badger:

- Biological monitors shall perform pre-construction surveys for kit fox/badger dens in the Project disturbance area and a 100-foot (30-meter) buffer beyond the Project disturbance area, with landowner permission to access, within 30 days of initiation of construction activities.
- All potential desert kit fox/badger dens identified during pre-construction surveys shall be monitored for a minimum of three consecutive nights (between August 1 and January 14) or five consecutive nights (between January 15 and July 31) to determine occupancy status. Occupancy monitoring shall be performed using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance(s). Each den shall be classified as inactive or active following the evaluation period.
- If no tracks are observed in the tracking medium or no photos of the target species are captured after the monitoring period, the den shall be classified as inactive.
- Inactive dens in the direct path of disturbance may be excavated by hand (by the biologists or under the supervision of a biological monitor) and backfilled to reduce the likelihood of reuse by badgers or kit fox. Dens not directly impacted by construction shall not be excavated.
- If an active den is found outside the natal season (between August 1 and January 14), the den may be subject to passive relocation. Prior to any relocation of desert kit fox and American badger, the CDFW must be notified of the active den and methods proposed for relocation. Relocation may occur by progressively blocking the den with natural materials (e.g., rocks, dirt, sticks, or vegetation) or artificial, non-injurious materials placed in front of the entrance for a minimum of five

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consecutive nights to discourage continued use. Additional deterrents such as natural mixtures of aromatic organics (e.g., onions, garlic, essential oils), transistor radios, and ultrasonic emitters may be used. The use of one-way doors may be used. Installation of one-way doors shall take place in the afternoon while desert kit fox/badgers are inactive and deep within the den complex. After verification that passive relocation has been successful and the den has been unoccupied for a total of five consecutive nights, the den may be fully excavated.

- If an active den is found during the natal season (January 15 and July 31), a 500-foot (150-meter) no-disturbance buffer shall be established. All active dens found during the natal season shall be presumed natal and shall not be subject to passive relocation activities unless approval is obtained from the CDFW.
- Buffers may be reduced, expanded, or temporarily modified to allow certain low-impact activities (e.g., vehicle access) to occur as determined by the Designated Biologist to be feasible without adversely affecting the den. All modifications to the size of exclusion buffers or allowance of certain Project activities within the exclusion buffer shall be documented by the Designated Biologist.
- Current guidelines from the CDFW regarding minimizing transmission of canine distemper virus shall be followed.

Mitigation Measure Bio-10 Desert Tortoise Protection.

No desert tortoise may be handled or relocated without authorization from the CDFW and USFWS. The Applicant shall employ qualified desert tortoise biologist(s) for purposes of implementing desert tortoise protection measures identified below. The Designated Biologist noted in MM BIO-1 may also serve as qualified desert tortoise biologist if they meet the following qualifications. The desert tortoise biologist(s) qualifications shall be subject to review and approval by the applicable lead and permitting agencies. Qualifications shall include prior approval by CDFW as an Authorized Desert Tortoise Biologist and/or at least two years of experience on trend plots or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by CDFW (e.g., Desert Tortoise Council tortoise training workshop) is required.

The qualified desert tortoise biologist(s) shall be responsible for overseeing compliance with desert tortoise protective measures, conducting pre-construction surveys for all work areas, monitoring for evidence of tortoises in construction areas, checking under vehicles and equipment, inspecting excavations and other potential entrapments, and ensuring worker compliance with all desert tortoise protection measures. Any incident that is considered by the qualified desert tortoise biologist(s) to be in noncompliance with desert tortoise protective measures shall be documented.

The qualified desert tortoise biologist(s) shall have the authority to halt any Project activity that is in violation of desert tortoise protective measures or that may result in

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take of a desert tortoise. The following incidents shall require immediate cessation of any Project activities: (1) location of a desert tortoise within 100 feet (30 m) of an active work area; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; and (4) operation of construction equipment or vehicles outside authorized work areas. Work activities may resume once the Designated Biologist or qualified desert tortoise biologist(s) determines there is no threat to the desert tortoise and/or the tortoise has walked more than 100 feet (30 m) away from the work area. The Applicant shall be responsible for implementing the following requirements, under direction by the qualified desert tortoise biologist(s) where appropriate.

- **Worker training:** The Worker Environmental Awareness Program described in MM BIO-2 shall incorporate desert tortoise specific training.
- **Exclusion fencing:** Prior to construction of the solar facility, the solar site shall be fully enclosed by temporary, or permanent desert tortoise exclusion fencing. All exclusion fencing shall adhere to USFWS design guidelines. To the extent feasible and permissible by County flood control design guidelines, permanent exclusion fence shall be integrated with the site security fence for maximum durability. The qualified desert tortoise biologist(s) shall monitor the installation of all fencing. Once installed, exclusion fencing shall be inspected at least monthly until construction completion and following all rain events, and corrective action taken if fence maintenance is needed. Exclusion fencing shall incorporate the installation of tortoise guards, or cattle guards, and/or gates at each road entry point. Gates shall always remain closed except when vehicles are entering or leaving the solar facility site. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open if a qualified desert tortoise biologist is present to monitor potential tortoise activity.
- **Pre-construction surveys:** Pre-construction surveys shall be performed prior to ground disturbance to ensure no desert tortoises are present within the direct disturbance area. Pre-construction surveys shall be conducted in unfenced Project areas no more than 7 days prior to ground disturbance. Clearance surveys shall also be conducted after the solar facility site has been fully enclosed by temporary, or permanent desert tortoise exclusion fencing.
- **Avoidance:** Any potentially occupied burrows shall be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If a live tortoise or an occupied tortoise burrow is identified in the work area, all Projects activities that may result in take shall cease. The tortoise shall be allowed to leave on its own accord without handling or harassment.
- **Unfenced work areas:** If a tortoise is observed on or near unfenced work areas, including access roads, vehicles shall stop to allow the tortoise to move off the road on its own. The ground beneath vehicles parked outside of cleared areas

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within desert tortoise exclusion fencing shall be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle shall not be moved until the desert tortoise leaves of its own accord. Any work conducted in an area that is not fully enclosed by exclusion fencing must be monitored by a qualified desert tortoise biologist who shall stop work if a tortoise enters the work area. Work activities shall only proceed when the tortoise has moved away of its own accord and there is no threat of injury or death. Work sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions) shall be enclosed by temporary exclusion fence and not left open overnight.

- **Dead or injured tortoises:** If a dead or injured desert tortoise is found within the Project area, the Applicant or Designated Biologist shall notify by phone and email the USFWS, CDFW, and lead agencies within 24 hours of detection. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, possible cause of death or injury, if known, and other pertinent information.

Mitigation Measure Bio-11 Minimization of Impacts to Native Vegetation

Table 3.5-3 provides an estimate of compensation acreages; however, final compensation shall be based upon final calculation of impacted acreage.

Table 3.5-4 Estimated Impacts to Native Vegetation and Habitat Compensation (Acres)

Natural Vegetation Community	Estimated Total Disturbance (acres)	Compensation Ratio	Estimated Compensation Acres
Sonoran Creosote Bush Scrub ^b	135	1:1	135
Desert Dry Wash Woodland	3.3	5:1	16.5
Unvegetated Ephemeral Wash	13	1:1	13 (nested in Sonoran Creosote Bush Scrub)

Notes:

^a Non-native vegetation types have been excluded (i.e., non-native grassland, deciduous orchards/vineyards, lacustrine, and urban)

^b No impacts to desert pavement.

Source: Appendix D

- Summary of compensatory mitigation:
 - Total compensation acreage: 151.5 acres
 - Sonoran creosote bush scrub: 135 acres
 - Desert dry wash woodland acreage: 16.5 acres

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- Unvegetated ephemeral wash: 13 acres (nested in the Sonoran creosote bush scrub)
- No compensation shall be required for impacts to anthropogenic land use or fallow agriculture. The compensation acreage shall be based upon final calculation of impacted acreage. Compensation shall be provided for impacts to the following resources, at the specified ratios (acres acquired and preserved to acres impacted):
 - Sonoran creosote bush scrub: 1:1
 - Desert dry wash woodland: 5:1
 - Unvegetated Ephemeral Wash: 1:1
- The Applicant shall provide funding or bonding for the acquisition and conservation of compensation lands. Conservation instruments, associated documentation, and/or securities shall be submitted to the applicable agencies for review and approval, prior to initiating ground disturbance, pursuant to the requirements of permits and authorizations issued by lead, responsible, and permitting agencies.

Mitigation Measure Bio-12 Burrowing Owl Avoidance and Relocation

The Applicants shall prepare and implement a plan for burrowing owl. The plan shall be reviewed and guidance provided by the lead agencies prior to the start of ground-disturbing activities. Burrowing owl protection and relocation shall follow the Staff Report on Burrowing Owl Mitigation (CDFG 2012) and incorporate the following requirements:

- Pre-construction surveys for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, whitewash) shall be conducted throughout each work area. Survey schedules shall be coordinated with constructing the desert tortoise exclusion fence and the pre-construction desert tortoise clearance surveys. As needed, follow-up surveys shall be conducted no more than 14 days prior to construction.
- Should any of the pre-construction surveys identify burrowing owl or active burrows within the solar facility, the Biological Monitor shall coordinate with the Construction Contractor to implement avoidance and setback distances as specified in the Staff Report on Burrowing Owl Mitigation (CDFG 2012).
- Any unoccupied suitable burrows within the solar facility site shall be excavated and filled in under the supervision of the Biological Monitor prior to site preparation during the non-breeding season.
- If passive relocation of burrowing owls is needed, the Applicant shall draft a plan detailing methods for the relocation and monitoring and management of the passive relocation.

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Significance Determination after Mitigation

Less than significant

Impact BIO-3 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?

As discussed under Impact BIO-2, the Project may result in direct and indirect impacts to special-status species through habitat disturbance and ground-disturbing construction activities. The BRTR (see Appendix D) identifies the presence of suitable habitat and moderate potential for occurrence of several special-status species within the site. For the gen-tie, access road, and medium voltage line, the BLM would consult with the USFWS under the DRECP Programmatic Biological Opinion.

The implementation of MM BIO-1 through MM BIO-8, including biological monitoring, pre-construction surveys, species-specific avoidance measures, buffer zones, and weed control, would avoid or substantially reduce potential impacts. MM BIO-11 would require compensatory mitigation for native habitat for special-status species. MM BIO-12 would require avoidance and relocation of burrowing owl. These measures are designed to ensure compliance with applicable regulations and protect sensitive biological resources during all phases of construction. With implementation of these MMs, impacts to special-status species would be less than significant.

Southern California Edison Activities

As discussed under Impact BIO-2, the SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not result in direct impacts to special-status species through habitat disturbance and ground-disturbing construction activities. The impact would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1 through MM BIO-8 and MM BIO-11.

Significance Determination after Mitigation

Less than significant.

Impact BIO-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement in the vicinity of the Project site is constrained by surrounding solar developments, local roads, and major highways such as SR 177 and I-10. The BRTR confirms that the Project site is not located within a designated regional wildlife corridor or multi-species linkage. The closest such linkage is approximately 3.3 miles to the south, across I-10, connecting

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the Chuckwalla Mountains to the Chuckwalla Valley. Therefore, the Project would not directly impact any known wildlife linkages or corridors.

The Project site may support limited movement of wildlife across the local landscape and contains habitat that could function as nesting or nursery sites for birds and other species. Nearby solar projects include the Athos Solar Project to the north, Palen Solar Project to the east, and Victory Pass Solar Project to the west. Areas both west and east of the Project site with higher habitat value have been left undisturbed by solar development and area available as wildlife passages. Nonetheless, the proposed solar facility would further interrupt potential wildlife movement routes through the area, primarily for movement across undisturbed desert scrub and anthropogenically disturbed land (agriculture). The gen-tie, access road, and medium voltage line would not directly limit movement of wildlife across the local landscape but would add to anthropogenically disturbed land in the area. Potential impacts to wildlife movement and breeding behavior during construction, operations, and decommissioning, including these open wildlife passages, include temporary avoidance of the area due to noise, lighting, and human activity.

MM BIO-1 through MM BIO-11 would be implemented to avoid and minimize these effects. In particular, MM BIO-1 requires biological monitoring to ensure avoidance of sensitive areas; MM BIO-2 requires a Worker Environmental Awareness Program; and MM BIO-8 requires pre-construction nesting bird surveys and establishment of buffer zones. MM BIO-8 also requires operational monitoring of bird mortality and use of adaptive management strategies if thresholds are exceeded.

Additionally, MM BIO-8 would require the use of bird-safe design features on any infrastructure, such as flight diverters and conductor spacing, to reduce collision and electrocution risk to birds. Implementation of these measures would ensure that potential impacts to wildlife movement and nursery sites would be minimized to less-than-significant levels.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not result in direct impacts to movement of wildlife or wildlife corridors because the substations are already fenced and the SCE Activities would not further interrupt potential movement. The impact would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1 through MM BIO-11.

Significance Determination after Mitigation

Less than significant.

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Impact BIO-5 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

The Project site supports vegetation communities primarily composed of creosote bush scrub and other desert shrubland types, with limited areas of desert dry wash woodland, which is considered a sensitive natural community. As noted in the BRTR, desert dry wash woodland has a state rarity rank of S4 and provides important habitat characteristics associated with ephemeral hydrologic systems in the region. Although the majority of the Project site avoids areas of higher ecological sensitivity, minor impacts to desert dry wash woodland would occur.

Potential direct impacts include removal or degradation of approximately 3.5 acres of desert dry wash woodland on the solar array site during construction activities such as grading, trenching, or equipment staging. Indirect impacts may include dust deposition, introduction or spread of invasive plant species, and alteration of hydrology affecting adjacent vegetation. The Project access road and gen-tie would potentially cross Desert Dry Wash Woodland. However, minimal new ground disturbance to Desert Dry Wash Woodland would occur from these elements because the access road should be wide enough to accommodate the construction, operation, and decommissioning of the Project. The gen-tie line would span any Desert Dry Wash Woodland to avoid new ground disturbance, whenever feasible. Under CMA LUPA-BIO-RIPWET-1, the BLM would ensure any impact to Desert Dry Wash Woodland are minor incursions. Nonetheless, if the gen-tie could not span Desert Dry Wash Woodland, additional minor impacts to this sensitive natural community could occur. The BLM would require compensation for any impacts of the gen-tie and access road at a 5:1 ration under CMA LUPA-BIO-COMP-1.

To minimize and offset these impacts, the Project would implement MM BIO-1 through MM BIO-7 and MM BIO-11. MM BIO-1 requires qualified Biological Monitors to oversee construction and ensure avoidance of flagged sensitive areas. MM BIO-2 mandates environmental awareness training for construction personnel to reinforce avoidance protocols. MM BIO-3 and MM BIO-5 require implementation of best management practices to control invasive species, flagging of special-status vegetation for protection, and development of an Integrated Weed Management Plan.

Additional protections include MM BIO-4, which requires dust suppression to minimize vegetation impacts, and MM BIO-11, which provides off-site compensation for permanent loss of native habitat, including desert dry wash woodland. The Project would avoid development of new access roads where feasible and minimize clearing and grubbing activities. On BLM-administered lands, With the implementation of these measures, impacts to vegetation communities, including sensitive habitat such as desert dry wash woodland, would be reduced to a less-than-significant level.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not result in direct impacts to riparian habitat or other sensitive habitat because the

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substations are already fenced and do not include riparian or otherwise sensitive habitat. The impact would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1 through MM BIO-7 and MM BIO-11.

Significance Determination after Mitigation

Less than significant

Impact BIO-6 Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Project does not contain jurisdictional wetlands, and no wetlands would be directly or indirectly affected. As documented in the BRTR, no federally regulated waters of the United States are present within the Project site due to the lack of a surface hydrologic connection to traditionally navigable waters. However, features subject to state jurisdiction, such as ephemeral drainages, do occur on site and function as ephemeral streams. These features are regulated by the CDFW under section 1602 of the California Fish and Game Code and by the Colorado River Basin Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Water Quality Control Act.

No substantial changes to surface hydrology are proposed because the Project would allow sheet flow through the site. Vegetation clearing, site grading, or construction of Project components would result in direct impacts to waters of the state under jurisdiction of both CDFW and RWQCB, including ephemeral dry washes. These impacts could include increased sedimentation or alterations in surface flow patterns, velocities, and sediment load during operations. Indirect impacts may also occur due to the introduction of pollutants, compaction of soils, or erosion resulting from construction, operations, and decommissioning activities. As noted in the setting, an estimated 13.00 acres of waters, 3.31 acres of vegetation, and 0.65 acre of excavated depression would be likely subject to CDFW regulation and require a streambed alteration agreement prior to disturbance. An estimated 5.93 acres of waters, 3.31 acres of vegetation, and 0.65 acre of excavated depression would be likely subject to regulation by the RWQCB and Waste Discharge Requirements. The 3.31-acre detention pond would not be impacted by the Project.

To address these potential impacts, several mitigation measures would be implemented. MM BIO-1 (Biological Monitoring) ensures sensitive resources are clearly flagged and avoided to the extent feasible. MM BIO-2 (Worker Environmental Awareness Program) requires training for all construction personnel regarding the presence and protection of jurisdictional features. MM BIO-3 (Minimization of Impacts to Native Vegetation) requires use of best management practices (BMPs), limits refueling and equipment staging in proximity to ephemeral drainages, and establishes protective buffers. MM BIO-4 requires hazardous materials and chemical use to be compliant with all applicable regulations, minimizing the risk of contamination. MM BIO-11

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(Compensation for Impacts to Native Vegetation) ensures compensatory mitigation for any unavoidable impacts to ephemeral drainages or associated habitats. Additionally, MM BIO-13 requires the Applicant obtain authorization from the CDFW and the RWQCB if the Project were to impact jurisdictional water.

The combination of these mitigation measures would minimize and compensate for potential direct and indirect impacts to waters of the state. Therefore, the Project would result in less-than-significant impacts with implementation of mitigation.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not result in direct impacts to wetlands or other sensitive habitat because the substations are already fenced and do not include wetlands or otherwise sensitive habitat. The impact would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1, MM-BIO-2, MM BIO-4, and MM BIO-11.

Mitigation Measure Bio-13: Stream Protection and Compensation.

Prior to ground-disturbing activities in waters potentially regulated by the state, the Applicant shall confer with the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB) and, if required, obtain appropriate authorization. The Applicant shall implement all conditions associated with regulatory agency agreements and authorizations including compensatory mitigation and, unless otherwise specified by CDFW and/or the RWQCB, shall implement the best management practices identified below to minimize adverse impacts to streams and watersheds:

- Construction crews shall minimize disturbance to wetlands, streambeds, and banks of any state-jurisdictional waters to the extent feasible.
- Vehicles and equipment shall not be operated in standing or flowing water.
- The Applicant shall prevent water containing mud, silt, or other pollutants from grading or other activities from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from entering ephemeral drainages.

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- No petroleum products or other pollutants from the equipment shall be allowed to enter any state-jurisdictional waters.
 - No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into off-site state-jurisdictional waters.
 - Stationary equipment such as motors, pumps, generators, and welders shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Cleanup equipment such as brooms, absorbent pads, and skimmers shall always be on site. The cleanup of all spills shall begin immediately.
 - All excess materials or debris shall be removed from the work area after completion of construction.
 - Project impacts to desert dry wash woodland and unvegetated ephemeral wash shall be mitigated by providing compensatory mitigation consistent with MM BIO-11.
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Significance Determination after Mitigation

Less than significant.

Impact BIO-7 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project would not conflict with any local policies or ordinances protecting biological resources. The Project is located in the unincorporated portion of the County and has been evaluated for consistency with applicable local plans and policies regarding biological resources. The Project area does not support any trees protected under a tree preservation ordinance; however, it includes habitat supporting sensitive vegetation and wildlife that are subject to regulatory protections. Impacts to these resources are discussed in Impact BIO-1 through Impact BIO-4 and would be mitigated through implementation of MM BIO-1 through BIO-13, which are designed to protect sensitive habitats, vegetation communities, wildlife movement corridors, and waters of the state. These measures ensure that habitat disturbance is minimized and that compensatory mitigation is provided where avoidance is not feasible.

The Project access road, gen-tie, and medium voltage line would be located on BLM-administered lands allocated under the DRECP as DFAs. Energy infrastructure is consistent with this allocation. Additionally, the BLM will review all infrastructure proposed for construction on BLM-administered land under NEPA and require all applicable CMAs be incorporated, such as requiring compensation at least at a 1:1 ratio for all impacts, requiring BMPs for construction of gen-tie lines to reduce impacts to birds, and avoidance of sensitive habitat such as Desert Dry Wash Woodland where feasible. If the CMAs do not sufficiently reduce the effects, the BLM would require additional mitigation such as an Integrated Weed Management Plan. Prior to the BLM making a decision on the Project infrastructure on BLM-administered lands, it would need to confirm the Project is in conformance with the DRECP. Because the Project would not conflict

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with local policies or ordinances protecting biological resources, including the DRECP, impacts would be less than significant with mitigation incorporated.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not conflict with local policies or ordinances protecting biological resources because the policies applicable to the existing Substations allow for work on the Substations and there are no biological resources on the substations to impact. The impact would be less than significant.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1 through MM BIO-13, and Impact BIO-6 for MM BIO-13.

Significance Determination after Mitigation

Less than significant.

3.5.5 Cumulative Analysis

Geographic scope

Cumulative impacts to biological resources include those from the Project combined with impacts from other existing, proposed, and reasonably foreseeable projects. The geographic scope for cumulative analysis encompasses the desert portion of Riverside County, from Palm Springs to the Colorado River. This region consists of similar habitats and supports the home ranges of special-status species potentially affected by the Project.

Cumulative impacts

As described under Section 3.5.3, Impact Analysis, the Project would result in direct and indirect impacts to biological resources, including special-status plants and wildlife, nesting birds, jurisdictional waters, and vegetation communities. These impacts could contribute to cumulative impacts in the region, which is undergoing large-scale solar development. However, with implementation of MMs BIO-1 through BIO-13, the Project's contribution would not be cumulatively considerable. The Project access road, gen-tie line, and medium voltage line would also potentially contribute to cumulative effects. However, BLM would review the impacts of these resources under NEPA and require DRECP CMAs that would reduce the effects as discussed in Section 3.5.3.

Special-status plants

Construction of the Project may impact special-status plant species if they were found onsite during pre-construction surveys. The past, present, and future projects would have similar or greater impacts to special-status plants, which could result in a cumulatively significant impact to regional special-status plants. However, implementation of MM BIO-7 would ensure that

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impacts to special-status plants are mitigated through avoidance, salvage, or off-site mitigation. With implementation of MMs, in combination with the lower level of conservation concern for species that are not listed as threatened, endangered, or sensitive, the Project's incremental contribution to cumulative impacts to other special-status plants would not be substantial. Accordingly, the Project's incremental contribution to the cumulative impacts to special-status plants caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

Native birds, including special-status passerine birds

Migratory birds are expected to occur throughout the area during construction, operation, and maintenance of the Project. The Project would contribute to cumulative direct and indirect impacts to migratory birds, including habitat loss and fragmentation; construction impacts to nesting birds; and an increase in noise and lighting, avian predators, and collisions and electrocutions. In combination with past, present, and foreseeable future projects, the Project could have a cumulatively substantial impact on special-status and migratory bird populations. However, with implementation of MM BIO-8 (Birds and Bats Conservation Strategy), which requires avoidance of active nests, lighting minimization, mortality monitoring, and adaptive management, the Project's contribution would not be cumulatively considerable.

Regarding potential collision from the solar facilities or gen-tie line, MM BIO-8 would require monitoring of bird kills and implementation of adaptive management. MM BIO-8 would also require mechanisms to visually warn birds, such as permanent markers or bird flight diverters, avoidance or minimized use of guy wires; and maintenance of sufficient distance between all conductors and grounded components to prevent electrocution. With incorporation of relevant MMs, the Project's incremental contribution to the cumulative impacts to native birds, including special-status passerine birds, caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

Burrowing owl

Impacts to burrowing owl from the Project may include habitat loss and potential mortality if burrowing owl are present in a work area, particularly during nesting season; and mortality or injury from collision with Project facilities, as described above for native birds. Other regional projects in the vicinity include several transmission lines and solar energy projects with similar habitat for burrowing owl, compared to the Project and could contribute to similar effects. However, implementation of MM BIO-4, MM BIO-8, and MM BIO-12 would avoid direct take and offset habitat loss through compensation. Therefore, the Project's contribution would not be cumulatively considerable.

Special-status raptors

Although the Project site does not provide high-quality nesting habitat, it may offer suitable seasonal and year-round foraging habitat. Several raptors are likely to forage infrequently on the solar sites at any time of year, including winter and migration seasons. Effects of the other projects in the vicinity would be similar to potential effects of the Project. In combination with projects in the region, the Project could have a cumulatively substantial impact on raptor habitat. Combined

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with other projects in the region, cumulative impacts to raptors could be significant. However, habitat loss would be minimal and offset through MM BIO-8 and MM BIO-11. Therefore, the Project's contribution would not be cumulatively considerable.

Special-status wildlife

Special-status species including desert kit fox, American badger, burro deer, may occur within the Project site and could be subject to displacement or injury during construction. In combination with regional projects, this could contribute to a significant cumulative impact due to habitat loss and potential injury and mortality. The principal potential cumulative impacts to burro deer would be reduced access to dependable irrigation water at agricultural sites. However, MM BIO-4 and MM BIO-9 through MM BIO-12 would ensure pre-construction surveys, passive relocation, and habitat compensation, minimizing the Project's contribution.

Special-status bats

Habitat loss, potential roost site disturbance, and collision risk could impact special-status bat species. These impacts in combination with impacts from with other projects could result in cumulative effects. However, with implementation of MM BIO-8, including BBCS development, seasonal timing, and roost avoidance, the Project's contribution would not be considerable.

Wildlife movement

Without mitigation, the Project could interfere substantially with the movement of 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. Combined with the impacts of other past, present, and reasonably foreseeable future projects, these effects could be cumulatively significant. Cumulative impacts analysis for wildlife movement take into account projects within 5 miles that could impact the multispecies linkage area identified in the DRECP, which links the Palen–McCoy Mountains to the northeast and the Chocolate Mountains to the southwest. These projects include existing and future solar projects around the Project such as the existing and operational Athos Solar Project, Palen Solar Project, and Victory Pass Solar Project, and projects further away such as the Arica Solar Project, Desert Sunlight, Desert Harvest, and operational Oberon Solar Project located farther west of the Project site, which also have the potential to influence wildlife movement. However, probable future projects on BLM-administered lands would be permitted under the DRECP and would be required to comply with the CMAs regarding avoidance of desert dry wash woodland and to ensure the linkage area retains its function as a wildlife corridor, and projects on private lands would be permitted by the County and subject to mitigation measures similar to the Project's. Therefore, cumulative impacts to wildlife movement would be less than significant. Accordingly, the Project's incremental contribution to any cumulative impacts to wildlife movement caused by other past, present, and probable future projects would not be cumulatively considerable or significant. Implementation of MM BIO-1 through MM BIO-8, would further minimize impacts. Given avoidance of linkage areas and regional permitting under the DRECP, the Project would not result in a cumulatively considerable contribution to wildlife movement impacts.

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Vegetation and habitat

Construction-related impacts of the Project would temporarily increase noise and activities, dust, and other habitat disturbances throughout the region. On completion of construction, longer-term land use conversion would contribute to reduced habitat availability and increased habitat fragmentation. In the context of the number of past, present, and future projects, many of which are large solar projects, the effects of the Project would incrementally contribute to the cumulative loss of vegetation and habitat. The minimal loss of natural habitats that would result from the Project would be offset by protecting compensation lands off site and by the areas conserved under the DRECP. Under the DRECP, Areas of Critical Environmental Concern and California Desert National Conservation Lands were protected as part of the overall goal of the DRECP to “advance federal and state natural resource conservation goals” (BLM 2016a). The Project would compensate for impacts to Sonoran creosote desert bush scrub, a widespread and common habitat type, and desert dry wash woodland, a sensitive vegetation community. MM BIO-11 requires compensation of habitat. With implementation of MMs, the cumulative contribution to impacts to vegetation and habitat from the Project would not be substantial. Accordingly, the Project’s incremental contribution to the cumulative vegetation and habitat impacts caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

Sensitive habitats and jurisdictional waters

The Project would minimally affect desert dry wash woodland. It would also minimally affect unvegetated ephemeral dry wash, which meets criteria as jurisdictional waters of the state. Many of the prospective projects in the Project region would have qualitatively similar impacts to desert dry wash woodland and unvegetated ephemeral dry wash due to the nature of the area and the large washes that cross it. Therefore, the Project’s impacts to sensitive habitats, combined with the effects of past, present, and reasonably foreseeable prospective projects, could result in a cumulatively significant impact to sensitive habitat. The effects of the Project would contribute incrementally to the cumulative impacts to sensitive habitat and jurisdictional waters of the state, but this incremental contribution would not be considerable because the Project has been designed to avoid sensitive habitat or avoid the desert dry wash woodland except for minor incursions because of the DRECP CMAs and because MMs would reduce the impacts so that residual effects would be minimal. MM BIO-11 requires compensatory mitigation for impacts to native vegetation communities and streams, and requires obtaining permits from CDFW and RWQCB prior to ground-disturbing activities in jurisdictional waters of the state, including streams. Accordingly, the Project’s incremental contribution to the cumulative impacts caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

Furthermore, with the incorporation of MMs BIO-1 through BIO-13, the Project’s incremental contribution to cumulative biological resource impacts would not be cumulatively considerable.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The

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work would not contribute to cumulatively considerable impacts because the work would not change the nature or operations of the Substation such that they would contribute to cumulative impacts beyond their existing contribution. The SCE Activities contribution to a cumulatively significant impact would be less than cumulatively considerable.

Significance before Mitigation

Significant.

Mitigation Measures

Refer to Impact BIO-2 Mitigation Measures for MM BIO-1 through MM BIO-12, and Impact BIO-6 for MM BIO-13.

Significance Determination after Mitigation

Less than significant.

3.5.6 References

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3.6 Cultural Resources

This section presents the environmental setting and analysis of impacts to cultural resources resulting from the Project. This section describes existing cultural and historic built environment for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.6.1 Environmental Setting

Definitions of Cultural Resources

The California State Office of Historic Preservation's (OHP's) Instructions for Recording Historical Resources defines *site* as "the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure; *district* as area possessing "a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development;; and *structure* as a term "used to distinguish from buildings those functional constructions usually made for purposes other than creating human shelter" (OHP 1995). Although the National Register of Historic Place's (NRHP's) threshold is 50 years for recording, the California standard is to record any cultural resources over 45 years of age. In general, an archaeological site should exhibit at least one of the following:

1. One or more features
2. Five or more artifacts in clear association with a 25 square meter (5 × 5 meters) area
3. If fewer than five, artifacts that have data potential or are "diagnostic" (e.g., fluted points

CEQA defines *historically significant resources* as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (CEQA Guidelines § 15064.5(a)(3); see also Public Resources Code section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. Is associated with the lives of persons important in our past
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4. Has yielded, or may be likely to yield, information important in prehistory or history (CEQA Guidelines § 15064.5(a)(3); see also Public Resources Code § 5024.1).

3.6-CULTURAL RESOURCES

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. The CEQA Guidelines state that if a project would have a significant impact on any cultural resources deemed historically significant, then project alternatives and mitigation measures must be considered.

Literature Review

The information included in this analysis is from the Phase I Cultural Resources Assessment: Savira Solar Project, Riverside County, California (Chronicle Heritage, 2025).

The Project site is near the boundary between the Colorado and Mojave deserts which are environmentally distinct. This, together with its position along a known prehistoric and historical travel corridor, suggests that the Project area was used in the past by groups whose home ranges included portions of the Mojave Desert, the interior Colorado Desert, and the Colorado River as well as by travelers from more distant locations such as the Peninsular Ranges or the Southwest. It is possible, therefore, that the area's archeological record may also reflect affinities with any of these regions. In view of these various influences and connections, the prehistoric context presented here draws on current knowledge from both the Mojave and Colorado Desert regions.

Prehistoric Context

The Colorado Desert, rich in prehistoric archaeological sites, has been intensively studied by archaeologists for over 80 years. Interregional comparisons are used to order and interpret the culture-historical framework, largely because sites with substantial subsurface components are quite rare, and this paucity has hampered chronology building. The site assemblage of the Colorado Desert is particularly diverse for sites associated with what might generally be termed *ritual events*. In addition to the remains of Native American habitations and resource procurement activities, there are abundant figures and shrines, petroglyphs and pictographs, and a well-preserved trail system. The San Dieguito complex represents a terminal Pleistocene and/or early Holocene cultural tradition in the Colorado Desert, based on surveys of the southern California coastal and desert areas in the 1930s. He suggested that subsistence relied primarily on highly ranked resources such as large mammals although numerous small mammals were also used. This subsistence strategy may have encouraged a pattern of relatively high residential mobility.

Beginning with Rogers, cultural materials have often been assigned to the San Dieguito complex based on desert varnish patination and degree of embeddedness in ancient desert pavements; this places various cleared circles, trails, and geoglyphs within the San Dieguito complex in the desert regions. These assignments must be considered tentative at best because patination and embeddedness have not been demonstrated as reliable for cross-dating purposes.

San Dieguito materials have been found near now-dry inland lakes, on old desert terrace deposits, at Ventana Cave, and near the California coast, where they were first documented at the Harris. Dating of the San Dieguito complex has proven to be problematic. The related Lake Mojave complex, in the Mojave Desert to the north, is thought to have existed 12,000 to 7000 years ago.

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More recent work might suggest a terminal date there of around 8000 years before present (B.P.) Paleoindian

Although a variety of claims have been made for an “early man” presence in the California deserts, these are considered speculative, and the earliest conventionally accepted human occupation of the region continues to be represented by the distinctive fluted point of the Clovis culture. Thought to date between about 13,500 and 11,000 cal. B.P., fluted points are most common along the shorelines of Pleistocene lakes in the northern Mojave Desert and San Joaquin Valley and likely reflect an early focus on lacustrine settings and the resources (including large game) associated with them. However, isolated specimens have been found throughout California, including one at Pinto Basin, about 60 km (37 mi) northwest of the Project Area, and one fragment discovered near McCoy Spring in the northern Chuckwalla Valley. These latter specimens suggest a sparse and highly mobile Pleistocene population in the southern Mojave and northern Colorado deserts.

Although Clovis appears to represent an adaptation to full Pleistocene conditions, the transition to the Holocene was marked by adjustments to the rapidly changing environments in the California deserts. Pluvial lakes, for example, were rapidly retreating, as indicated by the final desiccation of Lake Mojave by around 8700 B.P., and desert plant communities began to assume their modern form. Sutton and others suggest that human land-use strategies at this time may have been geared to monitor and exploit a wide variety of productive resource patches emerging at this time; these patches would certainly have included the remaining lakes and marshes, but also streamside and upland settings.

The cultural complexes representing this interval (ca. 10,000–8000 B.P.) include the San Dieguito in the Colorado Desert and the related Lake Mojave Complex in the Mojave Desert. Both are characterized by stemmed projectile points (Lake Mojave and Silver Lake), crescentics, abundant bifaces, a variety of well-made scrapers, and other flake tools. Milling equipment is uncommon and tends to reflect only light use, which has led to the assumption that plant foods were less important than in later periods. Early Holocene sites are uncommon in the Colorado Desert, which may relate more to spotty investigations and the instability of landforms than lack of human occupation. This seems especially likely considering the robust early Holocene record of the Mojave Desert, where Lake Mojave artifacts are found in a wide variety of settings.

Archaic Period

The Archaic Period (ca. 7000–1500 B.P.) encompasses the interval between the relatively cool/wet conditions of the early Holocene and the appearance of assemblages characteristic of the Late Prehistoric. This period saw the emergence of several distinctive regional complexes and appears to reflect cultural adaptation to the middle and late Holocene desert environment. Regional populations were generally expanding, leading to a diversification and intensification of subsistence strategies and the establishment of regional trade networks. Ground stone tools, rare or absent during Paleoindian times, became widespread and abundant in the desert, reflecting an increasing reliance on seeds and other plant resources. Again, although the Archaic is well

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represented in the Mojave Desert, the general scarcity of well-preserved Archaic sites in the Colorado Desert is problematic and remains an important research issue.

In the southern California deserts, the best-known regional culture complexes of the Archaic Period are the Pinto, Elko, and Amargosa, each defined by recognizably distinct projectile point types. The earlier complexes, Pinto and Amargosa I in the Mojave Desert, are both marked by projectile points of the Pinto series, named for sites in the Pinto Basin just northwest of the Project Area. Warren sees general continuity between the Lake Mojave and Pinto complexes, suggesting that Pinto groups initially focused on hunting but adapted to increasingly arid middle Holocene conditions by broadening diets and decreasing their reliance on artiodactyls. Indeed, recent data from Pinto components in the Mojave Desert suggest some technological parallels, but with some apparent reduction in mobility ranges. The major innovation at this time seems to be a widespread increase in the use of ground stone implements, which at some locations are better represented in Pinto components than perhaps at any other time during the Holocene.

In this context, the dating of Pinto deposits takes on some importance with respect to regional adaptations. Recent research cited by Sutton and others suggests that the Pinto Complex may have actually appeared during the early Holocene, partially concurrent with Lake Mojave materials. If so, the shift to intensive plant food processing may have taken place by about 9000 B.P., a timing more in line with the appearance of similar plant-intensive adaptations (i.e., the Millingstone Pattern) along the California coast. Therefore, the appearance of Pinto points in the Mojave Desert before the transition to hyper arid middle Holocene conditions is relevant to Warren's hypothesis that the increasing Pinto emphasis on plant foods was a response to the depression of artiodactyl populations brought on by environmental deterioration.

The latest Archaic manifestations in the region are represented in the Mojave Desert by the Gypsum Complex and in the Colorado Desert by Amargosa II. These complexes appeared during what appears to have been a period of generally cooler and wetter conditions during the initial portion of the late Holocene (see above). Site distributions in the Mojave Desert may reflect this amelioration of climate in that sites are more numerous but tend to be smaller and appear in a wider variety of settings, suggesting that populations were less tethered to available water. This interval is marked by the appearance of pressure-flaked Gypsum, Elko, and Humboldt type projectile points; additionally, ground stone assemblages became increasingly formalized, and mortars and pestles start to appear. In addition to the projectile points, flaked stone assemblages include a diverse array of choppers, scrapers, and other tools. In Arizona, Amargosa III is marked by increasing frequencies of ground stone and the introduction of long, triangular-bladed and corner-notched projectile points. In the Colorado Desert, Amargosa III is not sufficiently well expressed to draw a distinction between Amargosa II and III.

At Ford Dry Lake and vicinity, direct evidence for Archaic Period use or occupation is generally limited to occasional isolated projectile points, and inferred Archaic occupation at specific sites is often speculative. At sites CA-RIV-1383 and CA-RIV-1814 in the Chuckwalla Valley, limited evidence for a possible "occupation during San Dieguito/Amargosa periods" was reported by Carrico and others. At site CA-RIV-1383, a major campsite with evidence for occupation before

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1500 B.P., a radiocarbon date of circa 7000 B.P. was obtained on charcoal from a somewhat questionable context. Also cited as possible evidence of Archaic or earlier occupation at CA RIV-1383 were rock rings with highly patinated stones embedded in the pavement and highly patinated lithic artifacts. At CA-RIV-1814, a large quarry site with less definitive evidence of Late Prehistoric occupation, an Amargosa-style projectile point was recovered. According to Singer:

Artifacts from various sites in the Chuckwalla Valley show a succession of forms and styles, as do the sites themselves. The region may have been densely settled during Playa/San Dieguito times, but only sporadically visited or inhabited during Pinto/Gypsum times, and then reoccupied by later Yuman and Shoshonean peoples (Chemehuevi and Cahuilla).

Late Prehistoric/Protohistoric Period

Late Prehistoric and Protohistoric Periods are represented in this region by the Patayan Complex. These periods date from approximately 1500 B.P. until the American expansion into the area at the turn of the nineteenth century. The Protohistoric Period encompasses a protracted 300-year period of sporadic European exploration and colonization that had little effect on aboriginal lifeways in the southern California deserts. There is a clear correspondence between the geographical distribution of archaeologically recognizable Patayan cultural materials and the historically documented territories of Yuman-speaking peoples—the Quechan, Mohave, Cocopah, Paipai, Yavapai, Havasupai, and others. Thus, the archaeological Patayan Complex is often taken to be directly ancestral to the ethnographic Yuman cultures of the region. Nevertheless, Schaefer states that non-Yuman groups, such as the Cahuilla and the Chemehuevi, were also active participants in this cultural complex: “The prehistoric Patayan world was multicultural and inter-cultural, representing many dynamic adaptive strategies and social systems, but sharing common elements of technology, material culture, and ideology”.

The Patayan Complex is characterized by marked changes in the artifact assemblage, economic system, and settlement patterns of the region. Perhaps the most recognizable change from an archaeological perspective was the introduction of paddle-and-anvil pottery, either from Mexico or from the Ancestral Pueblo groups of the U.S. Southwest. During this time, floodplain horticulture featuring maize, beans, squash, and other crops was similarly introduced from the south and east. Arable land along the lower Colorado River came under cultivation as did the banks of the New and Alamo rivers in Imperial Valley. The Colorado Desert lay on the prehistoric frontier of the westward expansion of agriculturally based subsistence systems to the west.

Bow-and-arrow technology was also introduced at this time, possibly from desert hunter-gatherer groups moving in from the west and north. Smaller, arrow-sized projectile point types of the Cottonwood Triangular and Desert Side-notched series are common. The Cottonwood series projectile points likely predate the Desert Side-notched types and probably predate the introduction of pottery manufacture in the region. Concomitant with these dramatic subsistence and technology changes were several, apparently related, ceremonial and religious changes. During the Late Prehistoric Period, burial practices shifted from inhumations to cremations and partial cremations. Artistic expression on rock (petroglyphs and pictographs) and land (intaglios)

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flourished at this time—associated with expanding trade and trail networks and increasingly elaborate kinship systems tying together extensive territories. Warfare likely also increased at this time and was well documented in the Protohistoric and Historic periods.

Based on limited data, it appears that, like most of the Colorado Desert, archaeological components in the Chuckwalla Valley date to the Late Prehistoric and Protohistoric Periods. For example, Ritter noted a Rose Spring (Rosegate) projectile point and Tizon Brown Ware and Parker series pottery at site CA-RIV-1515 along the Palen Dry Lakebed, estimating occupation of the site from 1450 B.P. to 950/750 B.P. Several sites near the Ford Dry Lake playa margin also contain ceramics, indicating relatively late occupations. Additionally, most of the earth art and rock art sites, as well as many trails and ceremonial sites, are interpreted to most likely date to the Late Prehistoric Period. Many of these ceremonial features continued to be used after European contact, and even into the present day.

Additional clues to Late Prehistoric use of the area may also be found in debitage profiles of local sites; for example, a detailed study by Flenniken and Spencer conducted at sites in the McCoy Valley suggests that most of the lithic reduction was directed at the production of relatively small, thin flakes suitable for the creation of arrow-sized projectile points. Comparable findings are reported by Singer, who noted a similar reduction technology at site CA-RIV-1819, south of the Genesis Solar Energy Project at the foot of the nearby Mule Mountains. The raw material source at the site is a cobble (river gravel) deposit versus volcanic bedrock, resulting in a reduction trajectory also oriented toward the production of relatively small, thin flakes suitable for use as small flake tools or for blanks for the creation of arrow-sized projectile points.

Ethnographic Context

The area along the Colorado River has been home to a number of Native American groups for thousands of years. Six main groups, belonging to two different language families, were present in or near the Project Area at the time of European contact: the Chemehuevi, Cahuilla, and Serrano of the Northern Uto-Aztecan (NUA) language family and the Mojave, Halchidhoma, and Quechan of the Yuman language family. The three Yuman-speaking groups—the Mojave, Halchidhoma, and Quechan—are sometimes collectively referred to as the River Yumans as they share a number of cultural elements. The following section discusses each of the six groups, presenting information on settlement and subsistence practices, sociopolitical organization, material culture, trade, conflict, and worldview and ritual practice. While this section describes the use of the Project area in the past, it is important to note that Native American groups are still present and still use the Chuckwalla Valley for traditional and modern practices.

Quechan

According to Quechan oral tradition, their territorial range extended along the Colorado River from Blythe in the north to Mexico in the south. At the time of sustained European contact in the seventeenth century, the Quechan people numbered in the thousands. The largest concentration of Quechan traditionally lived at the confluence of the Colorado and Gila rivers, although they were strangely not reported in that area in 1540, when the Alacon and Diaz expeditions reached the confluence. Nevertheless, in the following century, large Quechan villages existed in the area.

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The Quechan economy was based on a combination of horticulture, fishing, and gathering. During the winter and spring, Quechan groups lived in seasonal village settlements on terraces above the river floodplain. After the spring floods receded, small family groups dispersed to their agricultural plots along the river to plant crops. After the harvest in the fall, the Quechan gathered again in the large villages on the terraces, where stored agricultural foods, fishing, and limited gathering allowed them to live together through the winter. In all times but high flood, fishing in the Colorado River provided an important source of protein.

Numerous named villages were along the terraces above the lower Colorado River flood zone. The village known as Avi Kwotapai was on the west side of the Colorado River between Blythe and the Palo Verde Valley, and Xenu mala vax was on the east side of the river near present-day Ehrenhberg. Quechan and other Yuman-speaking groups report well-traveled trails that extend along the Colorado River as well as trail networks between peaks and other significant landscape features.

Halchidhoma

Although no longer in the area, the Halchidhoma (also known as the Panya) are a Yuman-speaking people who, until about 1825, lived along the Colorado River between the present-day cities of Blythe and Needles. The Halchidhoma were known to travel and trade over great distances. The Coco-Maricopa Trail, leading west from a portage point across the Colorado River adjacent to the city of Blythe, linked the Halchidhoma with the Pacific coast. Ceramic seriation and radiocarbon dates from marine shell artifacts indicate that an extensive trade network between the Pacific coast and the lower Colorado River region was established by at least 1100 B.P. The Halchidhoma traded with the Cahuilla, Hualapai, Papago, and Pima of Arizona and were closely allied with the Maricopa.

By all accounts, the Halchidhoma were frequently in conflict with their Colorado River neighbors, the Quechan and Mohave. During the decades, if not centuries, of open hostility, the Halchidhoma established strong alliances with the Yuman-speaking Maricopa and Cocopa peoples who lived to the east along the Gila River. Ultimately, the Halchidhoma went to live, and intermarried with, their Maricopa allies and therefore are poorly documented in the ethnographic literature. Spier's ethnography of the Maricopa touches only briefly on the by then historical Halchidhoma.

Mohave

The Mohave were one of the most respected and feared groups in California at the time of European contact. They were known equally for their military might, powerful shamans, religious ceremonies, and proclivity to long-distance travel. The Mohave are also notable for their understanding of themselves as a unified "nation" of people, known as the Hamakhava, rather than as a series of loosely related clans or villages. The whole of the Mohave acted together in defending their territory and attacking their enemies. Visiting parties of Mohave also traveled far and wide, apparently largely out of curiosity and almost entirely without fear. Thus, the Mohave became spiritually and socially influential over a vast portion of the U.S. Southwest and southern

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California. Even the notably insular Zuni pueblo people “perform dances that they attribute to the Mohave”.

In 1604, the Oñate Spanish expedition encountered the Mohave as far south as the present Colorado River Indian Tribes Reservation although their largest settlements were known to be farther north. Kroeber reported that most of the Mohave population lived along both sides of the lower Colorado River from south of Davis Dam to Topock. According to Stewart, the Mohave also extended their territory south into the Chemehuevi and Colorado Valleys, and intermittently controlled areas as far south as the Palo Verde Valley. After the Halchidhoma vacated the Parker-Blythe area between 1825 and 1830, the Mohave briefly settled there but soon returned to their stronghold in the Mohave Valley.

During much of the year, the Mohave lived in villages on terraces above the Colorado River, only moving down onto the floodplain in the spring to plant crops after the seasonal floods. Like other lower Colorado River peoples, the Mohave relied on floodplain horticulture, fishing, and gathering for subsistence. Planted crops included maize, black-eyed beans (cowpeas), squash, pumpkin, and several local grasses. Cultivated plants were supplemented by the collection of wild plant foods including honey mesquite (*Prosopis glandulosa*) and screwbean mesquite (*Prosopis pubescens*), which could be stored for long periods and were traditional staple foods. Although the pods of both plants could be eaten green, they were usually pounded into flour using long stone or wooded pestles. Additionally, screwbean pods were often processed in large pits dug into sandy soil where the pods were placed, covered with vegetation, and then periodically watered to leach out bitter compounds.

The bulk of the traditional Mohave diet was vegetarian but hunting and fishing were important components of the seasonal subsistence cycle. Mohave hunters considered spring the best time to hunt, when they could lie in wait next to springs where the young grass would attract deer. Rabbits and other small game were also targeted although they were more often taken in traps, snares, and communal drives. When the high waters of the Colorado River receded in July and August, the Mohave turned to fishing and caught a variety of Colorado River fish species by driving them into shallow sloughs or trapping them in seines.

The Mohave are well known for their long-distance travel. Like other Colorado River tribes, they participated in a trade network extending east to the Pueblos of Arizona and west to the Pacific coast. Several important passes and routes of travel, including the well-known Mohave trail connecting the high deserts with the southern California coastal valleys, were developed or frequented by the Mohave. The endurance and speed of Mohave travelers were legendary at the time of European contact. According to one hyperbolic account, groups of Mohave men, running only at night, were said to be capable of traveling from the Colorado River to the Pacific coast in only three days, although the typical duration of such a trip was 15 to 16 days. During the Colonial era, the Spanish frequently encountered groups of traveling Mohave who continued the tradition of desert-coastal travel and trade throughout the Mission Period, occasionally in conflict with the wishes of Spanish officials.

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The general Yuman belief in the importance of dreaming, and the fundamental interrelationship between the mundane and spiritual worlds, were particularly developed among the Mohave. All people were capable of meaningful dreaming, and most individuals came to their chosen roles in life as a result of their dreams. In dreams, the Mohave travel in a mythical place and time when the world was first formed and the important places, such as mountains and springs, came into being. Dreams also inform public rituals, and the many complicated “song series” that singers perform from memory are said to be dreamed as much as learned. The songs of the Mohave are remarkably specific geographically, noting “the exact spot at which each character journeyed or slept or stood or looked about”. Thus, Mohave songs seem to act as a means of storing and transferring important landscape knowledge; they are, among other things, a collection of meaningfully constituted mental maps of the Mohave territory and beyond. Many nearby groups, including the Chemehuevi, borrowed extensively from the Mohave song series repertoire.

Among the Mohave, individuals and families owned specific parcels of farmland, as well as individual mesquite trees. Disputes over privately-owned resources were usually settled through physical contests “calculated to prevent fatalities” and avoid violent reprisals. Kenneth Stewart summarized the ethnographic literature regarding the Mohave for the *Handbook of North American Indians* series.

Chemehuevi

The Chemehuevi are the southernmost of 16 groups of Southern Paiute peoples and the only non-Yuman speakers living along the lower Colorado River at the time of European contact. The traditional territory of the Chemehuevi was an extensive area southwest of Las Vegas, including portions of the eastern Mojave Desert of California. Describing the Chemehuevi territory, Alfred Kroeber observed that it was “the largest in California occupied by a people of uniform dialect,” but also “easily one of the most worthless, and certainly among the two or three most thinly populated”. Lowell Bean and colleagues have challenged the view that the Chemehuevi population was extremely low at the time of European contact. Citing work by Stoffle and Evans, Bean and Vane argue that there were at least 13,000 Southern Paiute people (Chemehuevi and Los Vegas groups) “living in a territory running from Las Vegas south to the Palo Verde Valley and from the Colorado River west to the Iron Mountains”.

The vast Chemehuevi territory contains some of the driest deserts in the west, and the traditional Chemehuevi subsistence system was the most attuned to desert resources of all of the groups discussed here. The Chemehuevi living in the deserts practiced a relatively nomadic hunting/gathering way of life, with larger settlements near reliable water sources, but no permanent villages. Groups moved with the rhythm of the seasons, arriving to harvest plant foods as they matured and hunting primarily small game. Hunting parties also traveled to the San Bernardino Mountains and visited with their allies, the Northern Serrano or Vayume. Owing to the impermanence of most desert encampments, housing was typically of brush erected to protect inhabitants from the harsh sun and wind. Foods, such as dried meats, dried melon and squash, agave hearts, and various seeds, were stored in specially prepared baskets, earth pits, and caves. However, Chemehuevi groups did not live permanently with their food caches, and

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the stealing of cached food was apparently a grave issue, one that could incite war and inflict spiritual harm.

Until their expansion into the lower Colorado River region, the Chemehuevi did not use pottery but relied instead on a variety of woven baskets and implements, often with painted designs. Chemehuevi hunters were known for their recurved, sinew-backed bows, which, though shorter than comparable Mohave bows, nonetheless were accurate, powerful, and well-suited to hunting deer and other big game. Those groups that settled along the Colorado River adopted agriculture, more substantial wooden dwellings, pottery, and several other cultural features from their riverine neighbors.

Despite an underlying friction, the Chemehuevi were traditional allies of the Mohave, and after the Halchidhoma were driven from the Colorado River area in the early nineteenth century, the Chemehuevi moved into the Parker/Blythe area vacated by the Halchidhoma. Bean suggests, following Roth, that the Chemehuevi may have settled in the Palo Verde Valley vicinity before the expulsion of the Halchidhoma. According to Mohave tradition, as recounted by Kroeber, the Chemehuevi were invited to come to the Colorado River after 1830 by the Mohave. According to Laird's Chemehuevi sources, though, the Chemehuevi Valley and Cottonwood Island along the Colorado River were part of the Chemehuevi traditional territory prior to the 1800s. Kelly's ethnographic work suggested that the southern expansion of the Chemehuevi was relatively "recent," dating to the early 1800s. This continues to be a point of disagreement among scholars and among the descendants of the historical Mohave and Chemehuevi. In the Protohistoric and historical periods, the Chemehuevi traveled extensively through the deserts and as far west as the Pacific coast "just to look around" and to exchange goods and obtain marine shell ornaments and raw materials. Periodically, small groups of Chemehuevi and Las Vegas Southern Paiute traveled together to the Hopi villages in Arizona, although those trips were described as purely social visits involving gift exchanges, not trading expeditions.

When Europeans first reached the California desert, the Chemehuevi occupied the eastern half of the Mojave Desert, from south of Death Valley to Riverside and Imperial counties. As mentioned above, traditional Chemehuevi subsistence was based on hunting and gathering, although the groups living along the lower Colorado River adopted floodplain horticulture similar to that practiced by the Mohave and Quechan. The Colorado River Chemehuevi, though, retained a greater reliance on hunting and gathering than their Yuman neighbors.

Desert Cahuilla

The Desert Cahuilla traditionally occupied the Coachella Valley, west of the Project Area, near the modern towns of La Quinta and Indio, where desert and montane geographies collide. The Cahuilla continue to live and use their traditional use areas in the Coachella and Chuckwalla Valleys today. During the Late Prehistoric and Protohistoric Periods, the Cahuilla were in regular contact with groups along the lower Colorado River. The traditional route to the river crossed south of the Project along the course of the modern I-10 freeway. Along with other Takic speakers, the Cahuilla are believed to have migrated into southern California from the Great Basin. Scholars do not agree on the timing or effect of the Takic migration, and it remains an important topic of

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ongoing research. Based on linguistic data and archaeological materials, researchers have suggested migration dates from 1500 B.P. to as early as 2500 B.P. (ca. 1550–550 B.P.). Before inland Lake Cahuilla dried up around 500 B.P., Cahuilla peoples lived densely along the shoreline, making pottery very similar to that fashioned by the Yuman peoples of the Colorado River. Historically, the Cahuilla territory spanned from the Orocopia Mountains in the east to the San Gorgonio Pass and the San Jacinto Plain near modern-day Riverside.

Cahuilla subsistence was an extensive hunting/gathering system tethered to permanent villages near reliable water. Most large Cahuilla villages were inhabited year-round by a single, related lineage group. Except for the Lake Cahuilla settlement system, high desert canyons with perennial springs were particularly favored village locations. High canyon villages straddled several ecological niches and afforded protection from wind, weather, and enemies. The Cahuilla were organized into several clans, each consisting of several lineage groups tracing their ancestry to a single male ancestor. Each lineage group controlled a territory spanning four critical ecotones or “life zones:” the low desert, high desert, transition, and mountain life zones. Specific resources within these zones, such as springs and mesquite patches, were owned by lineage groups. Traditional songs and stories, some related to specific resources and landscape features, could also be owned exclusively by lineage groups and larger clans.

Seasonally, as different foods became available, small groups moved to temporary camps to collect localized plant resources and to hunt. Important game animals included rabbits, deer, and bighorn sheep. The Cahuilla primarily exploited desert plant resources such as agave, yucca, mesquite, various cacti, and grasses. In addition, large groups periodically traveled into the mountains to harvest acorns and pinyon nuts with their Serrano mountain allies. They brought back the harvests to the permanent settlements, where the nuts could be stored for many months. In the Northern Sonoran Desert Amity-Enmity System, the Cahuilla were key trading partners with the Halchidhoma (Panya), moving most of the traded goods through the southern California desert valleys and mountain passes. In the historic period, the Cahuilla, along with the Maricopa, were instrumental in reopening trade and communication between the Spanish settlements along the California coast and the Sonoran Desert.

Several ethnographic sources exist for the Cahuilla. Since the 1970s, Lowell Bean has become the foremost nonnative interpreter of traditional Cahuilla culture, synthesizing the extant ethnographic data and working closely with modern tribal members.

Serrano

The Serrano also belong to the Takic-speaking branch of the larger Uto-Aztecan language family. Serrano territory included the San Bernardino Mountains, east of Cajon Pass, and the desert area that is immediately south of Victorville, extending east as far as Twentynine Palms and south as far as Yucaipa Valley. The Serrano were primarily a mountain-dwelling tribe. Like their Cahuilla neighbors, the Serrano subsisted primarily on items they hunted and gathered. Division of labor with respect to subsistence among the Serrano entailed the women conducting most of the gathering, and the men hunting and fishing. Wild foods taken were almost identical to those used by the Cahuilla; acorns, pinyon nuts, mesquite, yucca roots, cactus fruits and various other roots,

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bulbs, shoots, and seeds. The most common animals taken were deer, mountain sheep, antelope, rabbits and other small rodents, and various birds. Bows and arrows were used for larger game, and throwing sticks, traps, snares, and deadfalls were used for smaller animals.

The Serrano conducted many of the same ceremonies as the neighboring Cahuilla, albeit by somewhat different methods. Like the Cahuilla, the Serrano held a ceremony after the birth of a child in which the mother and baby were placed in a heated pit. They remained in the pit for four days or until the baby's umbilical cord fell off. A feast was held by the paternal grandparents the day after the birth, where gifts were given to the guests and a cradle board was constructed for the infant. The Serrano did conduct a naming ceremony for children, but it was not a separate ceremony as it was with the Cahuilla; rather, it occurred during their annual mourning ceremony. The name for the annual ceremony among the Serrano is uncertain, but it was distinct from the funeral ceremony that occurred immediately following death and cremation of the individual. The first three days of the ceremony were spent preparing food and ceremonial paraphernalia for use later in the week. On the third night the sacred bundle is brought into the ceremonial house and is presented to all present clans; Strong suggests that this is the most important night for the host clan. The naming ceremony occurs on the fourth night for all those born in the last year, parents distribute gifts, singing and dancing occurs, and the paha carries the baby while the net bestows a name upon the child. The eagle killing ceremony takes place on the next night, and few details are available but it is likely that the ceremony is similar to the one performed by the Cahuilla. Like the Cahuilla, images are made of the deceased and on the last night of the ceremony, the effigies are danced with and then burned. Today, descendants of the Serrano belong to the Morongo Band of Mission Indians and the San Manuel Band of Mission Indians, both federally recognized tribes

Historic Context

The Project Area is in an area that has historically been, and remains, remote from centers of development and settlement. From the era of Spanish exploration of the Colorado Desert to the present, the regional area has encompassed transportation routes, mining claims, homesteads, military training grounds, nurseries, and residences. The history of the area relates to themes involving the development of the West and the Colorado Desert, mining and homesteading activities, military desert training, and agribusiness in the late twentieth century.

Early Settlement

The sixteenth century Spanish explorers Francisco de Ulloa, Hernando de Alarcón, and Francisco Vázquez de Coronado led expeditions from the Gulf of Mexico up the Colorado River past the Gila confluence, but it was not until 1702 that Father Eusebio Francisco Kino—a Jesuit missionary, cartographer, and explorer—explored the interior of the Colorado Desert. One focus of Kino's exploration was to dispel the myth that Baja California was an island, which led him to seek routes from Arizona to the Pacific Ocean. The establishment of an overland route to Monterey to access the Manila galleon trade was rejected by New Spain officials in Mexico City, who felt that the idea was too risky and that resources could be better spent elsewhere. The inhospitable nature of the route deterred further immediate exploration.

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Kino's route was later followed by Father Francisco Garcés, who reached the confluence of the Gila and Colorado Rivers in 1771. The Garcés expedition, assisted by Native American guides, crossed the Colorado River (near present-day Needles) and traveled west through the desert until the San Jacinto Mountains were visible in the distance before returning to Sonora. Garcés attempted an overland route to Monterey again three years later, accompanying border captain Juan Bautista de Anza. When they reached the Colorado River, the local Yumans assisted them in fording the river, locating wells and trails, and rescuing an exploring party lost in the desert. Anza and Garcés crossed the desert to the west, eventually crossing the San Jacinto Mountains by way of a small canyon, arriving at Mission San Gabriel in March 1774. Because of a shortage of supplies, most of the party, including Garcés, turned back, though Anza continued to Monterey. Garcés's route across the desert became part of what was known as the Old Spanish Trail, an important transportation link between New Mexico and California. The major route of migration to the north primarily circumvented the Colorado Desert, and early Spanish development of the region was tied to activity along the Colorado River.

In 1780, Missions La Purísima Concepción and San Pedro y San Pablo de Bicuñer were established under the direction of Father Garcés on the west bank of the Colorado River (near present-day Yuma). Although the Yumans were initially welcoming, assisting the early settlements, abuse and theft of prize farmland by the Spanish soldiers resulted in escalating hostilities between the two groups. In 1781, the Quechan attacked a military camp and both missions. More than 30 soldiers and settlers were killed, including Garcés. The women and children were taken prisoner by the Quechan and were eventually ransomed. This action, dubbed the "Yuma massacre," effectively closed Anza's trail, halting further immigration and forcing Spain to supply the new colonies with the expensive and unreliable sea route. Subsequent military campaigns by Spain and, later, Mexico failed to defeat or subdue the Quechan, and the area was effectively closed to European exploration, settlement, and mining until after the Republic of Mexico was established in 1823.

Into the early nineteenth century and the period of Mexican rule until 1848, development in the Colorado Desert remained sparse. The Romero Expedition was undertaken during this time (between 1823 and 1826), and the expedition crossed into Cahuilla territory near the San Geronio Pass in 1823 and may have explored as far east as present-day Desert Center, early American settlers began arriving in California after Jedediah Smith blazed a new trail to California in 1826 (through present-day Needles). As the migration into California boomed with the gold rush, tensions between the settlers and Native Americans increased. In response, the U.S. Cavalry developed camps and forts throughout the Arizona, Nevada, and California deserts to protect settlers and immigrants from hostile tribes. One of the earliest of these was Camp Calhoun, established in 1849 by the Americans on the banks of the Colorado River near present-day Yuma. In 1855, the name was changed to Fort Yuma.

Regional Development

Following the establishment of forts through the area, the California desert region again opened for exploration and settlement. As part of an effort to establish a railroad route from St. Louis to the Pacific Ocean, the U.S. Government conducted a series of surveys from 1853 to 1855 to identify

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feasible routes. Lieutenant Amiel Weeks Whipple, a topographical engineer in the Army, was assigned the task of determining the westernmost section from Arkansas to Los Angeles. Whipple passed through Mojave territory in 1854, crossing the Colorado River near present-day Needles. The railroad surveys also recorded the terrain and geology of areas of the Colorado Desert. The land that includes the Project Area was included in the survey in 1853.

After the Treaty of Guadalupe-Hidalgo in 1848, the U.S. took control of the southwest in the same year that gold was discovered in California. Mining camps were established in the desert as early as 1850, with the beginning of gold mining at Salt Creek in the Amargosa Desert. Along the eastern bank of the Colorado River, the town of La Paz, once known as Pot Holes, developed when gold was discovered nearby. The subsequent mini-gold rush in the area made La Paz an instant boomtown whose population peaked at 1,500 in the 1860s. La Paz was an important stop along the stage line between San Bernardino and the Colorado River, serving as the county seat for Yuma County until 1870. The La Paz mining district yielded placer gold for only a short period, and, by the end of the nineteenth century, La Paz passed from boomtown to ghost town.

The first Americans to arrive in the Colorado Desert in any numbers were prospectors hunting for the next big gold strike. Regionally, mining and prospecting activities were most intense in the mountains and high deserts of the Mojave, but small-scale mining has been a consistent feature of the Colorado Desert from the 1800s to the present day. By 1863, between “2,500 and 3,000 Americans and Mexicans were on the river between Palo Verde Valley and El Dorado Canyon,” most of them engaged in mining.

In the 1820s, limited placer mining began in the eastern Colorado Desert. In the early 1800s, prospectors were some of the only Euro-Americans traveling in the California deserts, and they frequently came into conflict with Native American groups. From the 1840s through the 1880s, the U.S. Cavalry established a series of camps and forts throughout the Arizona, Nevada, and California deserts to protect settlers and immigrants from the often-hostile tribes whose territories they were invading. In 1848, the discovery of gold at Sutter’s Mill brought a tremendous influx of American and European settlers to California. Between 1849 and 1860, an estimated 8,000 emigrants crossed the Colorado Desert on their way to California. In the 1850s, some would-be miners tried their luck in the eastern Colorado Desert but found very little gold. Most miners simply passed through the desert on their way to the larger strikes to the west and north. Significant economic development of the Colorado Desert region began in the 1870s and came to fruition in the early part of the twentieth century. Development was dependent largely on two things: transportation and water. The first of these came in 1872, with the construction of the Southern Pacific Railroad from Los Angeles to present-day Indio and, eventually, Yuma. The early townsite of Indio, the mid-point between Los Angeles and Yuma, was created to provide living quarters for train crews and railroad workers. A nearby Native American reservation provided some of the labor force. The first trains ran on May 29, 1876. Railroad stops were built at Walters (now called Mecca), Woodspur (Coachella), and Thermal, among others. The second transcontinental railroad was completed when the Southern Pacific and the Atchison, Topeka, and Santa Fe Railroads were linked at Deming in New Mexico Territory on March 8, 1881, providing settlers relatively quick and easy access to the region.

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The Southern Pacific Railroad reached Yuma on September 30, 1877. The railroad was the single most important boost to mining in the southeastern Colorado Desert, offering convenient transportation of heavy mining equipment, supplies, personnel, and bullion. By 1880, the Southern Pacific Railroad was providing regional access to gold and silver ore deposits in the Chocolate, Cargo Muchacho, and Palo Verde Mountains. When mines opened near the turn of the twentieth century, stamp mills and small tracks leading from the mines to the stamp mills were built. Mining productivity in the southeastern Colorado Desert was greatest between 1890 and 1910, with a brief resurgence in the 1930s.

A further boost to regional development in the Colorado Desert was the rail rate war of 1887, when fares from Missouri River to California were slashed to \$1. Advertising programs were developed to attract settlers to the West. With the railroad to transport crops and the consistently warm climate, irrigated areas in the desert were attractive places for prospective farmers of the time. Besides settlers, others were attracted to sanitariums that took advantage of the warm climate and desert hot springs at Palm Springs for health reasons.

Transportation

The first road through what is now Riverside County was blazed by William Bradshaw in 1862 as an overland stage route beginning at San Bernardino, California, and ending at La Paz, Arizona (now Ehrenberg, Arizona). Early in the 1860s, Hank Brown and John Frink independently developed routes to access the gold mines in the vicinity of La Paz, Arizona. Frink's route was an east-west road established as an alternative to the more southern Butterfield Stage route. This was apparently the first development across the Palo Verde Mesa, although it has since all but disappeared. In 1862, William D. Bradshaw opened a route, later known eponymously as the Bradshaw Trail. This route crossed the desert to the La Paz mining district. Bradshaw also operated a ferry across the Colorado River near Providence Point, opposite a small community that would become Ehrenberg, Arizona.

The east-west overland stage route was used extensively between 1862 and 1877 to haul miners and other passengers to the gold fields at La Paz. The trail has been largely or completely obliterated and is now a 65-mi-long graded road that traverses mostly public land south of the Chuckwalla Mountains.

Bradshaw developed his road partly along Brown's and Frink's previous routes, although Bradshaw's trail headed more directly east from Salt Creek Pass to the north slopes of the Chocolate Mountains. Like most early trailblazers, Bradshaw used Native American routes that predated Spanish exploration. Part of Bradshaw's Trail may have been the Coco-Maricopa Trail, which intersected the Colorado River near Blythe and may have passed south of the Project site. The Bradshaw Trail is near Corn Spring, approximately 16 mi west of the Project site, and like many other cross-country routes, largely became obsolete with the arrival of rail service in the desert and the depletion of the La Paz gold fields in the late 1870s. The railroads reoriented the development of trails and wagon roads that connected new mining communities to major routes of transportation. Railroad stops became destinations for wagon roads, allowing points of access to develop the remote desert interior.

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The early highway system in the U.S. developed out of a patchwork of trails that later became unimproved roads and were eventually connected into an integrated system of paved routes. Often, early roads in the U.S. followed trails that had been established by Native Americans in prehistoric times. One of the earliest transportation corridors through the Chuckwalla Valley included U.S. Routes 60 and 70, which is currently known as Chuckwalla Valley Road. As late as 1926, portions of Chuckwalla Valley Road were still unpaved.

Today, I-10 is the major transportation corridor through the Chuckwalla Valley. The highway is the major connector between Los Angeles and Phoenix. The road was completed in 1968 and has become a major east-west corridor for travelers and commerce.

Mining

Mining, particularly of precious metals, was a fundamental factor influencing California's early economy, culture, and politics. From the mid- to late nineteenth century, gold and silver mines, and the wealth they generated, were central to the influx of prospectors and settlers who transformed the former Mexican outpost into a land of plenty. The Colorado Desert's mining history, albeit less intensive than in other areas of California, similarly fostered the arrival of prospectors and the subsequent development of numerous towns and communities. The surge in mining activities in the early 1850s led to rapid changes in mining technology and the character of the industry.

Before the 1850s, mining activities in the Colorado Desert region were limited. Franciscan monks began hard rock mining and placer mining near present-day Yuma by 1780. Some of the earliest mining activity in the region occurred at "Potholes," approximately 10 mi north of present-day Yuma. Potholes is named for the placer deposits that were worked there by the Spanish from 1779 until 1781. In the 1820s, limited placer mining occurred in the eastern Colorado Desert. These early Spanish prospectors named the Cargo Muchacho ("loaded boy") Mountains after the gold they found there. These activities continued into the mid-nineteenth century.

Survey and prospecting of the mountains near Ford Dry Lake began to increase in the 1860s. With declining results in lode mines in the Sierra Nevada, mineral exploration was being undertaken in other areas. In the 1860s, mining districts were established at La Paz and Castle Rock on the Arizona side of the Colorado River near Blythe. Miners moved into the area in the 1860s and 1870s. No large-scale mining took place in what is now Riverside County, but small-scale mining operations were present in isolated spots throughout the Colorado Desert.

Prospects for mining were known to have existed in the Mule Mountains in 1861, and in the Big Maria Mountains and McCoy Mountains (named for prospector William McCoy) in 1862. These mines were part of the larger Ironwood Mining District. The Big Maria Mountains were originally called the Half-Way Mountains by the Ives expedition, and the Chemehuevi Mountains on maps dating to the 1860s. In addition to mines that were part of the Ironwood Mining District, the Chemehuevi Mining District included mines in the Big Maria, McCoy, and Palen Mountains (named for prospector Matt Palen).

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Eagle Mountain (northwest of the Project site) was prospected by Joe Torres between the late 1870s and early 1880s. Jack Moore staked a claim with his father at the Eagle Mountains in the early 1880s. They established the Eagle Mountain Mining District for the extraction of iron, gold, and silver. They were unsuccessful in maintaining the mine, and it was abandoned shortly after it was founded. The mine was reopened in 1895 by L.S. Barnes as part of a consolidation of Joe Torres's former claims.

Small-scale mining also took place in the Chuckwalla Mountains near Corn Springs. The Bryan Mine and a stamp mill operated by two men were near Corn Springs between 1898 and 1900. The men—Adams and Pickering—processed their ore at the stamp mill and may have processed ore from other nearby mines. In 1909, the Chemehuevi Mountains were divided and renamed the Big Maria and Little Maria Mountains. Mineral deposits at these mines included gold, silver, fluorite, manganese, copper, gypsum, and uranium.

Mining continued at Corn Springs into the early twentieth century. The “Hotel de Corn Springs,” a small house nearby, shows evidence of approximately 20 to 40 visitors per year. Two prospectors are known to have lived near Corn Springs. Terry Jones lived there until his death in 1923, and Gus Lerder (the so-called “Mayor of Corn Springs”) lived there until his death in 1932.

With the onset of World War II (WWII), the demand for steel increased. However, the iron ore in the Eagle Mountain claims was protected as part of the Joshua Tree National Monument. Henry J. Kaiser had a steel mill at Fontana and the Vulcan iron mine, near Kelso, which supplied materials for his west coast shipyards. Kaiser purchased the mine and succeeded in having the boundaries of Joshua Tree Monument shifted to exclude Eagle Mountain. Kaiser constructed a rail line that connected to the Southern Pacific Railroad, and ore mining commenced in 1948. By 1971, the Eagle Mountain Mine produced 90 percent of California's iron.

At its height, the mine employed more than 4,000 people, making it the largest employer in Riverside County. The town of Eagle Mountain included schools, fire and police departments, facilities, 416 rental houses, 185 trailers, 383 dormitories, and 32 apartments. Kaiser Steel needed to provide medical care for Eagle Mountain residents, and medical care provided by the company eventually became what is today Kaiser Permanente. The mine closed in 1983 because of economic factors and competition from abroad.

Water Conveyance

The Colorado River Aqueduct (CRA) is a water conveyance system operated by the Metropolitan Water District of Southern California. Construction began in 1933 and water first flowed through the system in 1941. The CRA system carries Colorado River water, impounded at Lake Havasu on the California-Arizona border, across mountains and desert to the coastal and inland valleys of southern California. The CRA stretches 242 miles from Parker Dam to Lake Mathews (formerly known as Cajalco Reservoir). Water from Lake Mathews is then distributed to local water districts in the Los Angeles Basin and lower Santa Ana River drainage. The system is composed of two reservoirs, five pumping plants, 63 miles of canals, 92 miles of tunnels, and 84 miles of buried

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conduit and siphons. The nearest of these pump stations is the Eagle Mountain Pump Lift, 7 miles north of Desert Center.

The CRA involved ingenious engineering solutions and newly introduced equipment at the time of its construction. It also employed more than 35,000 people during an eight-year span of construction, and as many as 10,000 people at one time, making it southern California's single largest work opportunity during the Great Depression. Because of its many engineering merits, the CRA has been named a National Historic Civil Engineering Landmark by the American Society of Civil Engineers. Today, it is one of the principal water supplies for southern California.

In building the CRA, Metropolitan chose an aqueduct route that required four pump lift stations. A fifth was added when the Granite Mountains tunnel could not be bored through easily. Each station was built with three pumps and the capability for expansion to nine pumps. Large amounts of electricity were required to operate the pumps, which necessitated construction of the transmission lines from Hoover Dam to the pump stations.

Construction of the transmission lines to power the system began in 1934, with the grading of dirt roads to provide access to the tower locations. The line is constructed of single H-frame steel towers with cross supports. Fritz Ziebarth of Long Beach, the contractor for construction of the transmission lines, established a construction camp at Camino, where the steel towers were assembled using steel made in San Francisco. The steel was sent by rail to Goffs on the Santa Fe Railroad line and then by truck to Camino. Reinforced concrete footings were poured at each tower location and then the towers were erected on the footings. Erection of the towers began in February 1936, and the line from Hoover Dam to Iron Mountain Pump Lift was completed by the end of 1936. Construction of the line from Iron Mountain Pump Lift to Hayfield Pump Lift was completed in July 1937.

Military Training Activities

Evidence of military training is present across the Colorado Desert. George Patton's Desert Training Center/California-Arizona Maneuvers Area (DTC/C-AMA) and Operation Desert Strike have left many artifacts, features, and sites across the region. The Project is between areas where major military maneuvers took place and where camps were located.

Desert Training Center (DTC/C-AMA)

During WWII, shortly after the bombing of Pearl Harbor and the U.S. entry into the war, Lt. General Lesley J. McNair, Director of Army Ground Forces and Combat Training for the War Department, decided to establish the DTC in southeastern California, Arizona, and Nevada to train U.S. troops in the event that they would be sent to North Africa to fight. It would be the first simulated theater of operations in the U.S. Major General George S. Patton, Jr., the first DTC Commanding General, was tasked with overseeing the transformation of the desert stretching from the California-Arizona border and the Mexican border to the southern part of Nevada. Participation in large-scale maneuvers was a standard practice for all divisions and corps prior to deployment to active theaters of operation.

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General Patton scouted the area by plane, jeep, and horseback beginning in March 1942. The area was suitable for training because of its openness, established railroads and highways, and the presence of several military installations throughout the region. The DTC was also suitable because it contained a variety of terrain types and no large population centers. Patton also investigated water supplies, meeting with the Water District Office in Los Angeles to ascertain what facilities would be available. He brokered agreements with the Southern Pacific Railroad to use the only existing tracks between Indio and Yuma, and with the Southern California Telephone Company and the Coachella Valley Home Telephone Company to set up three talking circuits for use at the DTC. He was “unstinting in his praise of the area” and found it “probably the largest and best training ground in the United States”. However, the first reaction of the troops was “distinctly unfavorable.”

The DTC was the largest training installation ever created (approximately 16,156 miles). Its purpose was to train soldiers for the harsh conditions of North Africa, as well as to field test equipment and supplies. The original facility extended from the Colorado River on its eastern border to just west of Desert Center, California, and from Searchlight, Nevada, in the north to Yuma, Arizona, in the south. After 19 months of training and expansion, the DTC was officially named “The Desert Training Center California-Arizona Maneuver Area” (DTC/C-AMA), and had grown to an area twice the size of Maryland. The DTC/C-AMA included tank, infantry, and air units training for desert warfare. Patton established his base of operations at Shaver’s Summit (now Chiriaco Summit) at Camp Young. Troops began arriving at the DTC/C-AMA in April 1942 and endured harsh physical training that included restricted access to water, physical endurance training, and lack of sleep. Life at the DTC/C-AMA was so difficult that the officers and enlisted men came to refer to it as “the place that God forgot.”

Patton commanded the DTC/C-AMA until July 1942, when he was placed in charge of “Operation Torch,” the Allied invasion of North Africa. Patton had developed tactics at the DTC/C-AMA that he eventually used in his campaign. When Patton was replaced by Major General Alvan Gillem, Jr., 12,000 troops were stationed at the DTC/C-AMA. As WWII continued, that number grew to more than 200,000 troops by May 1943. The need for troops around the world during WWII required that the various units stationed there be sent to places other than North Africa. In light of this need, the DTC/C-AMA was closed in April 1944.

With the end of WWII came a reduction in military activity in the Colorado Desert region. Civilian buildings and airports converted for use by the military during the war years returned to civilian use. Surplus military barracks were recycled for a variety of uses throughout the local communities. The primary post-war activities in the area were mining and agriculture. Agricultural practices were primarily confined from the middle to the western portion of the county, but there was also agricultural development in the Palo Verde Valley because of its proximity to the Colorado River.

The type of resources most likely to be encountered in the Chuckwalla Valley area of the DTC/C-AMA include foxholes, tank tracks, rock alignments, and trash scatters associated with the training activities. A number of military training installations were constructed in the vicinity of

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the Project, including Maneuver Areas, the Desert Center Airport, the Desert Center Observer's Camp, the 18th Ordinance Battalion Campsite, the Small Arms Range-Desert Center, the Desert Center Supply Depot, and the Desert Center Evacuation Hospital. These use areas are discussed below.

Maneuver Areas: The Chuckwalla Valley

The greater Chuckwalla Valley was considered a maneuver area, consisting of 11,520 acres, and was considered "contaminated" immediately after the war. Units moved across this valley in many of the maneuvers, and bivouacs and defensive positions were established in many locations. The valley, with its many washes and arroyos surrounded by rugged mountains, made for an apt place for training for war in North Africa. These washes, referred to as wadis overseas, were often places of tactical importance as they allowed for the concealment of a variety of types of units. They could also serve as an impediment to rapid movement. Several passes adjacent to this valley also served as good training grounds for movement, attack, and defense.

Desert Center Airport

The Desert Center Army Airfield was first known as the Desert Center Airdrome and was operational beginning sometime in the winter of 1942–1943. The airfield was a sub-base of Thermal Army Airfield, as a support base for the Air Technical Services Command. The airport contained two paved runways, each 5,000 feet by 150 ft, along with taxiways and a parking apron. More than 40 buildings were constructed at the airfield, including an operations building, powerhouse, control tower, pump house, well, and a 10,000-gallon water tower. Other buildings included officer's quarters, mess hall, dispensary, headquarters, recreation hall, link trainer building, hangar, and various supply buildings. Several crash sites are known to exist in the DTC/C-AMA, particularly in those areas close to air facilities.

Air-to-ground ranges are also considered a part of air facilities. For the most part, air-to-ground gunnery practice focused on the toe of mountains. Bombs and 0.50-caliber shell casings from these activities have been found in the years following the Army's departure from the area. There were likely range markers established on these facilities, along with targets for the aircraft to fire upon. The Desert Center Army Airfield is approximately 5 miles northeast of the town of Desert Center.

Desert Center Observer's Camp

A camp was established immediately north of the small town of Desert Center, along the road to Camps Coxcomb and Iron Mountain. It was here that the maneuvers were evaluated and deficiencies pointed out. The camp contained 112 tents, 5 shower buildings, and 8 latrines. The camp was also supplied with water through a well and pump and a 4,000-gallon storage tank. The land is along the north side of I-10, between Chiriaco Summit and Desert Center, and immediately to the east of Eagle Mountain Road.

Small Arms Range-Desert Center

A small arms range was established southeast of the town of Desert Center on the north end of the Chuckwalla Mountains. Neither the type of weapons used here, nor the units that used it, are known. In addition to established ranges, troops also developed their own more informal ranges

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while out on field exercises. In these cases, officers chose a suitable place with appropriate safety precautions (particularly natural features that formed a backstop) and established a firing position for their troops to use live ammunition.

Desert Center Evacuation Hospital

An evacuation hospital was established near the town of Desert Center on both sides of the road to Eagle Mountain. The hospital site remains in good condition today and retains its basic design and layout. Many rock-lined walkways, roads, symbols, tent sites, and other activity areas remain in place. Artifacts are dispersed across the site and in dumps. Remaining artifacts include cans, bottles, bandage spools, glass, wood, and miscellaneous metal. In addition, a motor pool for the hospital site remains. Rock alignments, military vehicle parts, and a solvent basin mark this location today.

Several other DTC/C-AMA related facilities have been documented within the Project vicinity. Perhaps most prominent of these is one of the main roads leading from Camp Coxcomb toward Blythe. The Red Route, as it was known, is depicted on historic U.S. Geological Survey (USGS) topographic quadrangle maps of the general area (i.e., Palen Mountains, California [1952] and Sidewinder Well, California [1952] 15-minute maps). It runs from Camp Coxcomb along the base of the Palen Mountains to the east of the Palen Lake and north of Ford Dry Lake. The road is visible from existing aerial images of the mountains. The Red Route may have been used for the transport of troops or tanks between maneuver areas.

Desert Strike

Desert Strike was a large-scale joint military training exercise conducted by the U.S. Strike Command in May 1964, focusing on the use of tactical nuclear and conventional weapons by Army and Air Force units. The exercise simulated a conflict between two fictitious nations, Calonia and Nezona, over water rights, with operations taking place along the Colorado River. The scenario featured deep armor thrusts, defensive maneuvers, airborne assaults, and simulated nuclear strikes.

A notable innovation was a new approach to military river crossings involving various amphibious and bridging techniques across a 140-mile stretch of the river. The exercise aimed to test logistics, communications, and mobility in a challenging desert environment, with 89,788 troops participating and a total cost of over \$35 million.

Despite its scale and logistical achievements, Desert Strike faced criticism for inefficiencies in planning, the strain on equipment in harsh conditions, and limited training value relative to its expense. As a result, similar large-scale exercises in the area were discontinued after this operation.

Agriculture/Ranching

Agriculture became an important industry, second only to mining, by the late 1850s. Homesteading formed the foundation for California's agricultural economy in the nineteenth century, and the official passage of the Homestead Act in 1862 opened vast areas of the public domain to private citizens. The Desert Land Act of 1877 also promoted the acquisition of open

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tracts of land, with an entitlement to 640 acres for each applicant, who were primarily speculators. Generally, lands that fell under this act were marginal for sustained agriculture. Transforming arid land into productive farming and grazing lands was the key. Although agriculture became an important industry in the Palo Verde Valley near Blythe and the Colorado River, significant agricultural development did not take place near the Project Area.

Land claims continued into the twentieth century, with numerous Desert Land Entries in the Project Area dating to the 1950s. However, most twentieth-century claims on residual federal lands were poorly suited for agriculture. Several claims were abandoned or rejected. Many Desert Land Entries were never improved or established due to inadequate water and harsh conditions. Lands available for homesteading also became increasingly marginal over time, requiring ever-larger tracts to achieve success. Large-scale farming came to dominate the regional marketplace.

Jojoba Farming

In the 1950s, jojoba oil (a liquid wax) was found to almost exactly duplicate sperm whale oil and was proposed for a wide variety of potential uses, from a high-grade industrial lubricant to a scalp and skin conditioner. But the jojoba supply was so limited and production costs so high that it remained an untapped resource. The jojoba industry got its start in the 1970s, coinciding with the energy crisis that made alternative oils attractive and the decline in commercial whaling that brought about the need for alternative oils in cosmetics. The seeds were gathered and sold by Native American tribes in California and Arizona, and then commercial farmers began to cultivate jojoba plants in the 1980s.

Approximately 6,000 acres of jojoba were planted by seed in the Chuckwalla Valley. They were cultivated at the end of the Homestead Act-era and have since been discontinued. Most of the land was acquired from the BLM under its now-defunct Desert Land Entry program. Under that program, a person could purchase a minimum of 40 acres for \$2.50 per acre, make improvements within a year, and the land became real property. Entrepreneurs in the U.S., Mexico, South America, South Africa, and Australia sowed large crops of wild seed in the Sonoran Desert. Today, all farms have been abandoned except LaRonna Jojoba Company, whose farm is actually a research/mother block of a variety of cultivars.

Community Development

There are few communities in the Chuckwalla Valley. The largest nearby city is Blythe, which is 24 miles to the east. Desert Center is approximately 9 miles west of the Project site. Other smaller communities include Lake Tamarisk, Hell, and Eagle Mountain. Lake Tamarisk does have permanent residents, but the towns of Hell and Eagle Mountain are not currently occupied.

Blythe

The nearest city to the Project site is Blythe, with a population of 22,000 people. The community was first incorporated in 1916. The largest single contributor to the Blythe economy is agriculture along the wide, fertile Colorado River floodplain, where more than 100,000 acres are under cultivation, grossing more than \$100,000,000 annually. Many recreational activities occur in the area, including fishing and boating on the Colorado River, camping, rock hunting, prospecting,

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visiting old mines, and hunting. The Palo Verde Mesa and the former Blythe Army Air Base are also attractive weekend destinations for local Blythe residents who enjoy exploring the desert, the mines, and the WWII-era features associated with the DTC/C-AMA.

Desert Center

Desert Center was founded in 1921 by Stephen Ragsdale, who opened a small gas station and diner with his wife, Lydia. Gasoline was pumped from a 55-gallon drum, and food was served to weary travelers. The town was moved 5 miles to the north to its current location along I-10 (what was then known as U.S. Route 60). Ragsdale constructed a large café and attached gas station, along with a market and a post office. He also built several cabins for travelers. Ragsdale lived in the town for years, and his son ultimately purchased the town, later adding a hamburger stand and a Stanco gasoline station.

Desert Center experienced a resurgence with the DTC and the establishment of Camp Desert Center and the Airfield. The town, however, once again became a small, quiet town once the DTC/C-AMA was closed at the end of WWII. The airfield is now privately owned.

The town's heyday came in the 1940s to 1980s, when Kaiser Steel's Eagle Mountain iron mine supported a population of more than 4,000 people. A small enclave of local businesses developed and lined Ragsdale Road to serve the mine workers and other travelers.

In 1990, Stanley Ragsdale erected several palm trees at Desert Center, which could be seen from I-10. With his death in 1999, the palm trees have not been cared for, and many have been removed. Today, Desert Center is in disrepair, although it still serves as a stopping point along I-10. It thrives on a small tourist industry associated with the DTC/C-AMA and General Patton's time in the area.

Hell

Little is known of this town located just east of the Project area, other than it was founded by Charles Carr in 1954. As of 1958, Carr, his wife, and their son were the only inhabitants. Carr also served as the lone member of Hell's Chamber of Commerce. The town was abandoned in the late 1950s or early 1960s. It had become isolated by the construction of U.S. Highway 60 and 70. Its remains were demolished and burned by the California State Division of Highways in late 1964 to make way for what would eventually become I-10. Today, nothing remains of the town.

Records Search and Literature Review

A review of existing data acquired for the surrounding projects, including Palen Solar, Devers to Palo Verde, Athos, Arica Solar, Victory Pass Solar, Oberon Solar, and Easley Renewable Energy projects as well as a review of BLM Cultural Resources Database was completed for the Project site with a 1-mile buffer around the proposed solar development site and gen-tie line alignment prior to field work.

Chronicle Heritage staff examined additional sources during the cultural resource literature review and records search, including the NRHP, the CRHR, the OHP Archaeological

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Determinations of Eligibility, the OHP Directory of Properties in the Historic Property Data File, historical aerial images and topographic maps, and BLM GLO land patents and survey plats.

Previous Studies

The records search results identified that 21 previous investigations have been conducted and documented within 1-mile of the Project site since 1977. Eight of these studies appear to include portions of or intersect the Project area. In total, 100 percent of the Project site has been previously surveyed for cultural resources.

Previously Identified Resources

The records search results indicate that 165 cultural resources have been recorded previously within the Project area and one-mile buffer. These resources include 43 historic-period archaeological sites, two multi-component archaeological sites, one prehistoric site, 24 prehistoric isolated artifacts, 87 historic-period isolated artifacts, seven historic-period built-environment resources, and one historic-period object.

Fourteen of these previously recorded resources are mapped within the Project area (see Table 3.6-1). These consist of two historic-period archaeological sites, two historic-period built-environment resource, and 10 isolated artifacts. A description of the archaeological and built environment resources sites is provided in detail below.

Table 3.6-1 Previously recorded resources within the Project Area

Primary no.	Trinomial	Age	Type	Description	CRHR eligibility determination
P-33-018794	-	Historic	Site	Refuse scatter	Not eligible
P-33-018795	-	Historic	Site	Refuse scatter	Not eligible
P-33-019415	CA-RIV-9854H	Historic	Structure	Blythe-Eagle Mountain Transmission Line	Not eligible
P-33-019419	CAORIV-9858H	Historic	Structure	Mecca Blythe Road	Not eligible
P-33-018798	-	Historic	Isolate	Metal sign	Not eligible
018799	-	Historic	Isolate	Can: Hole-in-top	Not eligible
018800	-	Historic	Isolate	Can: Hole-in-top	Not eligible
018805	-	Historic	Isolate	Two oval fish cans	Not eligible
018806	-	Historic	Isolate	Coffee can	Not eligible
018807	-	Historic	Isolate	Two oval fish cans	Not eligible
018808	-	Historic	Isolate	Can: soluble coffee	Not eligible
018809	-	Historic	Isolate	Crumpled metal sign	Not eligible
018810	-	Historic	Isolate	Baking soda can	Not eligible
018813	-	Historic	Isolate	50-caliber round	Not eligible

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P-33-018794

Site P-33-018794 was originally recorded in 2010 by KP Environmental LLC (KPE) as a historic period domestic refuse scatter associated with the settlement of Hell, California. Artifacts included a small whiteware mixing bowl, a fragment of a China dinner plate decorated with a blue willow pattern, food and evaporated milk cans, several hinged-lid pocket tobacco cans, a purse clasp, canning jar lid, a brown glass vanilla bottle, window glass, and a light bulb. As part of their investigation, KPE collected all diagnostic surface artifacts within the Project area. Phase II testing and evaluation was conducted at the site in 2011. Ten shovel test pits were excavated to determine the presence of subsurface deposits. Phase II testing indicated that no intact or substantial subsurface deposits exist at the site. Furthermore, the surface artifacts appear to have been disturbed as a result of the demolition of the extant buildings for the construction of I-10. All surface artifacts were mapped and collected at that time.

Based on the results of Phase II testing and evaluation, it was determined that P-33-018794 has not yielded and is not likely to yield information important in prehistory or history. The site was recommended not eligible for inclusion on the NRHP or CRHR.

P-33-018795

Site P-33-018795 was originally recorded in 2010 by KPE as a domestic C-Ration scatter associated with military operations of the 1942-1944 Desert Training Center Maneuver Area. An examination of the existing DPR update form indicates that KPE tested and evaluated the site in 2011. Phase II testing indicated that no intact or substantial subsurface deposits exist at the site. All surface artifacts were mapped and collected at that time.

Based on the results of Phase II testing and evaluation, it was determined that P-33-018795 has not yielded and is not likely to yield information important in prehistory or history. The site was recommended not eligible for inclusion on the NRHP or CRHR.

P-33-019415/CA-RIV-9854H (Blythe-Eagle Mountain Transmission Line)

P-33-019415 is the historic period 161 kV Blythe-Eagle Mountain Transmission Line and associated access road. An approximately 0.35-mile-long segment of this resource intersects the solar development site portion of the Project site. The transmission line runs from Eagle Mountain, near Desert Center, to Blythe. The resource was first recorded in 2009 by EDAW for the Palen Solar Power Project.

Resource P-33-019415 was recommended as not eligible for the CRHR. The resource has also been determined not eligible for listing on the NRHP through consensus between the BLM and the SHPO.

P-33-019419/CA-RIV-9858H (Mecca Blythe Road)

Resource of P-33-019419 consists of multiple segments of the Mecca-Blythe Highway, a historic period automobile road that traverses the Chuckwalla Valley. Historic maps indicate that, by 1918, the highway ran in a roughly east-west direction across the valley floor for distance of approximately 95 miles. The State of California took control of the Mecca-Blythe Highway in 1925, with portions of the route eventually incorporated into U.S. Highway 60/70.

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Historic records indicate that portions of the road were later reused during WWII to support DTC/C-AMA military training activities in the Chuckwalla Valley. Several segments of this resource have been recorded over several projects.

An approximately 0.25-mile-long portion of Segment 3 of this resource runs along the northern boundary of the northeast parcels of the Project area. Resource P-33-019419/CA-RIV-9858H was recommended as not eligible for the NRHP in 2019 and again in 2021.

Field Survey

Chronicle Heritage archaeologists conducted a pedestrian survey of the Project area between September 16 and September 24, 2024. Chronicle Heritage revisited the mapped locations of known archaeological resources within the Project area to assess their current condition and update the DPR 523 forms as necessary. Of the 14 previously recorded archaeological resources, Chronicle Heritage re-identified and updated DPR forms for two historic built-environment resources (P-33-019415/CA-RIV-9854H/Blythe-Eagle Mountain Transmission Line and P-33-019419/CA-RIV-9858H), and two historic-period isolated finds (P-33-018809, P-33-018812). The survey also documented 16 newly identified historic-period archaeological sites (Table 3.6-2) and 64 newly identified isolated finds.

Table 3.6-2 New Sites Identified in the Project Area

Temporary ID	Age	Description	Eligibility
BAJ-001	Historic	Refuse scatter: five cans	Not eligible
BAJ-002	Historic	Refuse scatter: three crushed sanitary cans, broken automotive glass, automotive parts, toy gun with "Indian" logo, amber and green broken bottle glass, non-automotive clear glass	Not eligible
BAJ-003	Historic	Refuse scatter: five cans, one car license plate, milled wood with nails, steel wire	Not eligible
BAJ-004	Historic	Refuse scatter: 18 cans and glass fragments from broken bottle	Not eligible
BAJ-005	Historic	Historic-period campsite with thermal feature containing 21 pieces of fire-affected rock and refuse consisting of four cans	Not eligible
BAJ-006	Historic	Refuse scatter: six cans	Not eligible
BAJ-007	Historic	Historic-period campsite with two thermal features containing a total of 18 fire affected rock and refuse consisting of six cans	Not eligible
BAJ-008	Historic	Refuse scatter: assorted refuse containing auto glass, auto parts, cans, milled wood, nails	Not eligible
BAJ-009	Historic	Refuse scatter: miscellaneous small auto parts, cans and can debris, glass shards, milled wood, white ceramic dinner plate fragment	Not eligible
BAJ-010	Historic	Refuse scatter: 25 cans, scrap metal broken glass	Not eligible
BAJ-011	Historic	Refuse scatter: amber, clear, and green bottle glass fragments; miscellaneous auto parts; fence panel; bottle caps; milled lumber	Not eligible

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BAJ-012	Historic	Thermal feature: fire pit with charcoal and metal in pit, adjacent firewood pile	Not eligible
BAJ-013	Historic	Thermal feature and refuse scatter: burn pile with associated refuse scatter	Not eligible
BAJ-014	Historic	Thermal feature and refuse scatter: burn pile, nails, horseshoes, small car parts, cans, shattered glass	Not eligible
BAJ-015	Historic	Refuse scatter: milled wood with nails, cans, Ball 5-gallon glass vessel base and fragments, bottle caps, steel wire scrap metal	Not eligible
BAJ-016	Historic	Refuse scatter: 30 cans	Not eligible

P-33-018794

During Chronicle Heritage's survey, the historic period refuse scatter within the previously recorded boundaries of P-33-018794 was not relocated. Based on the site update, the site constituents were collected by KP Environmental during site testing for the proposed Desert 50 Solar Project. The site no longer exists.

As the site constituents were fully collected in conjunction with site testing, the previously recorded site P-33-018794 no longer exists, retaining no integrity or further information potential. P-33-018794 is not eligible for listing in the CRHR.

P-33-018795

During Chronicle Heritage's field survey, the historic period refuse scatter within the previously recorded boundary of P-33-018795 was not relocated. Based on the site update, the site constituents were collected by KP Environmental during site testing for the proposed Desert 50 Solar Project. The site no longer exists.

As the site constituents were fully collected in conjunction with site testing, the previously recorded site P-33-018795 no longer exists, retaining no integrity or further information potential. P-33-018795 is not eligible for listing in the CRHR.

P-33-019415/CA-RIV-9854H (Blythe-Eagle Mountain Transmission Line)

P-33-019415 (also recorded as P-33-022249 and P-33-023910) is a complex of historic period structures, a portion of which intersects the Project area. The resource consists of the 161 kV Blythe-Eagle Mountain Transmission Line, an associated access road, and a three-wire domestic voltage powerline. The 161 kV transmission line runs from Eagle Mountain, near Desert Center, to Blythe. The resource was first recorded in 2009 by EDAW for the Palen Solar Project with later updates completed by FirstCarbon Solutions, Æ, and PaleoWest. Approximately 45 to 50 feet in width, the Blythe-Eagle Mountain Transmission Line consists of a series of double-pole wood towers supporting three transmission lines. A dirt access road parallels the transmission line just to the south. The three-wire domestic voltage powerline runs north along SR 177/Rice Road before turning in a northwest direction to parallel the Blythe-Eagle Mountain Transmission Line.

The portion of the transmission line that intersects the Project site consists of two double-pole wooden towers that are spaced approximately 760 feet to 780 feet from one another. The poles

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support three transmission lines. An associated access road runs parallel to the transmission line. The segment of the transmission line within the Project area was found to be in the same condition as previously recorded.

The Blythe-Eagle Mountain Transmission Line (P-33-019415/CA-RIV-9854H) was previously evaluated for listing on CRHR in 2011 and recommended not eligible under all criteria. The California Public Utilities Commission (CPUC) concurred with the eligibility recommendation in their certification of the EIS prepared for the Desert Sunlight Solar Project. Further, the County determined that the resource again was not individually eligible for listing in the CRHR in 2019 and 2024. The current study indicates that the resource has not changed significantly since and the previous determination remains valid. P-33-019415 is not eligible for listing in the CRHR.

P-33-019419/CA-RIV-9858H (Mecca-Blythe Road)

Resource of P-33-019419 consists of multiple segments of the Mecca-Blythe Highway, a historic period automobile road that traverses the Chuckwalla Valley. Historic maps indicate that, by 1918, the highway ran in a roughly east-west direction across the valley floor for distance of approximately 95 miles. The State of California took control of the Mecca-Blythe Highway in 1925, with portions of the route eventually incorporated into U.S. Highway 60/70. Historic records indicate that portions of the road were later reused during WWII to support DTC/C-AMA military training activities in the Chuckwalla Valley.

Several segments of this resource have been recorded over several projects. These include a 3-mile-long section recorded in 2009 by EDAW (Segment 1) for the Palen Solar Power Project. Two additional sections of the road (Segments 2 and 3) were later recorded for the Athos Renewable Energy Project. Segment 2 consists of a 1,723-foot-long section. Segment 3, referred to as the Right-Hand Road, is an east-west-trending road that extends approximately 5.3 miles along the southern boundary of Sections 19–24, Township 5 South, Range 16 East.

A fourth (Segment 4) was identified by Chronicle Heritage during the Class III survey for the Arica Solar Project. Segment 4 consists of a 1.72-mile-long northwest-southeast running dirt road. Segment 4 of P-33-019419 consists of an informal two-track road that measures 10 feet in width with no discernible berm. Several artifacts were found in close proximity to the alignment and appear to be associated with the road. Identified remains include an aqua colored bottle finish, a hole-in-top can, an iron object stamped with the lettering “6-42-D / A-5498 / 3457” (A1), and two portions of a leaf spring, one of which was well buried.

For this survey, Chronicle Heritage archaeologists revisited a portion of the road just north of the Project site, part of Segment 3. The landscape has drastically changed since last recorded; on the south side of the road is a Jojoba abandoned agricultural field with dried vegetation piled together. On the north side of the road, a solar power-generating facility has been developed. There are sparse areas of undeveloped land along the road with a vegetation consisting of creosote brush, white bursage, and seasonal grasses on an alluvial plain and ephemeral washes that trend southwest towards a northeast direction.

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Electrical metal poles have been erected, trending east to west along the old historic road. The road shows heavy use by construction crews. The road also exhibits non-local soils, such as gravel.

Resource P-33-019419 has been recommended as not eligible for the NRHP and was determined not eligible for listing on the NRHP for the Arica, Victory Pass, and Oberon solar projects. The current study found that the segment of the road from the Project site does not retain its historical presence as the road has been further disturbed and developed for agricultural and solar power-generating facility use (e.g., widening, graveling, erosion control). The previous determination that the resource is not eligible for listing on the NRHP remains valid. Accordingly, P-33-019419 is recommended not eligible for listing on the CRHR.

BAJ-001

BAJ-001 is a historic period refuse scatter site measuring 16.2 by 11.1 m (N/S by E/W.) The scatter consists of five cans, including one aluminum pull tab can, one church-key-opened can, one crushed sanitary can, and one rotary-opened sanitary can. The church-key-opened can is approximately 8 inches in length. The rotary-opened can is a rusted, crushed sanitary can with missing top and intact side seam. One can lid reads, "[B]ARRINGTON HALL SOLUBLE COFFEE," a coffee company in existence from 1883 until World War II. The cans in the scatter are aligned in a perpendicular fashion between wash channels. The site is amongst moderately dense vegetation, including creosote bushes, smoketree, Panamint cryptantha, and white bursage. The nascent desert pavement of the site is surrounded by seasonal washes that run south-north and are characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Animal burrows are abundant within and around the site.

Refuse such as metal beverage or sanitary cans are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, cans cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons, sites typified by a concentration or scatter of refuse materials, such as cans, are not considered significant under Criteria 1, 2, or 3.

BAJ-001 is a small collection of cans, including one coffee can likely dating to around or just after WWII. Refuse scatters containing discarded cans and bottles are common throughout the desert and have limited information potential. It is also likely that these cans are wholly, or in part, secondary deposits. The landscape is characterized by seasonal and ephemeral washes that flow from south to north. This site is unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. The recording effort itself has exhausted any data potential of this can scatter and therefore BAJ-001 is not considered significant under Criterion 4.

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BAJ-001 is recommended not eligible for listing in the CRHR.

BAJ-002

BAJ-002 is a historic-period refuse scatter site measuring 20.4 by 12.6 m (E/W by N/S). The refuse scatter consists of three crushed sanitary cans, broken automotive glass, automotive parts, toy gun with "Indian" logo, amber and green broken bottle glass, non-automotive clear glass, lug nuts, bolts, and springs. This largely automotive scatter is likely associated with a no longer extant automotive service shop in Hell (P-33-018794). The site is located 10 meters north of a dirt road that runs NE-SW through the survey area. The site is amongst moderately dense vegetation, including creosote bushes, smoketree, Panamint cryptantha, and white bursage. The nascent desert pavement of the site is surrounded by seasonal washes that run south-north and are characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Animal burrows are abundant within and around the site.

Although automotive refuse, especially along roads, is broadly associated with transportation-related activities that took place in the Chuckwalla Valley following WWII, no clear associative value was found to link these remains to important events or persons that made significant contribution to the broad patterns of California's history and cultural heritage as such BAJ-002 is not significant under Criterion 1 or 2. The automotive debris lacks distinctive characteristics of a type, period, or method of construction and the site is not the work of a master craftsman nor does it have properties possessing high artistic value. Therefore, it is not eligible under Criterion 3.

This refuse scatter is located in an area of high disturbance, and the auto shop with which it was likely associated is no longer extant; therefore, BAJ-002 is unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation in the Chuckwalla Valley, California, or the nation. In addition, the recording effort itself has exhausted any data potential of this refuse scatter; therefore, BAJ-002 is not considered significant under Criterion 4.

BAJ-002 is recommended not eligible for listing in the CRHR.

BAJ-003

BAJ-003 is a historic-period refuse scatter site measuring 10.4 by 7.1 m (E/W by N/S). The site is comprised of four crushed and partially buried sanitary cans, one bimetal pull tab can, one car licenses plate, milled wood with nails, steel wire, and pushed rocks. The site is situated between two south-north flowing seasonal washes among moderately dense vegetation, including creosote bushes, smoketree, Panamint cryptantha, and white bursage. The nascent desert pavement of the site is surrounded by seasonal washes that run roughly south-north and are characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Animal burrows are abundant within and around the site.

Discarded refuse including cans, lumber, and scrap are broadly associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during the early to mid-20th century. In itself, however, this refuse cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association

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with significant persons of national, statewide, or local significance. Furthermore, cans and other period refuse are and were mass produced nationally, and in similar forms across companies. For these reasons, sites typified by a concentration or scatter of refuse materials, such as cans, are not considered significant under Criteria 1, 2, or 3.

BAJ-003 is a small collection of cans and other refuse. These types of scatters common throughout the desert and have limited information potential. The landscape is characterized by seasonal and ephemeral washes that flow from south to north, making this area susceptible to consistent erosional events. These sites are unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation, agriculture, mining, or military use of this portion of California, or the nation. In addition, the recording effort itself has exhausted any data potential of this refuse scatter and, therefore BAJ-003, is not considered significant under Criterion 4.

BAJ-003 is recommended not eligible for listing in the CRHR.

BAJ-004

BAJ-004 is a historic period refuse scatter measuring 14.2 by 8.1 m (E/W by N/S). The scatter consists of 16 sanitary cans and two bimetal cans. Some of the cans are rotary opened; however many are deteriorated and/or buried. About 75 percent of the cans are in a pile and they range in size from small (condensed milk) to large food cans. Among the cans is possibly modern amber glass shards. The site sits in an alluvial plain between two washes approximately 50 meters north of I-10. There is a sparse vegetation, predominantly, low-lying seasonal grasses, and some creosotes. The soil is salty, sand poorly sorted, with small to large cobbles, immediately adjacent to two cobble terraces.

Refuse such as metal beverage or sanitary cans are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, cans cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons, sites typified by a concentration or scatter of refuse materials, including cans, are not considered significant under Criterion 1, 2, or 3.

BAJ-004 is a small collection of cans, including one coffee can likely dating to around or just after WWII, making it likely to be associated with the use of the Chuckwalla Valley as part of the Desert Training Center. However, refuse scatters containing discarded cans and bottles are common throughout the desert and have limited information potential. It is also likely that these cans are wholly, or in part, secondary deposits. The landscape is characterized by seasonal and ephemeral washes that flow from south to north. These sites are unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. The recording effort itself

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has exhausted any data potential of this can scatter and therefore BAJ-004 is not considered significant under Criterion 4.

BAJ-004 is recommended not eligible for listing in the CRHR.

BAJ-005

BAJ-005 is a historic period campsite with a thermal feature and an associated refuse scatter measuring 7.8 by 6.5 meters (N/S by E/W). The thermal feature within the historical campsite measures 3 by 3 feet (N/S by E/W) and is comprised of 21 visible fire affected rock. The refuse scatter contains four cans, three bi-metal pull tab and one church key-opened beverage can. The campsite is located at the top of a small rise of desert pavement 1 meter west of a roughly south-north ephemeral wash. Vegetation within and around the site consists of a diverse but sparse distribution of creosote, big galleta, white bursage and jumping Choya, including some growth on the outer wall of the thermal feature. The soil is fine to medium, poorly sorted alluvium with some small subangular pebbles. Bioturbation is prevalent within the site boundary and its immediate vicinity.

Thermal features and campsites with associated refuse such as beverage cans and bottles are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves however, these discrete thermal features cannot convey a clear association with significant national or statewide events, nor do they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons historic thermal feature sites are not considered significant under Criterion 1, 2, or 3.

BAJ-005 is a small thermal feature with an associated refuse scatter consisting of a collection of cans. Refuse scatters and thermal features containing discarded cans and bottles are common throughout the desert and have limited information potential. This site is unlikely fulfill the data requirements needed to provide further information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. The recording effort itself has exhausted any data potential of this thermal feature and refuse. Therefore, BAJ-005 is not considered significant under Criterion 4.

BAJ-005 is recommended not eligible for listing in the CRHR.

BAJ-006

BAJ-006 is a historic period refuse scatter measuring 6.7 by 5.9 meters (N/S by E/W). The refuse scatter consists of seven cans, including two degraded oil cans, three bimetal pull tab cans, one aluminum Coors pull tab, and one church key-opened sanitary can with bullet holes. This scatter is likely the result of roadside dumping or recreational activity associated with I-10 70 meters south of the scatter and the prominent southwest to northeast dirt road 20 meters east of the scatter. The site is situated within an ephemeral wash that flows south-north on sandy-silty soil with small to medium subangular pebbles. The landscape is relatively flat with sparse vegetation,

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dominated by creosote bushes, cattle saltbush and desert grasses. Bioturbation is prevalent in the area.

Refuse such as metal beverage or sanitary cans are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, cans cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons, sites typified by a concentration or scatter of refuse materials, including cans, are not considered significant under Criterion 1, 2, or 3.

BAJ-006 is a small collection of cans. Refuse scatters containing discarded cans and bottles are common throughout the desert and have limited information potential. It is also likely that these cans are wholly, or in part, secondary deposits. The landscape is characterized by seasonal and ephemeral washes that flow from south to north. These sites are unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. The recording effort itself has exhausted any data potential of this can scatter and, therefore, BAJ-006 is not considered significant under Criterion 4.

BAJ-006 is recommended not eligible for listing in the CRHR.

BAJ-007

BAJ-007 is a historic period campsite with two thermal features and an associated refuse scatter, measuring 10.9 by 9.8 meters (E/W by N/S). Feature one (F1) is a 6 by 5 foot (N/S by E/W) thermal feature with seven visible fire affected rock of various granitic and meta-volcanic rocks, with a wind block made of 10 visible stones lined up in a crescent shape on the northwest portion of the feature. Feature two (F2) is a 3-by-3-foot (N/S by E/W) thermal feature 5 meters from F1, consisting of 11 fire affected rock of various granitic and metal-volcanic rocks with evidence of heat spalling. While F1 is a defined campfire ring, F2 is deflated. The associated refuse includes six scattered cans, of which three are bimetal cans, one hole-in-top can, and two sanitary cans. The site is located on an alluvial plain with ephemeral washes that trend south to north, west of a small patch of disturbed desert pavement. The vegetation in the area is a sparse distribution creosote bushes, cattle saltbush, and desert grasses.

Thermal features and campsites with associated refuse such as beverage cans and bottles are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, these discrete thermal features cannot convey a clear association with significant national or statewide events, nor do they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons, historic thermal feature sites are not considered significant under Criterion 1, 2, or 3.

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BAJ-007 consists of two thermal features with an associated refuse scatter comprised of a collection of cans. Refuse scatters and thermal features containing discarded cans and bottles are common throughout the desert and have limited information potential. This site is unlikely to fulfill the data requirements needed to provide further information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. The recording effort itself has exhausted any data potential of this thermal feature and refuse. Therefore, BAJ-007 is not considered significant under Criterion 4.

BAJ-007 is recommended not eligible for listing in the CRHR.

BAJ-008

BAJ-008 is a historic period refuse scatter site measuring 35.1 by 30.2 meters (E/W by N/S). This site consists of five concentrations of broken auto glass with miscellaneous auto debris, broken bottles, milled lumber, nails, wire, and cans strewn between and one concentration of metal auto debris that includes a chain, gaskets, and other parts. Each concentration has a diameter of 2.5- to 3 meters. As a whole, the site appears to represent remnants of an abandoned vehicle and may be associated with a no longer extant automotive service shop in Hell (P-33-018794). The site is approximately 150 meters north of the I-10 freeway and 40 meters northeast of a watering station structure. There are two southwest-northeast ephemeral washes running through the site. The soil is composed of silty sand with a moderate amount of small to medium subangular pebbles; however, the area under the glass concentrations has a lower density of pebbles than area around it. The vegetation is sparse with few creosotes and saltbushes in the immediate vicinity.

Although automotive refuse, especially along roads, is broadly associated with transportation-related activities that took place in the Chuckwalla Valley following WWII, no clear associative value was found to link these remains to important events or persons that made significant contribution to the broad patterns of California's history and cultural heritage. This being the case, BAJ-008 is not significant under Criterion 1 or 2. The automotive debris lacks distinctive characteristics of a type, period, or method of construction, and the site is not the work of a master craftsman nor does it have properties possessing high artistic value. Therefore, it is not eligible under Criterion 3.

This refuse scatter is located in an area of high disturbance, and the auto shop to which it was likely associated is no longer extant. This being the case, BAJ-008 is unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation in the Chuckwalla Valley, California, or the nation. In addition, the recording effort itself has exhausted any data potential of this refuse scatter; therefore, BAJ-008 is not considered significant under Criterion 4.

BAJ-008 is recommended not eligible for listing in the CRHR.

BAJ-009

BAJ-009 is a historic period refuse scatter site measuring 35.5 by 34.3 meters (N/S by E/W). This refuse scatter is one of four push-pile sites identified in the southeast corner of the survey area, consisting of automobile parts, broken glass bottles, modern ceramic sherds, and crushed sanitary

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cans. The landscape suggests that the refuse has been pushed by industrial machinery, aiding the distribution of debris toward the northeast. The site contains a total of 71 crushed sanitary cans, one bimetal can, a ceramic figurine fragment, spark plugs, and 30 crown bottle caps. Some of the maker's marks on the glass basal fragments include Anchor Hocking, Ball, and Owens-Illinois and are alongside miscellaneous broken yellow, translucent blue, green, clear, and amber glass. The site is situated between two access roads: one trending south-north along an abandoned agricultural field and the second trending southwest-northeast between the water retention pond and the agricultural fields. The vegetation includes a sparse distribution of creosote brushes, Panamint cryptantha, Big galleta, and white bursage. The soil is silty sand with a mild abundance of medium to large subangular cobbles. Bioturbation is prevalent within and around the site.

BAJ-009 consists of historic refuse materials pushed together during grading and land clearing associated with the construction of the water retention pond and/or the agricultural fields to the east. The pushed pile and historic refuse are associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during 20th and early 21st centuries. In themselves, however, the pile and associated refuse cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. In addition, cans and other period materials were mass produced nationally and in similar forms across companies. This being the case, this historic refuse site is not considered significant under Criterion 1, 2, or 3.

As a pushed pile site, the constituents of BAJ-009 are disturbed and in a secondary or even tertiary context. In addition, the landscape is characterized by seasonal and ephemeral washes that flow from south to north and have clearly eroded the sediment mound. As a result, this site lacks any chronological context and cannot provide any further information valuable to the history of transportation, agriculture, mining, or military use of the Chuckwalla Valley, California, or the nation. The recording effort itself has exhausted any data potential of this site may have had; therefore, BAJ-009 is not considered significant under Criterion 4.

BAJ-009 is recommended not eligible for listing in the CRHR.

BAJ-010

BAJ-010 is a historic- period refuse scatter site measuring 26.5 by 18.8 meters (N/S by E/W). This refuse scatter is one of four pushed pile sites identified in the southeast corner of the survey area and consists of 22 crushed sanitary cans, three bi-metal cans, an unknown number of degraded cans, one piece of scrap metal (a sign or an automobile fire wall), glass shards (clear, amber, light blue, and green), and eight crown bottle caps. The site is situated between two access roads: one road runs south-north along an abandoned agricultural field and other southwest-northeast between the water retention pond and the agricultural fields. The vegetation includes a sparse distribution of creosote brushes, Panamint cryptantha, Big galleta, and white bursage. The soil is silty sand with a mild abundance of medium to large subangular cobbles. Bioturbation is prevalent within and around the site.

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BAJ-010 consists of historic refuse materials pushed together during grading and land clearing associated with the construction of the water retention pond and/or the agricultural fields to the east. The pushed pile and historic refuse are associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during the 20th and early 21st centuries. In themselves, however, the pile and associated refuse cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. In addition, cans and other period materials were mass produced nationally and in similar forms across companies. This being the case, the historic refuse site is not considered significant under Criterion 1, 2, or 3.

As a pushed pile site, the constituents of BAJ-010 are disturbed and in a secondary or even tertiary context. In addition, the landscape is characterized by seasonal and ephemeral washes that flow south-north and have clearly eroded the sediment mound. As a result, this site lacks any chronological context and cannot provide any further information valuable to the history of transportation, agriculture, mining, or military use of the Chuckwalla Valley, California, or the nation. The recording effort itself has exhausted any data potential of this site may have had; therefore, BAJ-010 is not considered significant under Criterion 4.

BAJ-010 is recommended not eligible for listing in the CRHR.

BAJ-011

BAJ-011 is a historic period refuse scatter site measuring 28.3 by 21.3 meters (E/W by N/S). This refuse scatter is one of four pushed pile sites identified in the southeast corner of the survey area and contains 17 cans sanitary cans, two bimetal cans, one cone top can, miscellaneous auto parts, a fence panel, four bottle caps, and two milled lumber pieces. There are also amber, clear, and green bottle glass fragments with the maker's marks Ball Mason and Douglas. Most of the constituents are partially buried. The site is situated between two access roads: one road runs south-north along an abandoned agricultural field and the other southwest-northeast between the water retention pond and the agricultural fields. There are two ephemeral washes that border the site on the east and west boundaries. Vegetation is sparse, primarily dominated by creosote and saltbush. The soil is silty sand with a mild abundance of medium to large subangular cobbles. Bioturbation is prevalent within and around the site. The area also has indications of vehicular disturbance, likely associated with the adjacent roads.

BAJ-011 consists of historic refuse materials pushed together during grading and land clearing associated with the construction of the water retention pond and/or the agricultural fields to the east. The pushed pile and historic refuse are associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during 20th and early 21st centuries. In themselves, however, the pile and associated refuse cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. In addition, cans and other period materials were mass produced nationally and in similar forms

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across companies. For this historic refuse site is not considered significant under Criterion 1, 2, or 3.

As a pushed pile site, the constituents of BAJ-011 are disturbed and in a secondary or even tertiary context. In addition, the landscape is characterized by seasonal and ephemeral washes that flow south-north and have clearly eroded the sediment mound. As a result, this site lacks any chronological context and cannot provide any further information valuable to the history of transportation, agriculture, mining, or military use of the Chuckwalla Valley, California, or the nation. The recording effort itself has exhausted any data potential of this site may have had; therefore, BAJ-011 is not considered significant under Criterion 4.

BAJ-011 is recommended not eligible for listing in the CRHR.

BAJ-012

BAJ-012 is a historic-period campsite with one thermal feature and associated refuse, measuring 5.1 by 3.8 meters (E/W by N/S). The feature itself measures 7 x 6.5 feet (N/S x E/W). The feature indicates possible continued modern use based on the apparent remodeling and layers of burned materials in the center ranging from historical on the bottom to modern on the top. The feature contains about 73 visible fire affected rock. Additionally, there are approximately 20 pieces of ironwood stacked 2 meters. The site is located 10 meters west of the water station within an area of cleared brush resulting from the construction of the water retention pond and supporting infrastructure. The site is located 40 meters northeast of the water retention pond and 110 meters northeast of I-10. The soil is silty sand with a mild abundance of medium to large subangular cobbles. Vehicle disturbance is apparent, likely due to the proximity of the site to the water station.

The thermal feature and associated refuse in BAJ-012 is most likely semi-permanent historic thermal features with continued use associated with the agricultural activity in the area through the early to mid-2000s. This discrete thermal feature does not convey a clear association with significant national or statewide events, nor does it convey a specific association with significant persons of national, statewide, or local significance. Furthermore, the refuse associated with this site was mass produced nationally and in similar forms across companies. For these reasons this potentially historic thermal feature site is not considered significant under Criterion 1, 2, or 3.

BAJ-012 is unlikely to fulfil the data requirements needed to provide further information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California or the nation. Contemporary repeated use of this thermal feature has degraded any potentially historic materials. The recording effort itself has exhausted any data potential of this thermal feature and refuse. Therefore, BAJ-012 is not considered significant under Criterion 4.

BAJ-012 is recommended not eligible for listing in the CRHR.

BAJ-013

BAJ-013 is a historic period thermal feature with an associated refuse scatter, measuring 10.9 by 10.5 meters (N/S by E/W). The site consists of a 4.1-by- 3.1 meter (N/S by E/W) thermal feature

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made up of 18 fire affected rock, five sanitary cans, colorless broken beverage bottle glass, aluminum lids, three bottle caps, approximately 80 nails, and partially burned milled lumber up to 5 feet long. The site is located about 90 meters north of I-10 among moderately dense vegetation, including creosote bushes, smoketree, Panamint cryptantha, and white bursage. The nascent desert pavement of the site is surrounded by seasonal washes that run roughly south-north and are characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Animal burrows are abundant within and throughout the immediate vicinity of the site.

Thermal features and campsites with associated refuse such as beverage cans and bottles are broadly associated with the development of the Colorado desert region for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, these discrete thermal features cannot convey a clear association with significant national or statewide events, nor do they do not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans are and were mass produced nationally and in similar forms across companies. For these reasons, these historic thermal feature sites are not considered significant under Criterion 1, 2, or 3.

BAJ-013 is a thermal feature with an associated refuse scatter consisting of a collection of cans, bottles, and wood scrap. Refuse scatters and thermal features containing discarded cans and bottles are common throughout the desert and have limited information potential. This site is unlikely to fulfil the data requirements needed to provide further information valuable to the history of transportation, agriculture, mining, or military use of this portion of the desert for California, or the nation. The recording effort itself has exhausted any data potential of this thermal feature and refuse. Therefore, BAJ-013 is not considered significant under Criterion 4.

BAJ-013 is recommended not eligible for listing in the CRHR.

BAJ-014

BAJ-014 is historic period thermal feature with an associated refuse scatter, measuring 15.9 by 11.4 meters (E/W by N/S). The site consists of a 3.3-by-2.4 meter (N/S by E/W) thermal feature made up of 16 fire affected rock, three sanitary cans, one crushed aerosol can, colorless broken bottle glass fragments, purple glass fragments, green glass fragments (Anchor Hocking), one gallon colorless glass base (Glass Company), a mason jar top, a metal friction lid, approximately 120 nails, auto parts, bolts, spark plugs, and one horseshoe. As a whole, this site is likely associated with a no longer extant automotive shop. The site is situated 30 meters north of I-10 on an alluvial plain, with some partial areas of desert pavement among moderately dense vegetation, including creosote bushes, smoketree, Panamint cryptantha, and white bursage. The soil is characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Bioturbation is prevalent in the area.

BAJ-014 is a thermal feature with associated refuse including beverage cans, bottles, and automotive debris. This site is clearly associated with transportation-related activities that took place in the Chuckwalla Valley following WWII and a no longer extant automotive shop. However, this discrete thermal feature cannot convey a clear association with significant national

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or statewide events, nor does it convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans, bottles, and auto parts are and were mass produced nationally and in similar forms across companies. For these reasons BAJ-014 is not considered significant under Criterion 1, 2, or 3.

BAJ-014 is a thermal feature with an associated refuse scatter consisting of a collection of cans, bottles, and automotive scrap. Refuse scatters and thermal features containing discarded cans and bottles are common throughout the desert and have limited information potential. In addition, the auto parts degraded and became indistinct. Overall, this site is unlikely to fulfil the data requirements needed to provide further information valuable to the history of transportation in the Chuckwalla Valley, California in general, or the nation. The recording effort itself has exhausted any data potential of this thermal feature and refuse. Therefore, BAJ-014 is not considered significant under Criterion 4.

BAJ-014 is recommended not eligible for listing in the CRHR.

BAJ-015

BAJ-015 is a historic period refuse scatter site, measuring 20.8 by 20.7 m (N/S by E/W). This refuse scatter is one of four pushed pile sites identified in the southeast corner of the survey area and consists of 13 sanitary cans, an unknown number of degraded cans, milled lumber, scrap metal, crown bottle caps, large broken Ball mason jar, broken colorless glass (most likely associated with the Ball mason jar), and amber broken glass. There is evidence that the landscape has been pushed by machinery, distributing debris in a northeast pattern. The site is located on a flat alluvial plain, situated between two access roads: one trending south-north and the second southwest-northeast. The area appears to have been heavily disturbed by the seasonal washes moving through and around the site. The vegetation is a moderately dense distribution of creosote bushes, smoketree, Panamint cryptantha, and white bursage. The soil is characterized by sandy silty loam with sub-angular to sub-rounded pebbles. Bioturbation is prevalent in the area.

BAJ-015 consists of historic refuse materials pushed together during grading and land clearing associated with the construction of the water retention pond and/or the agricultural fields to the east. The pushed pile and historic refuse are associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during 20th and early 21st centuries. In themselves, however, the pile and associated refuse cannot convey a clear association with significant national or statewide events. Furthermore, they do not convey a specific association with significant persons of national, statewide, or local significance. In addition, cans and other period materials were mass produced nationally, and in similar forms across companies. For this historic refuse site is not considered significant under Criterion 1, 2, or 3.

As a pushed pile site, the constituents of BAJ-015 are disturbed and in a secondary or even tertiary context. In addition, the landscape is characterized by seasonal and ephemeral washes that flow north-south and have clearly eroded the sediment mound. As a result, this site lacks any chronological context and cannot provide any further information valuable to the history of

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transportation, agriculture, mining, or military use of the Chuckwalla Valley, California, or the nation. The recording effort itself has exhausted any data potential of this site may have had; therefore, BAJ-015 is not considered significant under Criterion 4.

BAJ-015 is recommended not eligible for listing in the CRHR.

BAJ-016

BAJ-016 is a historic period refuse scatter site, measuring 15.4 by 12.7 meters (N/S by E/W). The site contains 31 cans, including one ribbed sanitary can and 30 church key-opened cans, amber broken glass, colorless broken glass, and some small pieces of milled lumber distributed alongside an ephemeral wash on an alluvial plain trending southwest to northeast. Based on the distribution of secondary deposits down the wash 30 meters away, the wash has disturbed the constituents. The landscape gives the impression that it has previously been plowed, based on obvious commercial equipment tracks in the area and the sparse vegetation. BAJ-016 is one of only two historic resources (the other is BAJ-ISO-064) recorded in the northeast section of the survey area.

Discarded refuse such as cans, glass, lumber, and scrap are broadly associated with the development of the Chuckwalla Valley for transportation, agriculture, mining, and military use during the early to mid-20th century. In themselves, however, this refuse cannot convey a clear association with significant national or statewide events. Furthermore, it does not convey a specific association with significant persons of national, statewide, or local significance. Furthermore, cans and other period refuse are and were mass produced nationally and in similar forms across companies. For these reasons, sites typified by a concentration or scatter of refuse materials, like cans, are not considered significant under Criterion 1, 2, or 3.

BAJ-016 is a collection of cans, glass, and other refuse. These types of scatters are common throughout the desert and have limited information potential. The landscape is characterized by seasonal and ephemeral washes that flow from south to north, making this area susceptible to consistent erosional events. These sites are unlikely to fulfill the data requirements needed to provide information valuable to the history of transportation, agriculture, mining, or military use of this portion of California, or the nation. In addition, the recording effort itself has exhausted any data potential of this refuse scatter and therefore BAJ-016 is not considered significant under Criterion 4.

BAJ-016 is recommended not eligible for listing in the CRHR.

Historic Districts

The Prehistoric Trails Network Cultural Landscape/Historic District

(PTNCL) is a historic district that encompasses the entirety of the Project area. The District consists of prehistoric resources and landforms associated with the Halchidoma (or Cocomaricopa) Trail (P-33-000053). The boundary of the PTNCL extends along the length of the historically known route of the trail, from where it begins near Blythe at the Colorado River, continuing to the west through the Chuckwalla Valley towards modern Los Angeles. The PTNCL

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has been designated as a noncontiguous cultural landscape that incorporates prehistoric archaeological sites associated with P-33-000053/CA-RIV-53T. It can be broadly defined as having a width of approximately 10 miles that is centered along the I-10 corridor and within the viewshed of that vantage point. The Project sits entirely within the defined boundaries of the PTNCL.

PTNCL site types are divided into three categories: destinations, trails, and trail-associated sites or features. Destinations are defined primarily as water sources, but also include residential, religious, and resource-collection sites. Trails are linear alignments that were either created by the repeated passage of feet or by formal construction. Trail-associated sites or features may include concentrations of ceramics/pot drops, cleared circles, rock rings, rock clusters, rock cairns, rock alignments, petroglyphs, and geoglyphs. In places where the trail itself is not preserved, its route may be approximately traced by distinctive patterns of the same trail-associated sites and features listed above. The period of significance is the entire prehistoric and early historic periods. The thematic associations include travel, trade, ritual, and resource exploitation, particularly the collection of stone tool and ground stone raw materials.

The PTNCL was previously determined eligible for listing on the CRHR under Criteria 1 and 4 for the Palen Solar Project. No trail segments have been documented or known to exist within the Project area of direct impacts. No trail associated sites or features have been documented within the Project area of direct impacts. No destination sites, such as water sources, residential, religious, and resource-collection sites, have been documented or known to exist within the Project area of direct impacts. No cultural sites identified in the Project's Cultural Resources Study Area were associated with the PTNCL because they were all historic.

The Desert Training Center Cultural Landscape/Historic District

(DTCCL) is a contiguous historic district that encompasses the entirety of the Project area. No resources located within the Project's direct impact area are eligible as contributors to this district. The district resource consists of a collection of historical archaeological sites associated with the DTC/C-AMA in the Chuckwalla Valley and on the Palo Verde Mesa. The significance period is preliminarily defined as 1942–1944. The DTC/C-AMA was the largest and the only such military training facility in American military history. The BLM is in the process of preparing a NRHP Multiple Property Documentation Form (NPS 10-900-b) for DTC/C-AMA historic properties. In this draft document, the themes, trends, and patterns of history shared by the DTC/C-AMA properties are organized into historic contexts and the property types that represent those historic contexts are defined. The relevant themes include U.S. Preparation for WWII, U.S. Military Training, Gen. George S. Patton, Jr., and Gen. Walton Walker. Depots, airfields, ranges, bivouacs, maneuver areas, camps, and hospitals are among some of the property types included in the district. Most property types associated with the DTC/C-AMA, exist today as archaeological resources, such as refuse deposits, tank tracks, foxholes, and bivouacs.

The DTCCL was previously determined eligible for listing on the CRHR under Criterion 4 for the Palen Solar Project.

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3.6.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

State

California Environmental Quality Act

The Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess a project's impact on cultural resources (Pub. Res. Code §§ 21083.2 and 21084). The first step in the process is to identify cultural resources that may be impacted by a proposed project and then determine whether the resources are "historically significant."

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (CEQA Guidelines 15064.5(a)(3); see also Pub. Res. Code § 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. Is associated with the lives of persons important in our past
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4. Has yielded, or may be likely to yield, information important in prehistory or history (CEQA Guidelines § 15064.5(a)(3); see also Pub. Res. Code § 5024.1)

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a proposed project would have a significant impact on important cultural resources deemed "historically significant," then project alternatives and mitigation measures must be considered.

Human Remains

California Public Resources Code, Sections 5097.98(b) and (e), require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until the landowner confers with the Native American Heritage Commission-identified Most Likely Descendants to consider treatment options. In the absence of Most Likely Descendants or of a treatment acceptable to all parties, the landowner is required to re-inter the remains elsewhere on the property in a location not subject to further disturbance. Section 5097.99 establishes as a felony the acquisition, possession, sale, or dissection with malice or wantonness

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Native American remains or funerary artifacts. Finally, Section 5097.991 establishes as state policy the repatriation of Native American remains and funerary artifacts.

California Health and Safety Code Section 7050 makes it a misdemeanor to mutilate, disinter, wantonly disturb, or willfully remove human remains found outside a cemetery and further requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

Local

Riverside County General Plan

The Multipurpose Open Space Element of the Riverside County General Plan guides the preservation policies that ensure that cultural resources are appropriately considered. The Multipurpose Open Space Element contains the following goals and policies relevant to the analysis of cultural resources that apply to the Project (Riverside County 2015):

OS 19.1

Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside

OS 19.2

The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that at a minimum would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state and federal law.

OS 19.3

Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

OS 19.4

To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.

OS 19.5

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Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

3.6.3 Methodology for Analysis

The study area for direct impacts to cultural resources is defined as all areas that would be subject to ground-disturbing activity associated with the development of the Project, which includes the 535 acres of private land in the Project area under County jurisdiction.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The thresholds of significance for assessing impacts come from the CEQA Guidelines Appendix G and County of Riverside's Environmental Assessment Form. For impacts to cultural resources, the Checklists asks if the Project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations. (Impact CUL-1)
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations. (Impact CUL-2)
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations (Impact CUL-3)
- Disturb any human remains, including those interred outside of formal cemeteries. (Impact CUL-4)

The County of Riverside's Environmental Assessment Form includes additional significance criteria, which were also used in the analysis. The additional criteria differing from the above CEQA criteria that indicate that a project could have potentially significant impacts are as follows:

- Alter or destroy a historic site (Impact CUL-1); or
- Alter or destroy an archaeological site (Impacts CUL-2 and CUL-3).

Under all these criteria, adverse changes and impacts would be the following:

- Physical, visual, or audible disturbances resulting from construction and development that would affect the integrity of a resource or the qualities that make it eligible for the CRHR.
- Exposure of resources to vandalism or unauthorized collecting.
- A substantial increase in the potential for erosion or other natural processes that could affect resources.

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- Neglect of a resource that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe.
- Transfer, lease, or sale of a resource out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the resource's historic significance.

3.6.4 Impacts and Mitigation Measures

Impact CUL-1 Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5

Construction

As described above in Section 3.6.2 Environmental Setting, there are no known CRHR-eligible historical resources in the Project's direct impact area for the solar panels, access road, gen-tie line, and medium voltage lin. Therefore, the Project would not alter or destroy a historical resource. Eighty-four cultural resources were identified within the Project area. These include four previously identified cultural resources (two historic isolates and two built environment resources) and 80 newly identified cultural resources (16 historic archaeological sites and 64 historic isolates). The Phase I Cultural Analysis Performed by Chronicle Heritage analyzed the CRHR-eligibility of all resources under Criteria 1, 2, 3, and 4 and determined that none of the cultural resources in the Project area have been previously determined or are recommended as eligible for listing on the CRHR. Therefore, no further management is recommended for these resources.

However, the Project site has the potential to contain previously unknown historical resources, specifically in the form of archaeological deposits that may underlie the ground surface. Should buried archaeological deposits be uncovered during project construction activities, and should such resources qualify as historical resources under CEQA, they could be subject to significant impacts. Impacts to any newly identified resources would be addressed by the implementation of MM Cultural-1 through MM Cultural-8.

Operation and Maintenance

The Project operation and maintenance would not require excavation or other ground disturbance. Operation and maintenance activities would have no potential to encounter cultural resources and would have no impact on cultural resources.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5 because it would be located in areas that have been disturbed and any new infrastructure or activities required would be the same as the existing infrastructure on the substation. The impact would be less than significant.

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Significance Determination before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measure Cultural-1: Project Archaeologist

Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program (CRMP). A Cultural Resource Monitoring Plan shall be developed in consultation with the monitoring tribe(s) that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural, tribal cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring..

Mitigation Measure Cultural-2: Develop and Implement Cultural Resources Environmental Awareness Training.

Prior to issuance of a grading permits and for the duration of ground disturbance (as defined in MM Cultural-4), the Applicant shall provide Worker Environmental Awareness Program (WEAP) training to all workers prior to beginning work at the Project site. The training shall be prepared by the Project Archaeologist, may be conducted by any member of the archaeological team, and may be presented in the form of an annotated and narrated digital slide show. Tribal representatives shall be given the opportunity to participate in development of the WEAP training. The Project Archaeologist shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended but must be resumed if ground disturbance resumes. Training shall include the following:

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- A discussion of applicable laws and penalties under the law
- Samples or visuals of artifacts that might be found in the Project vicinity
- A brief review of the cultural sensitivity of the Project and the surrounding area
- A discussion of what such artifacts may look like when partially buried, or wholly buried, and then freshly exposed
- A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits
- Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the Project Archaeologist or archaeological monitors, and that redirection of work would be determined by the construction supervisor and the Project Archaeologist
- Instruction that the Project Archaeologist, alternate Project Archaeologist, and supervisory archaeological resource field staff have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the Project Archaeologist
- Identification of reporting procedures in the event of a discovery
- An acknowledgment form signed by each worker indicating that they have received the training
- A sticker that shall be placed on hard hats indicating that WEAP training has been completed

This is a mandatory training, and all construction personnel must attend prior to beginning work on the Project site. A copy of the sign-in sheet shall be kept ensuring compliance with this measure.

Mitigation Measure Cultural-3: Cultural Resources Monitoring Plan.

Prior to the start of construction, the Project Archaeologist shall develop a Cultural Resources Monitoring Plan that addresses the details of all activities and provides procedures that must be followed to reduce the potential impacts to undiscovered buried archaeological resources associated with the Project.

The Cultural Resources Monitoring Plan shall describe a program for monitoring for undiscovered National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) eligible cultural resources during Project construction and avoidance and treatment measures in the event of a find. The plan shall identify archaeological monitoring procedures for monitoring during initial ground disturbing activities in previously-undisturbed areas and provide a process that should be followed in the event that an inadvertent discovery is identified, including the discovery of human remains. The frequency and location of archeological

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monitoring will be determined by the Project Archaeologist with consideration to the rate of excavation, materials excavated, and the presence and abundance of artifacts and features. The plan should also identify the roles and responsibilities of all parties, notification procedures, communication protocols, conditions for reduction or cessation of monitoring, and reporting requirements. The Cultural Resources Monitoring Plan may require that protective fencing or other markers, at the discretion of the County, be erected and maintained to protect resources from inadvertent adverse effects during construction. The plan shall also include maps and narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources, if any. The plan shall detail provisions for monitoring construction activities in these high sensitivity areas. It shall also detail the methods, consultation procedures, and timelines for addressing all post-review discoveries. Specific element of the plan include:

- The plan shall identify person(s) expected to perform any monitoring tasks, their responsibilities, and the reporting relationships between Project construction management and the mitigation and monitoring team. It shall also specify monitoring reporting and what forms/documentation needs to be completed daily during monitoring.
- The Project Archaeologist shall manage all monitoring, mitigation, curation, and reporting activities under the Cultural Resources Monitoring Plan. The Applicant shall ensure that the Project Archaeologist makes recommendations regarding the eligibility for listing in the NRHP and CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.
- The Cultural Resources Monitoring Plan shall address the authority to halt ground disturbance during construction. If a cultural resource over 50 years of age is found, or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts.

Pursuant to California Code of Regulations title 14 section 15126.4(b), the plan shall specify that preservation in place is the preferred method of mitigating impacts in the event of an unanticipated discovery of an archaeological site determined to be a historical resource. Potential means of preservation in place include but are not limited to the following:

1. Planning construction to avoid the archaeological site
2. Deeding the archaeological site to a permanent conservation easement
3. Capping or covering the archaeological site with a layer of chemically stable soil before building facilities on it
4. Incorporating the site within parks, green space, or other open space

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When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.

- Preparation and implementation of a data recovery plan to be used to guide the data recovery and disposition of any historical or Tribal Cultural Resource (as defined under the California Environmental Quality Act) that may be encountered during construction and that cannot be avoided or preserved in place. The data recovery plan shall include, minimally, a regional cultural setting, appropriate regional research questions, field and laboratory methods for the data recovery effort, and analysis and reporting requirements. The data recovery plan shall include treatment measures that focus on recovering information related to tribal values as they are conveyed through archaeological data. The treatment measures shall be developed through consultation among traditionally culturally affiliated tribes and the County. Treatment measures may include detailed resource documentation, preparation of interpretative or educational materials, reburial of artifacts that convey tribal values, or other measures identified in coordination with the tribes and the landowner.

Following implementation of data recovery and other treatment protocols, a report documenting the methods and results of the data recovery and treatment program shall be prepared by a Secretary of the Interior-qualified archaeologist and shall be submitted to the County for review and approval.

Mitigation Measure Cultural-4: Archaeological Monitoring

Archaeological Monitors working directly under the Project Archaeologist shall monitor initial grading activities in undisturbed soil on private land.

For the linear facilities on BLM-administered land, a qualified lead archaeological monitor that meets the Secretary of the Interior's Professional Qualifications Standards (as defined in Code of Federal Regulations title 36 part 61) shall be present for initial grading activities in undisturbed soil. If additional archaeological monitors are needed, they do not need to have the same qualifications but may work under the supervision of the lead archaeological monitor; in such cases the lead archaeological monitor must be on site.

The frequency and location of archeological monitoring will be determined by the Project Archaeologist, or qualified lead archaeologist on BLM land, with consideration to the rate of excavation, materials excavated, and the presence and abundance of artifacts and features.

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Daily monitoring forms shall be completed by the archaeological monitor(s) and the Project Archaeologist shall be responsible for retaining, editing, and compiling them. The County shall be provided with a compilation of the daily reports on a monthly basis. The Project Archaeologist shall have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted.

Mitigation Measure Cultural-5: Unanticipated Resources

A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative(s), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, avoidance, recovery, etc) for the cultural resource/Tribal Cultural Resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* and or Tribal Cultural Resources* are discovered, the following procedures shall be followed:

All ground disturbance activities within 100 feet of the discovered cultural resource/Tribal Cultural Resource shall be halted and the Project archaeologist** shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist, the Native American tribal representative, and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, avoidance, recovery, etc.) for the cultural Resource and or Tribal Cultural Resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

*A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other.

*A Tribal Cultural Resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national or state register of historical resources, or listed in a local register of historic resources; or resources that the lead agency determines, in its discretion, are tribal cultural resources.

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** If not already employed by the project developer, a County approved archaeologist and a Native American Monitor from the consulting tribe(s) shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary

Mitigation Measure Cultural-6: Environmental Constraints Sheet

Prior to issuance of grading permits: the developer/ applicant shall provide evidence to the Riverside County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate an area that will be used, if needed, for reburial of any artifacts that have been identified during grading and cannot be avoided. This area will be protected and not disturbed in the future. This is confidential information, and the exact nature of this area will not be called out on the grading plans.

Mitigation Measure Cultural-7: Artifact Disposition

Prior to Grading Permit Final Inspection In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and Human Remains) and Provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through the following methods.

Desert Training Related Resources- All artifacts related to the Desert Training Center activities shall be curated with the General Patton Memorial Museum.

Historic Resources- Non Desert Training Center related historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines.

Pre-contact resources-A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be

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included in the Phase IV Report. The details of any disposition of artifacts shall be documented in the Phase IV report.

Mitigation Measure Cultural-8: Phase IV Monitoring Report

Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources Monitoring Plan. The report will also include the Tribal Monitoring notes as a confidential appendix. Once approved by the County Archaeologist, the Project Archaeologist shall provide a copy to the consulting tribes and the South Coastal Information Center (SCIC)..

Significance Determination after Mitigation

Less than significant.

Impact CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Construction

As described in Section 3.6.1 above, there are no known CRHR-eligible archaeological sites in the Project site. Therefore, the Project would not alter or destroy an archaeological site.

The Project site has the potential to contain previously unknown archaeological sites that may underlie the ground surface. Should buried archaeological sites be uncovered during project construction activities, and should such resources qualify as historical resources under CEQA, they could be subject to significant impacts. Impacts to any newly identified sites would be addressed by the implementation of Mitigation Measures (MM) Cultural-1 through Mitigation Measures Cultural-8, which would reduce these impacts to be less than significant

Indirect Impacts. Portions of the PTNCL and DTCCL are located within the Project's indirect impact area. The Project would be a prominent element on the landscape and would be clearly visible from portions of these resources. However, the visual changes would be in kind with the current nature and scale of existing visible developments. Further, the PTNCL is primarily associated with destinations, trails, and trail-associated sites or features that relate to travel, trade, ritual, and resource exploitation, particularly the collection of stone tool and ground stone raw materials. The historical significance of those characteristics primarily relates to travelers going to or from a destination and is linear in nature. The Project elements would be in kind with

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existing infrastructure and, thus, views of the Project from the PTNCL would not affect their historical significance or the historical significance of use associated with the PTNCL beyond the current conditions. Therefore, the Project would not compromise the integrity of the resources or materially alter in an adverse manner any characteristics of the resources that convey their historical significance. As such, these archaeological resources would not be subject to significant indirect impacts from the construction, operation, maintenance, or the decommissioning of the BESS and solar facility and gen-tie line.

Operation and Maintenance

The Project operation and maintenance would not require excavation or other ground disturbance. Operation and maintenance activities would have no potential to encounter cultural resources and would have no impact on cultural resources.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not cause a substantial adverse change in the significance of a archaeological resource pursuant to in §15064.5 because it would be located in areas that have been disturbed and any new infrastructure or activities required would be the same as the existing infrastructure on the substation. The impacts would not result in indirect impacts to landscapes because the work would not change the existing views of the substations. The impact would be less than significant.

Significance Determination before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measures Cultural-1 through Cultural-8

Significance Determination after Mitigation

Less than significant.

Impact CUL-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Construction

A review of the archaeological record searches and results of recent field surveys did not identify any human remains in the Project area. However, previously unidentified human remains could be found and potentially impacted (directly or indirectly) during Project construction. If human remains or related resources are discovered, such resources shall be treated in accordance with state and local regulations and guidelines that govern the disclosure, recovery, relocation, and preservation of human remains (14 CCR § 15064.5(e)). With incorporation of Mitigation Measure Cultural-9, any potential impacts on human remains would be less than significant.

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Operation and Maintenance

The Project operation and maintenance would not require excavation or other ground disturbance. Operation and maintenance activities would have no potential to disturb human remains, and no impact would occur.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not disturb any human remains because it would be entirely within an already disturbed footprint. The impact would be less than significant.

Significance Determination before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measure Cultural-9: Human Remains Protocol

If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. There will be no photography of human remains or associated resources.

Significance Determination after Mitigation

Less than significant.

3.6.5 Cumulative Impacts

As discussed above, the Project would not alter or destroy a historical, archeological resource or human remains, either directly or indirectly. There are no known CRHR-eligible historical resources in the Project's direct impact area. Therefore, the Project would not make a considerable contribution to cumulative impacts on any known CRHR-eligible historical, archaeological resource, or human remains.

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The visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments. Cumulative projects similarly would be in kind with the current nature and scale of existing visible developments and would be subject to similar measures designed to avoid and minimize impacts to historical resources. However, while the visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments, the addition of more industrial components to the Chuckwalla Valley, as a result of the Project in combination with past projects, other current projects, and probable future projects, would contribute to adverse visual impacts to the PTNCL, particularly from character defining features within the PTNCL. The Project would implement Mitigation Measures Cultural-1 through MM Cultural-9, which would avoid and minimize impacts to archaeological resources, reducing project-level impacts to less than significant. Cumulative projects would likely be required to implement similar measures. However, cumulative visual impacts to the PTNCL would remain significant, and the Project's incremental contribution would be cumulatively considerable.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would contribute to the significant indirect visual impact to the PTNCL, which would result in a cumulatively significant impact. However, because it would be located in areas that have been disturbed and any new infrastructure or activities required would appear the same as the existing infrastructure on the substation, the Project's contribution to the cumulative impact would be less than cumulatively considerable.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measures Cultural-1 through Cultural-9 would be implemented to address potential cultural resources impacts for the Project. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to indirect visual impacts to the PTNCL would be cumulatively considerable. The Southern California Edison Activities contribution to indirect visual impacts to the PTNCL would not be cumulatively considerable.

3.6.6 References

Chronical Heritage. 2025. Phase I Cultural Resources Assessment: Savira Solar Project, Riverside County, California.

Office of Historic Preservation (OHP). 1995. Instructions for Recording Historical Resources. Available: https://ohp.parks.ca.gov/?page_id=1069.

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3.7 Energy

This section presents the environmental setting and analysis of impacts to energy resources resulting from the Project. This section describes existing energy resources for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.7.1 Environmental Setting

Non-GHG and renewable energy resources in California generated approximately 120,932 gigawatts (GWh) of energy, which is 56.1 percent of in-state energy generation (CEC n.d.-b). In 2023, approximately 41,344 GWh of electrical power was generated from solar energy in California, which accounts for 19.2 percent of all electrical power generated in the state (CEC n.d.-b). Between 2021 and 2023, solar energy power generation in California increase by 2.1 percent, from 17.1 percent to 19.2 percent (CEC, n.d.; n.d.).

The Project would develop up to 150 MW of renewable energy and up to 250 MW of battery storage. The Project would generate up to 150 MW of electrical power from a renewable energy source. Power produced by the Project would be transmitted via a 1.8-mile-long, 230 kV gen-tie line to the existing Arica and Victory Pass substation, where it would be carried on the existing 3-mile 230 kV Arica/Victory Pass gen-tie to the regional transmission grid at the SCE Red Bluff substation. SCE provides electric utilities to over 15 million people in central, coastal, and southern California, including 180 incorporated cities and 15 counties (SCE n.d.). In 2022, SCE generated approximately 85,870 GWh of electricity within the service area (CEC n.d.-c).

3.7.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

There are no federal regulations, plans, or policies for energy that apply to the Project.

State

Assembly Bill 32

Assembly Bill (AB) 32, also known as the California Global Warming Solutions Act of 2006, requires a reduction of greenhouse gas emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is required to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions. AB 32 is the first program in the U.S. to take a long-term approaching to address climate change.

California Energy Action Plan

California has mandated and implemented aggressive energy-use reduction programs for electricity and other resources. In 2003, California's first Energy Action Plan (EAP) established a

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high-level, coherent approach to meeting California’s electricity and natural gas needs and set forth the “loading order” to address California’s future energy needs. The “loading order” established that the State, in meeting its energy needs, would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply. Since that time, the CPUC and CEC have overseen the plans, policies, and programs for prioritizing the preferred resources, including energy efficiency and renewable energy.

Senate Bill 100

On September 10, 2018, Senate Bill (SB) 100 was passed, making California the second state in the nation with a deadline to move to 100 percent zero-carbon electricity. SB 100 accelerates California’s *renewable portfolio standard* (RPS) requirements of electricity utility providers to 50 percent renewable energy sources by 2025, 60 percent by 2030, and requires that 100 percent come from zero-carbon sources of electrical power generation by 2045.

Senate Bill 350

Also known as the Clean Energy and Pollution Reduction Act, SB 350 establishes clean energy, clean air, and greenhouse gas emissions reduction goals, including reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050. Additionally, SB 350 increases California’s renewable-energy-generated electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This objective will increase the use of RPS-eligible energy sources, including solar, wind, biomass, geothermal, and others.

State CEQA Guidelines

The California Natural Resources Agency adopted certain amendments to the State CEQA Guidelines, effective in 2019, to change how CEQA lead agencies consider the environmental impacts of energy use. The State CEQA Guidelines, section 15126.2(b) requires analysis of a project’s energy use to assure that energy-use implications are considered in project decisions. CEQA requires a discussion of the potential environmental effects of energy resources used by projects, with particular emphasis on avoiding or reducing the “wasteful, inefficient, and unnecessary consumption of energy” (see Public Resources Code section 21100(b)(3)).

Warren-Alquist Act

The Warren-Alquist Act of 1975 is the legislation that created the CEC. The Act enabled the CEC to formulate and adopt the nation’s first-ever energy conservation standards for buildings constructed and appliances sold in California. The CEC was also directed to create a research and development program with a focus on fostering non-conventional energy sources.

Local

Riverside County General Plan

The County of Riverside County General Plan Land Use Element and Multipurpose Open Space Element guide the long-term conservation of natural resources and preservation of available open space areas (Riverside County 2015, 2021). The Land Use Element and Multipurpose Open Space

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Element contain the following goals and policies relevant to the analysis of energy resources for the Project:

Policy LU 17.2:

Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside.

Policy OS 11.1:

Enforce the state Solar Shade Control Act, which promotes all feasible means of conservation and all feasible uses of alternative energy supply sources.

Policy OS 11.2:

Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

Policy OS 11.3:

Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.

Policy OS 11.4:

Encourage site-planning and building design that maximizes solar energy use/potential in future development applications.

3.7.3 Methodology for Analysis

All construction, operation, and decommissioning activities for the Project would include use of energy-consuming equipment and processes. This analysis presents a qualitative discussion of the Project's energy use for all phases and components based on the quantitative analysis presented in Section 3.9: Greenhouse Gas Emissions. As set forth in the State CEQA Guidelines, Appendix F: Energy Conservation, the goal of conserving energy implies the wise and efficient use of energy, including the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

Lead agency actions that are consistent with these goals would not be likely to cause an energy-related impact. The energy impact analysis emphasizes avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy resources. It also considers whether the Project would result in a potentially significant environmental impact due to inefficient, wasteful, and unnecessary consumption of energy.

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The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and Riverside County Environmental Assessment Checklist. For energy resources, the Checklists ask if the Project would:

- Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Impact ENG-1)
- Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency. (Impact ENG-2)

3.7.4 Impacts and Mitigation Measures

Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Construction of the Project would last approximately 15 months. The Project would temporarily use energy resources for construction activities. During construction, vehicles and equipment would consume energy resources in the form of diesel fuel and gasoline. Equipment and materials manufactured for the Project would also require energy use. Temporary construction power services would be required for construction activities. Energy use for the Project is presented in Section 3.9, Greenhouse Gas Emissions. Consumption of energy resources as a result of Project construction would be similar to the construction of other nearby solar facilities and would cease upon the completion of construction. Decommissioning impacts are anticipated to be similar to the construction impacts and would also use energy. The implementation of Mitigation Measure AQ-1 would reduce energy consumption during Project construction by requiring all construction diesel engines to meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines, limiting idling for all diesel heavy construction equipment, and properly maintaining equipment and trucks in accordance with manufacturer's specifications. Construction of the Project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

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Operation and Maintenance

Operation of the Project would generate electricity that would be interconnected with the SCE Red Bluff substation. During operation, Project activities would be limited, and approximately 10 workers would be required on site during operation, including administrative personnel, operators, security, and maintenance personnel. Workers would conduct daily site visits for security, maintenance, and repairs. Operational activities that would consume energy would include panel washing, vehicle and equipment maintenance, vegetation management, equipment replacement, and road maintenance. Most workers would be located off site. The small workforce and operational activities would require minimal energy use. While the Project would consume energy, the Project would use renewable energy to generate electrical power that would displace that generated using fossil fuel. The Project would result in a less-than-significant impact with respect to the inefficient consumption of energy.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the upgrades would be minimal and short-term and would not result in inefficient consumption of energy. Therefore, impacts would be less than significant.

Significance Determination Before Mitigation

Potentially significant

Mitigation Measure

MM Air Quality- 1.

Significance Determination After Mitigation

Less than significant

Impact ENG-2: Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

The Project would generate up to 150 MW of electrical power using renewable energy. Implementation of the Project would assist California in achieving its renewable energy use objectives under SB 100 and SB 350 and greenhouse gas emissions reduction goals under AB 32. The Project would also be consistent with the policies outlined in the County of Riverside General Plan by developing renewable energy power-generation capabilities in an environmentally responsible manner. Therefore, the Project would directly support federal, State, and local plans for renewable energy power-generation development. Beneficial impacts related to State or local plans for renewable energy use or energy efficiency would occur, and the Project would not conflict with or obstruct a State or local plan for renewable energy.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the upgrades would be minimal and short-term and would not conflict

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with or obstruct a State or local plan for renewable energy. Therefore, impacts would be less than significant.

Significance Determination

Less than significant

3.7.5 Cumulative Impacts

The geographic scope of the cumulative analysis for energy consumption is eastern Riverside County, which includes all the cumulative projects identified in Tables 3.1-1 and 3.1-2. This geographic area was selected because all cumulative projects have the potential to utilize energy resources temporarily or permanently or have the potential to conflict with plans and policies related to increasing renewable energy and energy efficiency.

As discussed under Impact a), the Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Mitigation Measure AQ-1 would reduce the consumption of energy resources by requiring all construction diesel engines to meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines, limiting idling for all diesel heavy construction equipment, and properly maintaining equipment and trucks. Operational vehicle and equipment use would not result in the wasteful, inefficient, or unnecessary consumption of energy due to the limited use of diesel fuel and gasoline. Operation of the Project would reduce fossil fuel use for electrical generation by displacing it with electrical power generated using renewable energy.

Construction of the cumulative projects identified in Tables 3.1-1 and 3.1-2 would require the use of fossil fuels. However, it is assumed that each cumulative project would implement best management practices and comply with all applicable federal, State, and local regulations to reduce wasteful, inefficient, or unnecessary use of energy resources. Many of the cumulative projects listed in Tables 3.1-1 and 3.1-2 are solar energy projects that reduce fossil fuel use for electric power generation by generating power using renewable energy, which contributes to California's renewable energy use objectives. The Project would not make a cumulatively considerable contribution to energy impacts and would constitute a beneficial cumulative contribution to supporting federal, State, and local plans for renewable energy development.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the upgrades would be minimal and short-term and would not result in cumulative impacts related to inefficient use of energy or conflict with or obstruct a State or local plan for renewable energy. Therefore, impacts would not be cumulatively considerable.

Significance Determination before Mitigation

Significant

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Mitigation Measures for Cumulative Impacts

Mitigation Measures Air Quality- 1 would be implemented to address potential energy impacts for the Project. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to energy impacts would not be cumulatively considerable and would be less than significant.

3.7.6 References

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3.8 Geology, Soils and Mineral Resources

This section presents the environmental setting and analysis of impacts to geology, soils, and minerals resources resulting from the Project. This section describes existing geology, soils, and mineral resource information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.8.1 Environmental Setting

The following information is from the Paleontological Resource Assessment Report for the Savira Solar Project, Riverside County, California (Chronical Heritage 2025a), Paleontological Resource Survey Report for the Savira Solar Project, Riverside County, California (Chronical Heritage 2025b), the Stage 1 Geotechnical Study for the Savira Project, Riverside County, California (Terracon Consultants, Inc. 2025), the Preliminary Geotechnical Engineering Report for the Savira Project, Riverside County, California (Terracon Consultants, Inc. 2026, Appendix F) and the Response to Comments by County of Riverside Planning Department - Savira Solar Project (Terracon Consultants, Inc. 2026b, Appendix F).

Regional Setting

The Project site is within the Colorado Desert Geomorphic Province in Southern California. The Colorado Desert Geologic province is characterized by relatively low elevations (low desert) with mountain ranges separated by desert playas and basins.

The Project site is located in the Chuckwalla Valley, situated between relatively uplifted mountain ranges consisting of granitic and metamorphic rocks. These ranges drain toward the valley forming young (Holocene-age) alluvial fans with erosional remnants of Pleistocene-age fans along the margins of the mountains. Windblown sands (dunes) are extensive. Minor areas locally are occupied by dry lakes (playas), including Palen Dry Lake. These lakes are normally dry but are subject to flooding during summer monsoon rains. A Geologic Index Map (Jennings, 1967, Salton Sea Sheet) depicting these units and others in the Chuckwalla Valley is included in Appendix F.

Geologic Setting and Units

Based on geologic mapping by Terracon (Terracon Consultants, Inc. 2026b, Appendix F) and by Jennings (1967), the Project site is underlain by young alluvial deposits, mapped as Qal. The alluvium consists of sands and silty sands with gravel (Appendix F). The Geologic Map in Appendix F includes site-specific geologic mapping of the site and locations of representative exploratory borings. Some explorations were removed for clarity of the map.

Very young wash deposits are mapped as Qw, marginal to the western portion of the Project site. The wash deposits are very recent to historic in age. The washes associated with Qw cross Interstate 40 via culverts (Terracon 2026b, Appendix F).

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Soil Types and Hazards

Soil Types

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) has mapped soils in the Project area. A summary of the properties of the major soil type within the Project site, as accessed through the NRCS Web Soil Survey, is presented in Table 3.7-1.

Table 3.7-1 Mapped Soil Units and Soil Properties

Map unit name	Percentage of Project area within soil unit	Hydrologic group ^a	Wind erodibility group ^b	Soil erodibility factor (K factor) ^c	Linear extensibility percent ^d
101—Carsitas-Carsitas non gravely complex, 2 to 4 percent slopes	100%	A	2	.15	0

Notes:

- ^a A Hydrologic Group is a group of soils having similar runoff potential under similar storm and cover conditions. Soil properties that influence runoff potential depth to a seasonal high-water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Soils in Group A have the lowest runoff potential when wet and transmit water freely, while soils in Group D have the highest runoff potential when wet and water movement through the soil is restricted (NRCS, 2025).
- ^b A *wind erodibility group* (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion, which varies according to factors such as soil texture, organic matter content, carbonates, rock fragments, and mineralogy (NRCS Staff n.d.). Soil moisture and frozen soil layers also influence wind erosion. WEG values are assigned to soil map units by NRCS and range from a value of 1 to 8: high wind erosion susceptibility (WEG 1 or 2), moderate wind erosion susceptibility (WEG 3 or 4), low wind erosion susceptibility (WEG 5, 6, or 7), and no susceptibility to wind erosion (WEG 8) (NRCS, 2025).
- ^c The soil erodibility factor (known as the *K factor*) is used to indicate the susceptibility of soils to sheet and rill erosion by water and the rate of runoff. K factor values range from 0.02 (least erodible soils) to 0.69 (most erodible soils). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (NRCS, 2025).
- ^d The linear extensibility percent of a soil is used to identify shrink-swell classes as follows: low (<3), moderate (3-6), high (6-9), and very high (>9).

Source: (NRCS n.d.)

Subsurface soils encountered during site specific borings consisted of medium dense to very dense silty sands silty sands with gravel. Cobbles ranging between 3 and 6 inches in diameter were encountered within all of test pits excavated to a depth of 10 feet below ground surface. Very dense silty sand layers were encountered between depths of 5 and 15 feet within some boring locations. The above-average density of the soil layers is an indicator of the possible presence of caliche within the site. Caliche refers to the calcium carbonate, generally white, light pink, or reddish brown, commonly found within the subsurface soil layers in the Mojave Desert region (Terracon Consultants, Inc. 2026b).

Expansive and Collapsible Soils

Expansive soils contain large amounts of clays that expand when wetted and cause damage to foundations if moisture collects beneath structures (e.g., settlement, structure heave, slab-on-grade foundation shifting). Wetting can occur as a result of precipitation, a rise in the water table, irrigation water application, water line leakage, and other factors. Damage from expansive soils also occurs when the soils dry out and contract. Linear extensibility percent is the linear

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expression of the volume difference of natural soil between wet and dry conditions (NRCS n.d., tit. National soil survey handbook, title 430-VI). The linear extensibility percent of a soil is used to identify shrink-swell classes as follows: low (<3), moderate (3–6), high (6–9), and very high (>9). The soils within the Project site were classified as low shrink-swell class (NRCS n.d.).

Soil collapse occurs when increased moisture weakens chemical or physical bonds between soil particles, which allows the soil structure to collapse and the ground surface to subside. Collapsible soils occur as relatively dry alluvial fan, colluvium, and wind-blown deposits or as generally low-density, fine-grained combinations of clay and sand left by mudflows that have dried, resulting in the formation of small air pockets in the subsurface. These soils typically consist of silt and sand, with minor amounts of clay. When moisture is added the soils weaken, resulting in collapse or subsidence (Terracon Consultants, Inc. 2026b).

The Project site was tested and a consolidation test performed at the BESS location identified sandy soils in some areas with a slight collapse potential when saturated under normal BESS footing loads (Terracon Consultants, Inc. 2026b).

Erosion

Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from the Earth's surface over time by physical forces such as rainfall, flowing water, wind, or anthropogenic agents. The erosion rate depends on factors such as geologic parent material, soil type, slope, soil placement, vegetation, and human activity. Erosion potential generally is higher in areas with steep slopes and on granular soils. Erosion potential also increases when vegetation is removed and soils are exposed. The soil erodibility factor (known as *K factor*) is used to indicate the susceptibility of soils to sheet and rill erosion by water and the rate of runoff. K factor values range from 0.02 (least erodible soils) to 0.69 (most erodible soils). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (NRCS n.d.). The NRCS assigns two separate K factors to soil map units: factor Kw considers the whole soil while factor Kf considers only the fine-earth material, which are soil particles less than 2.0 millimeter in diameter. The K factor does not apply to organic horizons. The soils within the Project site typically have low K factor ratings (0.15). Wind erosion is most prevalent in silty and fine sandy soils with disturbed vegetation. High winds can create hazardous dust storms in the Project area. Dust storms are also a health hazard to residents that are forced to breathe particulates in the air. *Wind erodibility groups* (WEGs) are made up of soils that have similar properties affecting their susceptibility to wind erosion. WEG values are assigned to soil map units by NRCS and range from a value of 1 to 8: high wind erosion susceptibility (WEG 1 or 2), moderate wind erosion susceptibility (WEG 3, 4, or 4L), low wind erosion susceptibility (WEG 5, 6, or 7), and no susceptibility to wind erosion (WEG 8). As shown in Table 3.7-1, the soils within the Project area have a WEG of 2, which is high wind erosion susceptibility (NRCS n.d.).

Subsidence

Subsidence is the deep-seated settlement of soils due to mining, dissolution of subsurface carbonate rocks, or fluid withdrawal (oil, natural gas, or groundwater). Subsidence also can be caused by consolidation, hydrocompaction, oxidation or dewatering of organic-rich soils and,

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more rarely, tectonic down-warping during earthquakes (Riverside County 2024). Land subsidence associated with groundwater overdraft is a concern in many valley areas in California. Review of the Safety Element of the Riverside County General Plan (Riverside County 2024) maps the Project area as susceptible to subsidence; however, no areas with documented subsidence are mapped underlying the Project site and, to date, no land subsidence has occurred at nearby solar projects (Riverside County 2024). Additionally, the USGS has not mapped any subsidence within the Project area (USGS n.d.).

Landslides

A landslide is the slipping down or flowing of a mass of land (rock, soil, and debris) from a mountain or hill. Landslide potential is high in steeply sloped areas underlain by alluvial soils, highly weathered material, thinly bedded shale, or bedrock where the bedding planes are oriented in an out-of-slope direction (i.e., bedding plane angles that are greater than horizontal but less than the slope face) or with fracture planes (Riverside County 2024). Landslides can be caused by human activities (slope over-steepening or overloading) and natural events (e.g., earthquakes, rainfall, erosion). Much of the Project area is relatively flat with low potential for landslides.

Faults and Seismicity

Faults

Faults are fractures or lines of weakness in the Earth's crust. Sudden movement along a fault generates an earthquake. The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) designates Earthquake Fault Zones based on the presence of an active fault. The CGS has developed criteria to classify fault activity for the A-P Act. By definition, an active fault is one "sufficiently active and well-defined," with evidence of surface displacement within Holocene time, roughly the last 11,000 years (CGS [1999] 2007). A potentially active fault displaces Quaternary deposits (last 1.6 million years). Potentially active faults also represent possible surface rupture hazards although to a lesser degree. In contrast to active or potentially active faults, faults considered inactive have not moved in the last 1.6 million years. New construction for human occupancy within active fault zones is prohibited unless a comprehensive geologic study shows that the fault does not pose a hazard to the proposed structure. Solar Energy facilities are not intended for human occupancy; therefore, they do not fall within the Alquist-Priolo Special Studies Zones requirements. However, the active fault zones represent the best available information for the potential for fault surface ruptures within the Project area (Figure 3.8-1).

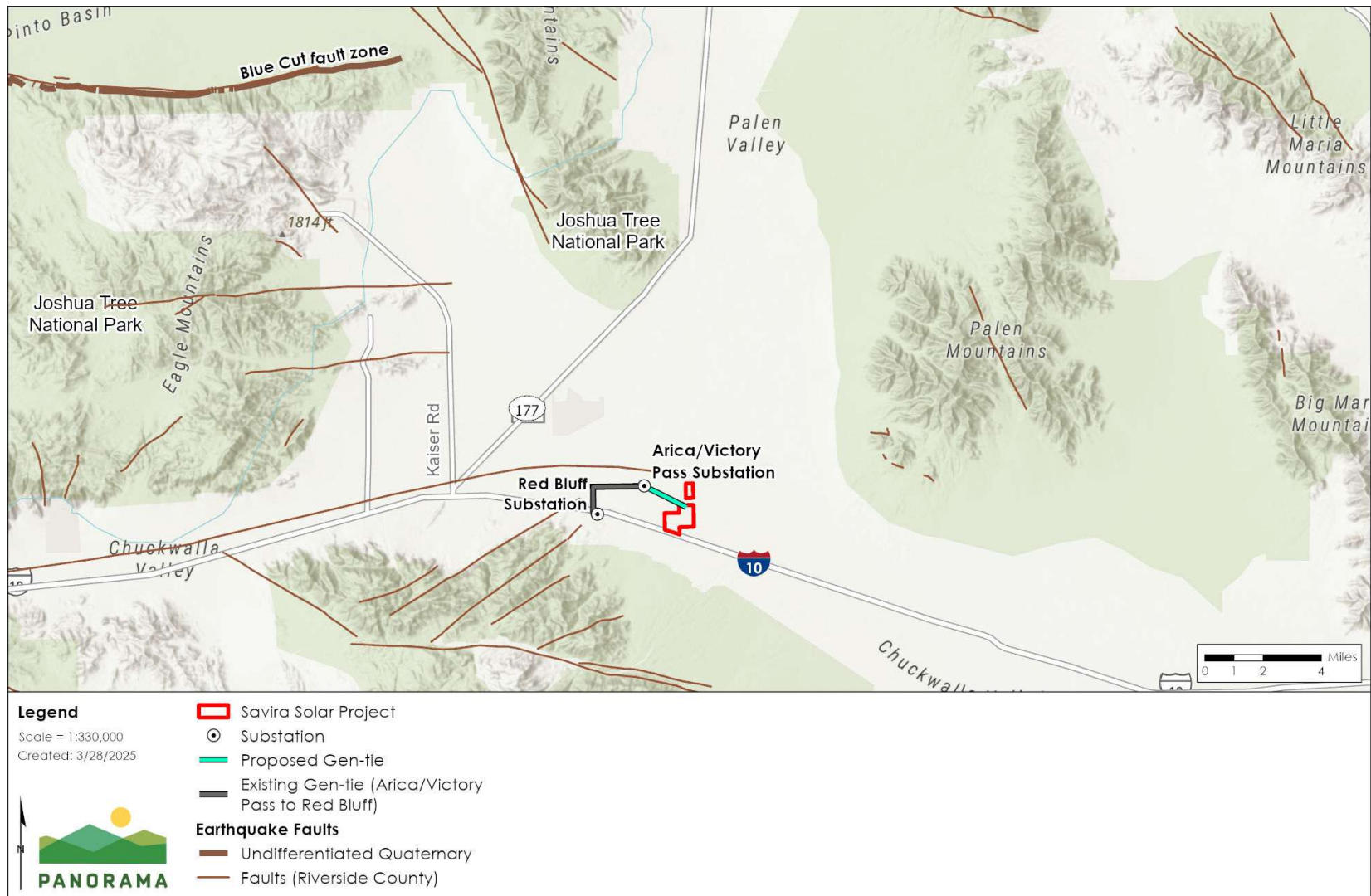
The site is located in Southern California, which is a seismically active area. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. As calculated using the USGS Unified Hazard Tool, the San Andreas (Coachella), which is considered to have the most significant effect at the site from a design standpoint, has a maximum credible earthquake magnitude of 7.76 and is located approximately 57 kilometers from the site. Based on the USGS Design Maps Summary Report, using the American Society of Civil Engineers (ASCE 7-22) standard, the peak ground acceleration (PGA_M) at the project site is expected to be 0.37 g. Based on the

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USGS Unified Hazard Tool, the project site has a mean magnitude of 6.83. Furthermore, the site is not located within an Alquist-Priolo Earthquake Fault Zone based on review of the State Fault Hazard Maps (Terracon Consultants, Inc. 2026b).

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Figure 3.8-1 Major Earthquake Faults in the Project Region



Source: (USGS 2022)

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Fault Rupture

Surface fault rupture occurs when fault movement causes displacement of surface deposits. The displacement may result from a large-magnitude earthquake or from “creep” (measurable surface displacement in the absence of an earthquake) along a fault without an associated earthquake. The Project site does not lie within or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone designated by the State of California to include traces of suspected active faulting. The closest APZ boundary, designated for the Hidden Spring fault zone, is located approximately 48 kilometers southwest of the site. This portion of the Colorado Desert is not characterized by active or potentially active faults and the potential for fault rupture within the site is considered low. No active faults are shown on or in the immediate vicinity of the site on published geologic maps, including the Riverside County GIS system and Jennings (2010).

No evidence for active faulting on or immediately adjacent to the site was observed during the geologic field reconnaissance or on the aerial photographs reviewed. The site is located on a gently-sloping alluvial fan emanating from granitic bedrock terrain located southwest of the site, on the other side of 1-40. Review of aerial imagery dating back to 1953 confirms a uniform geomorphic surface of Holocene age with local erosional remnants of Pleistocene age surfaces (Qc on attached Geologic Index Map). Terracon’s investigation did not reveal any evidence for disruption of this slope, such as changes in slope (inflections) or scarps. Lidar imagery available from the USGS (<https://apps.nationalmap.gov/3depdem/>) for the site also confirms a uniformly sloping surface with no evidence for faulting (Appendix F).

Ground Motion

Ground shaking is the seismic effect that results in most structural damage. The Project site is subject to ground shaking associated with earthquakes on active faults near the Project site, including the San Andreas fault system. The seismic evaluation conducted for the nearby Athos Project by Terracon (Terracon Consultants, Inc. 2018) indicates moderate to strong ground shaking should be anticipated in the Project area.

Liquefaction

Liquefaction is a mode of ground failure that results when a saturated soil loses substantial strength in response to earthquake shaking. Liquefaction is typically a hazard where loose sand or non-plastic silt soils exist below groundwater but may also occur with sensitive plastic silt or clay below groundwater. According to the Riverside County GIS application (accessed June 2026b), the Project site and surrounding area are included within a "moderate" liquefaction potential. Based on the site soil density and lack of historical high groundwater, the soils at the site are not susceptible to liquefaction or lateral spreading in a seismic event. Other hazards associated with liquefaction, such as lateral spreading are also considered low to negligible.

At the request of the Riverside County Planning Department, Terracon performed a dry seismic settlement evaluation using data from our exploratory borings drilled to a depth of 51 ½ feet bgs with the software "LiquefyPro" by CivilTech Software. A Peak Ground Acceleration (PGAM) of 0.37g and the de-aggregated modal magnitude of 8.1 were utilized as input into the analysis

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program. The analysis results show that seismically induced settlement of dry/unsaturated sands at the site is estimated to be on the order of 0.12 inch. The maximum differential seismic settlement could be on the order of one-half of the total seismic settlement over a distance of 50 feet. This anticipated seismic settlement combined with static settlement of 1 inch for the recommended foundation bearing pressures included in the original geotechnical report, are within generally accepted tolerances for shallow spread footing foundations planned for the improvements and additional recommendations are not required at this time (Terracon 2026b, Appendix F).

Sand Transport

The Project site is located on the boundary of the Chuckwalla Valley sand transport corridor.

The dominant sand-transport direction occurring in eastern Chuckwalla Valley is toward the east (USGS 2021). However, occasional strong wind events from the north can transport large quantities of sand southward and temporarily reshape local geomorphic features as observed in late October 2019 (USGS 2021). Natural sand-transport corridors are necessary to allow sand to be transported eastward from the ephemeral stream channels and playas that supply sediment to the dunes, sand sheets, and sand ramps of Chuckwalla Valley for southward transport during episodic strong weather events (USGS 2021).

According to mapping compiled by the Bureau of Land Management (BLM), the Project region is a sand transport area. However, the Project site itself is not located within an aeolian and sand transport area although it may provide some sand through the washes to the sand transport area (BLM 2023).

Mineral Resources

The Project site is mapped within Mineral Resource Zone (MRZ) 4 (Riverside County 2024), which is identified as “areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of industrial mineral resources.” Therefore, no economically viable mineral deposits are known to be present at the site, and no mines are known to have existed within the Project site. The California Department of Conservation Division of Mine Reclamation Mines Online website (CDOC n.d.) indicates that no mines are located within the Project area.

3.8.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program

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was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

International Building Code (IBC)

Published by the International Code Council, the purpose of the IBC is to establish minimum structural requirements to provide a reasonable level of safety, public health, and general welfare, through structural strength, and safety to life and property from fire and other hazards attributed to the built environment. The provisions of the IBC apply to the construction, alteration, relocation, enlargement, replacement, repair, use and occupancy, location, maintenance, removal, and demolition of buildings or structures as well as any appurtenances connected to applicable buildings or structures. The IBC also incorporates the requirements and regulations set forth in several other International Code Council codes, including the International Energy Conservation Code, the International Existing Building Code, the International Fire Code, and the International Fuel Gas Code. The IBC is in use or adopted in all 50 states of the United States and is updated every 3 years to ensure that new construction methods and technologies are incorporated into existing codes. The IBC has replaced the Uniform Building Code as the basis for the California Building Code (CBC).

California Desert Conservation Area Plan.

The BLM manages the portions of the Project area on BLM-administered land under the California Desert Conservation Area (CDCA) Plan, As Amended. With respect to mineral resources, the CDCA Plan aims to maintain the availability of mineral resources on public lands for exploration and development. The DRECP LUPA amended the CDCA Plan with a focus on renewable energy and conservation. Regarding minerals, the DRECP does not amend the CDCA Plan goals, it adds the goal to support the national need for a reliable and sustainable domestic mineral and energy supply and to support responsible mining and energy development operations necessary for California's infrastructure, commerce, and economic well-being.

State

The Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures intended for human occupancy. The main purpose of the A-P Act is to prevent the construction of buildings used for human occupancy on the surface traces of active faults. The A-P Act requires the State Geologist to delineate Earthquake Fault Zones along active faults within the state and to issue appropriate maps. Setbacks from active

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faults are required within the specified zones. For the purpose of the A-P Act, an active fault is one that has moved in the last 11,000 years. For projects located within active fault zones, the State's Guidelines for Evaluating the Hazard of Surface Fault Rupture (CGS Note 49) must be followed by the engineering geologists who prepare fault rupture hazard investigation reports that are required and reviewed by the county geologist.

Seismic Hazard Mapping Act of 1990

The Seismic Hazard Mapping Act (SHMA) was passed in 1990 following the 1989 Loma-Prieta earthquake to reduce the potential impacts of earthquakes on public health and safety and to minimize property damage caused by earthquakes related to ground deformation. The SHMA established a requirement for the identification and mapping of areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground-shaking. The SHMA requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone Maps). Zones of Required Investigation have been designated for portions of Kern and Los Angeles counties, and Seismic Hazard Zone Maps have been completed for portions of both counties that are located within the Project area (CDOC 2015).

California Building Code

The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. It is based on the 2021 International Building Code, with the addition of more extensive structural seismic provisions. The 2022 CBC was published July 1, 2022, by the California Building Standards Commission and became effective January 1, 2023. The CBC is included in California Building Standards Code (the CCR title 24) and is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns

Seismic sources and the procedures used to calculate seismic forces on structures are defined in section 1613 of the CBC. The code requires that all structures and permanently attached nonstructural components be designed and built to resist the effects of earthquakes. The code also includes grading and other geotechnical issues, building specifications, and non-building structures.

Surface Mining and Reclamation Act.

The Surface Mining and Reclamation Act (SMARA) of 1975 (Pub. Resources Code § 2710 et seq.) mandated the initiation by the State Geologist of mineral land classification to help identify and protect mineral resources in areas within the state subject to irreversible land uses that would

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preclude mineral extraction. The Act also allowed the State Mining and Geology Board to designate lands containing mineral deposits of regional or statewide significance. Mineral lands are mapped according to jurisdictional boundaries (i.e., counties), mapping all mineral commodities at one time in the area, using the California Mineral Land Classification System. Classification into Mineral Resource Zones is completed by the State Geologist in accordance with the State Mining and Geology Board's priority list. Classification of these areas is based on geologic and economic factors without regard to existing land use and land ownership.

Local

Riverside County General Plan

The Multipurpose Open Space Element (MOSE) and the Safety Element of the County of Riverside General Plan provide policies to protect natural resources and open space and to minimize the effects of natural and human-caused hazards to safety in and around unincorporated Riverside County. The MOSE addresses protecting and preserving natural resources, agriculture and open space areas, managing mineral resources, preserving and enhancing cultural resources, and providing recreational opportunities for the citizens of Riverside County. There are no relevant policies included in the MOSE for the Project due to the fact that there are no minerals or mining activities within the Project site. However, the following policies included in the Safety Element are relevant to the Project:

S 2.10:

Identify and request mitigation of on-site slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements, particularly during the entitlement or permitting process.

S 2.11:

Request grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, to ensure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.

S 2.18:

Request studies that assess the potential of this hazard on proposed development within "High" and "Very High" wind erosion hazard zones and request appropriate mitigation to wind erosion hazards prior to the issuance of development permits.

S 2.20:

Request buildings to be designed to resist wind loads as appropriate for their form and location.

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Riverside County Ordinances

Title 15 of Riverside County Ordinances regulates buildings and construction by adopting reference to the CBC in addition to County-specific amendments that are equal to or more stringent than the provisions of the CBC.

Riverside County Department of Environmental Health

The Department of Environmental Health oversees on-site wastewater treatment system permits and projects and reviews and approves septic system plans. To obtain a construction permit for the installation of a new septic system, a building permit is required from the local building and safety agency. A Land Use Application (specifically, On-Site Wastewater Treatment System Construction Application) must be submitted, along with supporting documentation and fees, at the Downtown Riverside or Indio Office, depending on the location of the project. After submission and evaluation, additional information may be required. Supporting documentation includes the following:

- A percolation report, including three sets of detailed plans, signed by a Professional of Record registered with the Department of Environmental Health
- A floor plan, drawn to scale, of the dwellings or structures that the septic system will service
- Documentation of water service, such as a will-serve letter or water bill. If an existing water well will be used to supply potable water, a well evaluation may be required. If a new well will be constructed, a County Environmental Health Permit for construction, reconstruction, or destruction of the well is required throughout the County.

3.8.3 Methodology for Analysis

Evaluation of potential geologic and soil-related impacts were based on the Preliminary Geotechnical Engineering Report for the Savira Project, Riverside County, California (Terracon Consultants, Inc. 2026a; Appendix F) and the Response to Comments by Riverside County for the Savira Solar Project (Terracon Consultants, Inc. 2026b; Appendix F), as well as information from BLM, County of Riverside, USGS, and CGS. Geotechnical considerations for structures would be in accordance with current applicable building and seismic codes in effect at the time the engineering plans and designs are approved. The Applicant will include the recommendations of the Geotechnical Engineering Report in all final engineering plans and designs. The EIR assesses Project impacts to soils and geologic hazards based on these considerations.

This EIR assesses impacts of the Project on mineral resources based on the Mineral Resource Zone and BLM, CGS, and County identification of the mineral resources for the area. The EIR assesses the degree to which the Project would reduce the availability of mineral resource areas identified within the Project site.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are

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consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts resulting from geologic or soil conditions come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. The Checklists ask if a project would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42 (Criteria Requiring No Further Evaluation)
 - Strong seismic ground shaking (Impact GEO-1)
 - Seismic-related ground failure, including liquefaction (Impact GEO-2)
 - Landslides (Criteria Requiring No Further Evaluation)
- Result in substantial soil erosion or the loss of topsoil. (Impact GEO-3)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Impact GEO-4 and Impact GEO-5)
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) [Section 1803.5.3 of the California Building Code (2019)], creating substantial direct or indirect risks to life and property. (Impact GEO-6)
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (Impact GEO-7)

The criteria for assessing impacts to mineral resources come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. The Checklists ask whether a project would:

- Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the State. (Criteria Requiring No Further Evaluation)
- 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. (Criteria Requiring No Further Evaluation)

Additional geologic conditions impact criteria set forth in the County's Environmental Assessment Checklist ask whether a project or any project-related component would:

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- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards. (Impact GEO-4)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence. (Impact GEO-5)
- Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard. (Criteria Requiring No Further Evaluation)
- Change topography or ground surface relief features. (Criteria Requiring No Further Evaluation)
- Create cut or fill slopes greater than 2:1 or higher than 10 feet. (Criteria Requiring No Further Evaluation)
- Result in grading that affects or negates subsurface sewage disposal systems. (Impact GEO-8)
- Be impacted by or result in an increase in wind erosion and blow sand, either on or off site. (Impact GEO-9)

Additional mineral resources impact criteria set forth in the County's Environmental Assessment Checklist ask whether a project or any project-related component would:

- Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines. (Criteria Requiring No Further Evaluation)

Criteria Requiring No Further Evaluation

Due to nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

- **Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault?** The Project site is not located within Alquist-Priolo active fault zones (Terracon Consultants, Inc. 2026a) or a fault zone based on County of Riverside Fault Study Zones; therefore, the risk of a rupture of a known fault at the site and any resulting adverse effects is unlikely.
- **Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides?** The Project site is relatively flat to gently sloping with no potential for landslides or seismically induced landslides (Terracon Consultants, Inc. 2026b). Therefore, there would be no potential for loss, injury, or damage due to landslides or seismically induced landslides.
- **Would the project be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?** Seiche hazards are only present at locations that are beside an enclosed or semi-enclosed body of water. None of the Project elements are located

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adjacent to an enclosed or semi-enclosed body of water and as such there would be no potential to be adversely affected by seiche hazards. The Project site is also located on relatively gentle topography that the potential for mudflows is relatively low. In addition, the soils on site have a hydrological group A, which has the lowest runoff potential when wet and, thus, the Project would not be subject to mudflows (NRCS n.d.). The Project site is not located within close proximity to a volcanic hazard with the closest volcanic hazard area being the Salton Buttes Area at the south end of the Salton Sea, located approximately 43 miles southwest of the Project site (USGS 2023). Therefore, based on the Project site location and characteristics, no impacts would occur.

- **Would the project change topography or ground surface relief features?** The Project site is flat to gently sloping and no mass grading would be conducted on the Project site. Mowing, grubbing, grading, and compaction would be conducted for the substation, storage container, operation and maintenance (O&M) facility, laydown yards, and internal and external roads. The solar array areas would have minimal grading and would be mowed and rolled to reduce vegetation height. Therefore, the Project would have no major change to the topographic relief or ground surface and no impacts would occur.
- **Would the project create cut or fill slopes greater than 2:1 or higher than 10 feet?** The Project site is flat to gently sloping and no mass grading would be conducted on the Project site. The Project does not include components that would require creating cut or fill slopes greater than 2:1 or higher than 10 feet. Therefore, no impacts would occur.
- **Would the project result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State.** The Project site is mapped within Mineral Resource Zone (MRZ) 4 (Riverside County 2024), which is identified as “areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of industrial mineral resources.” Therefore, no economically viable mineral deposits are known to be present at the site, and no mines are known to have existed within the Project site. The California Department of Conservation Division of Mine Reclamation Mines Online website (CDOC n.d.) indicates that no mines are located within the Project area. Therefore, no impacts would occur.
- **Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?** There are no locally important mineral resource recovery sites within the Project site as delineated in the County of Riverside General Plan (Riverside County 2015) or the Desert Center Area Plan (Riverside County 2021). Therefore, no impacts would occur.
- **Would the project potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?** No proposed, existing, or abandoned quarries or mines are located within or near the Project solar

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development site or along the proposed gen-tie line alignment (CDOC n.d.). Therefore, no impacts would occur.

3.8.4 Impacts and Mitigation Measures

Impact GEO-1: Would the project be subject to strong seismic ground shaking?

Although no known Holocene-active or non-active faults underlie the Project site, strong ground shaking resulting from a seismic event on a regional Holocene-active fault could occur. The Project area is subject to ground shaking associated with earthquakes on active faults near the Project site, including the San Andreas fault system.

The Project would be required to follow regulatory requirements regarding building the structures and would follow the recommendations provided in the Preliminary Geotechnical Engineering Report (Terracon Consultants, Inc. 2026a), including for any seismic concerns. Because of the existing regulatory requirements and with implementation of the existing geotechnical recommendations, the impact would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to strong seismic ground shaking would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact GEO-2: Would the project be subject to seismic-related ground failure, including liquefaction?

As noted in the Preliminary Geotechnical Engineering Report, due to the anticipated depth to groundwater and the dense nature of subsurface soils, the potential for liquefaction at the site is considered low. Other geologic hazards related to liquefaction, such as lateral spreading, are therefore also considered low (Terracon Consultants, Inc. 2026a)

Construction of the Project components, including the solar arrays, BESS, and O&M building, would be required to adhere to the seismic requirements of the County Building Code and most recent California Building Code (CBC), and would be consistent with the recommendations outlined in the Preliminary Geotechnical Engineering Report (Terracon Consultants, Inc. 2026a), which include requirements for site preparations and foundation design measures to ensure that any liquefaction hazards are minimized. Therefore, considering the anticipated groundwater conditions (i.e., depth to groundwater) at the site and compliance with existing regulatory requirements and implementation of the geotechnical design recommendations in the Project's final engineering design, potential impacts of seismic-related ground failure, including liquefaction, would be less than significant.

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Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to seismic-related ground failure, including liquefaction, would be less than significant.

Significance Determination before Mitigation

Less than significant

Impact GEO-3: Would the project result in substantial soil erosion or the loss of topsoil?

Construction and Decommissioning

Ground disturbance that would occur during Project construction would require the use of heavy machinery for vegetation removal, grading, installation of roads, the solar field, transmission facilities, the O&M building, the substation, the BESS, and other facilities. Construction and future decommissioning of these facilities would involve the use of tractors, bulldozers, graders, trucks, and various other types of heavy equipment, and would involve minor changes to on-site topography. These activities would loosen existing surface soils and sediments, increasing the potential for erosion during storm events. In addition, increased impervious areas could also lead to erosion by increasing the rate and frequency of runoff.

However, the final grading plan would be designed to minimize alteration of drainages as the Project site is relatively flat to gently sloping and would require minimal grading to allow for installation of the solar panels. The site would be contour-graded level, and the overall topography and drainage patterns would remain unchanged. Very limited cut and fill would be completed within specific arrays to limit slope steepness and produce a consistent grade in each solar field area.

A SWPPP or similar would be incorporated in the Project to address potential erosion and siltation on or off-site during construction activities and erosion control measures would be included in the Closure, Decommissioning, and Reclamation Plan that would be implemented during the decommissioning phase of the Project. In addition, a Project Drainage Plan would be developed that would be designed to control runoff and prevent long-term erosion during operations. The Drainage Plan would include pre-development and post-development peak flow estimates and hydraulic calculations to determine flood conditions, floodplain limits, flood depths, and velocities. The Drainage Plan would demonstrate the relationship of drainage and flood features to the components of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports. The Drainage Plan would demonstrate adequate design to protect the Project site from flooding, erosion, and scour without adversely affecting adjacent property, inducing erosion, or concentrating or diverting flows. The Drainage Plan would include detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates, including but not limited to retention basins and swales, thus minimizing the potential for off-site erosion and siltation of downstream washes. Finally, future

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decommissioning would involve site restoration, which would improve site conditions to approximate pre-Project conditions.

Additionally, the Project would include mitigation measures for dust control, minimization of vegetation and soil disturbance, and revegetation of disturbed areas (Mitigation Measure Air-2, Mitigation Measure Air-4, and Mitigation Measure BIO-6) to reduce wind and water erosion and prevent soil from leaving the site.

At the end of the Project's operation, the solar modules, gen-tie line, and all other improvements would be dismantled and removed from the site. Impacts to soil erosion would be similar to those under construction and similar mitigation would be required to reduce erosion to less than significant.

Because wind and water erosion of disturbed soil would be minimized by implementation of plans required by regulations and mitigation measures, the Project would not result in substantial soil erosion or the loss of topsoil. Therefore, impacts would be less than significant with mitigation.

Operation and Maintenance

Once developed, the solar site would maintain sheet flow where possible, with water exiting the site in existing natural contours and flows. Post-construction flows would follow the same general drainage patterns as existing conditions. The soil is very permeable, so following the natural terrain would allow for maximum infiltration and reduce runoff. Permanent retention basins would be installed as needed to limit runoff and maintain existing conditions to the extent possible. Therefore, impacts would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to substantial soil erosion or loss of topsoil would be less than significant.

Significance Determination before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Air-2, Mitigation Measure Air-4, Mitigation Measure BIO-6

Significance Determination after Mitigation

Less than significant.

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Impact GEO-4: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?

The Project site is in an area of relatively gentle topography and therefore, has a relatively low potential for slope instability or landslide hazards including rockfalls (Riverside County, 2024). Lateral spreading, a hazard associated with liquefaction where liquefiable materials move as a block toward an open slope face, would also have a low probability at the site due to the topography, depth to groundwater, and low liquefaction potential (Terracon Consultants, Inc. 2026a).

The Project site was tested and a consolidation test performed at the BESS location identified sandy soils in some areas with a slight collapse potential when saturated under normal BESS footing loads (Terracon Consultants, Inc. 2026a). This low potential for collapse would be minimized by implementing the Preliminary Geotechnical Engineering Report's recommendations to address collapse-related hazards through site preparation methods. Engineering of the Project would take into consideration the results and recommendations provided in the Preliminary Geotechnical Engineering Report in accordance with building code requirements and therefore the potential impact of on- or off-site landslide, lateral spreading, collapse, or rockfall hazards would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to on- or off-site landslide, lateral spreading, collapse, or rockfall hazards would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

Although there are areas within the Project area that are mapped susceptible to subsidence, there are no areas with documented subsidence mapped underlying the Project site (Riverside County 2024). Additionally, the USGS has not mapped any subsidence within the Project area (USGS n.d.). However, the Preliminary Geotechnical Engineering Report includes an evaluation of collapsible soils with recommendations to address these hazards through site preparation methods (Terracon Consultants, 2026a; Appendix F).

Subsidence tends to occur where there is sustained regional groundwater pumping that substantively depresses the groundwater table and geologic conditions are conducive to volumetric changes from the lowered groundwater. The Project may include the construction of an on-site groundwater well to provide water supply for the Project. Although the Project may

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include groundwater pumping, the volume of water required would be relatively small. Water use assumptions during the construction phase is anticipated to be a maximum of 100 acre-feet (AF) to be used for dust suppression, truck wheel washing, and other purposes during the 2-year construction timeframe (average of 50 acre-feet per year [AFY]). Up to 10 AFY would be used during operation. This being the case, the potential for subsidence due to groundwater withdrawal is not likely. However, the Preliminary Geotechnical Engineering Report includes recommendations to address these hazards through site preparation methods, and the potential impact would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in ground subsidence would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact GEO-6: Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?

The soils within the Project site were classified as low shrink-swell class (NRCS n.d.). The Preliminary Geotechnical Engineering Report addresses any expansive soils that may be present on site and includes development of specific structural design for expansive conditions. Adherence to these geotechnical recommendations provided by a licensed geotechnical engineer in accordance with building code requirements would reduce potential impacts of expansive soils to less-than-significant levels.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to being located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property would be less than significant.

Significance before Mitigation

Less than significant.

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Impact GEO-7: Would the project have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

During the operation and maintenance phase of the Project, a septic system or leach field may be required for facilities at the O&M building. The leach field, if needed, would be located near the O&M building and connected to it by a sewer line. In accordance with building code requirements, the Preliminary Geotechnical Engineering Report (Appendix F) includes an evaluation of soil percolation tests, contours and anticipated use and engineering of the Project would take into consideration the results and recommendations provided.

In addition, the septic system, if needed, would be permitted through the County Department of Environmental Health, which includes a review process to ensure adequate drainage of wastewater. Prior to construction of the septic system, percolation testing would be required for the proposed location of the septic system to ensure that observed percolation of water can meet minimum standards set by the County. Therefore, based on existing site characteristics and adherence to current septic system testing and code requirements, the potential for soils incapable of adequately supporting the use of septic wastewater would be minimized and the potential impact would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to being placed on soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water would be less than significant.

Significance Determination before Mitigation

Less than Significant

Impact GEO-8: Would the project result in grading that affects or negates subsurface sewage disposal systems?

There are no subsurface sewage disposal systems on or adjacent to the Project site. Therefore, the Project grading, which would be minimal, would not affect or negate existing subsurface sewage disposal systems. The leach field, if needed, would be located near the O&M building and connected to it by a sewer line. Engineering of the Project would take into consideration the results and recommendations provided in the Preliminary Geotechnical Engineering Report (Appendix F) in accordance with building code requirements and ensure that any grading required for the Project would not affect or negate associated subsurface sewage disposal. Impacts would be less than significant.

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Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to grading that affects or negates subsurface sewage disposal systems would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact GEO-9: Would the project be impacted by or result in an increase in wind erosion and blow sand, either on or off site?

The Project area is located within the Chuckwalla Valley sand transport corridor. According to mapping compiled by BLM, the Project regions is a sand transport area, but the Project site is not located within an aeolian and sand transport corridor (BLM 2023).

The PV modules would be mounted on relatively unobtrusive steel support posts that would not substantively increase wind erosion or blow sand on or off site. The O&M building would also represent a relatively minor aboveground improvement. Any buildup of windblown sand on any of the proposed aboveground improvements (e.g., solar panels, O&M building, battery storage area) may require some minor maintenance that would be included as part of anticipated maintenance activities but is not likely to be substantively impacted by wind erosion or blow sand. This being the case, any impact from wind erosion and blown sand would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, impacts related to being impacted by or result in an increase in wind erosion and blow sand, either on or off site would be less than significant.

Significance Determination before Mitigation

Less than significant.

3.8.5 Cumulative Analysis

Tables 3.1-1 and 3.1-2 list existing and reasonably foreseeable projects in the region. Geologic and soil conditions can vary widely within a short distance and the impacts tend to be very localized, making the cumulative geographic scope the Project and immediately adjacent projects. The Redonda Solar Project would be immediately adjacent to the Project and the construction activities may overlap. These projects when combined with the Project may result in cumulatively

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considerable geologic or erosion impacts. Existing adjacent projects include the Victory Pass Solar Project and Arica Solar Project.

The Project would have no impact related to fault rupture, landslides, seismically induced landslides, or locally important mineral resource recovery sites; therefore, it could not contribute to cumulative impacts for these issue areas.

Other geologic hazards would be site-specific impacts for the Project, and each of the past, present, and reasonably foreseeable development projects in the cumulative analysis study area. While the geologic and seismic hazards could impact the Project infrastructure, it would be unlikely to be damaged or destroyed in a manner that would combine with the geologic and seismic impacts to the adjacent project and cause injury to a nearby person. This being the case, the geologic and seismic impacts would not combine to result in a cumulatively significant geologic impact and the Project's contribution to such impacts would not be cumulatively considerable.

With respect to soil resources and the potential for erosion and loss of topsoil, impacts to soil erosion triggered by Project construction, operation, and decommissioning could combine with the effects of construction, operation, and decommissioning of other nearby projects. While each project's soil disturbance could combine to result in cumulative off-site water and wind erosion, each project has or would undergo an environmental review under NEPA and CEQA and would be required to abide by existing regulations and Applicant commitments such that they would have a DESCP, Drainage Plan, SWPPP, or equivalent and plans to stabilize and/or revegetate disturbed areas. These measures would reduce wind and water erosion and minimize potential for soil to leave the Project site. Additionally, the Project would be subject to the same regulations, have a SWPPP (or equivalent plan), and have mitigation measures for dust control, minimization of vegetation and soil disturbance, revegetation of disturbed areas, a DESCP, and a Drainage Plan (Mitigation Measure Air-2, Mitigation Measure Air-4, and Mitigation Measure BIO-6) to reduce wind and water erosion and prevent soil from leaving the site. Because wind and water erosion of disturbed soil would be minimized by implementation of plans required by regulations and mitigation measures, Project soil erosion would not combine with the erosion from nearby projects and would not create a cumulatively significant impact due to erosion.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, within the existing footprint of previously developed areas. The work to be completed as part of the substation upgrades would not include major ground disturbing activities or new structures to be placed in the area and therefore, these activities would not create a cumulatively significant impact related to geology, soils and minerals.

Significance Determination before Mitigation

Significant

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Mitigation Measures for Cumulative Impacts

Mitigation Measure Air-2, Mitigation Measure Air-4, and Mitigation Measure Bio-6 would be implemented to address potential geology, soils, and mineral resources impacts for the Project and alternatives. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to impacts to geology, soils and mineral resources impacts would not be cumulatively considerable.

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3.9 Greenhouse Gas Emissions

This section presents the environmental setting and analysis of impacts to greenhouse gases (GHGs) resulting from the Project. This section includes existing GHG information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.9.1 Environmental Setting

Climate Change Overview

The term *climate change* is used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Natural processes and anthropogenic actions have been identified as the causes of climate change. The Intergovernmental Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward (IPCC 2014). After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space (IPCC 2014). Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature. Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere is naturally occurring, CO₂, CH₄, and N₂O are also emitted from anthropogenic sources, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion whereas methane emission results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride and are generated in certain industrial processes. CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their *global warming potential* (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to

3.9 GREENHOUSE GAS EMISSIONS

be caused by the same mass of CO₂. CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of 25 and 298 times that of CO₂, respectively (Greenhouse Gas Protocol n.d.).

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations of CO₂). In pre-industrial times (c. 1860), concentrations of atmospheric CO₂ were approximately 280 parts per million (ppm) (NOAA 2024). By February of 2025, atmospheric CO₂ concentrations had increased to 427.09 ppm, 53 percent above pre-industrial concentrations (NOAA 2025).

Potential global climate change impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Regional Setting

In 2022, the United States emitted about 6,343 million metric tons of CO₂ equivalent (CO₂e), or 5,489 million metric tons of CO₂e after accounting for sequestration from the land sector. Emissions increased in 2022 by 1 percent. The increase in total GHG emissions was driven largely by an increase in CO₂ emissions from fossil fuel combustion. In 2022, CO₂ emissions from fossil fuel combustion increased by 1 percent compared to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic (EPA 2025b).

According to the U.S. Environmental Protection Agency (EPA), net emissions in 2022 were 17 percent below 2005 levels. The recent decline is mostly due to a shift to less CO₂-intensive natural gas generation of electricity and a rapid increase in the use of renewable energy in the electric power generation sector. Transportation activities accounted for 28 percent of total GHG emissions in 2022. Emissions from electric power accounted for the second largest portion (25 percent) while emissions from industry accounted for the third largest portion (23 percent) of total GHG in 2022 (EPA 2025b).

The California Air Resources Board (CARB) produces a Greenhouse Gas Emissions Inventory each year that estimates anthropogenic emissions within California (CARB 2024). The 2024 Greenhouse Gas Emissions Inventory estimates GHG emissions from 2000 to 2022. In 2000, California emitted approximately 462.9 million metric tons of CO₂e (MMTCO₂e). Between 2000 and 2022, CO₂e emitted in California decreased by 19.8 percent. Table 3.9-1 lists the most recent GHG emissions emitted in California.

Table 3.9-1 MMTCO₂e Emission in California Between 2018 and 2022

Year	MMTCO ₂ e
2018	410.5
2019	404.4

3.9 GREENHOUSE GAS EMISSIONS

Year	MMTCO ₂ e
2020	368.5
2021	380.4
2022	371.1

Source: (CARB 2024)

The 2019 to 2020 decrease and subsequent increase of GHG emissions from 2020 to 2021 are likely due in large part to the impacts of the COVID-19 pandemic, which were of global significance. The 2022 emissions data, however, shows that the state of California is continuing a trend of GHG emissions reductions since 2019.

3.9.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Vehicle Standards

In 2011, the EPA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO₂ 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 aims to reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA 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 applies to vehicles with model year 2018 through 2027 for certain trailers and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program. On September 27, 2019, the EPA and the National Highway Transportation Safety Administration (NHTSA) published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, or “The Part One Rule” (NHTSA 2019). The Part One Rule revokes California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA finalized rulemaking for SAFE Part Two, which sets CO₂ emissions standards and corporate average fuel economy standards for passenger vehicles and light duty trucks, covering model years 2021 through 2026.

State

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

California passed the California Global Warming Solutions Act of 2006 (AB 32), which established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG

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emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished by enforcing a statewide cap on GHG emissions that were to be phased in starting in 2012. To effectively implement the cap, AB 32 directed CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

AB 32 also required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every 5 years. The initial AB 32 Scoping Plan contained the main strategies California used to reduce the emission of GHGs that cause climate change. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by CARB (CARB 2014). The First Update to the Climate Change Scoping Plan identified the 2020 emissions limit as 431 million metric tons of CO₂e and the 2020 business-as-usual forecast as 509 million metric tons of CO₂e. Finally, the Updated Scoping Plan provided recommendations for establishing a mid-term emissions limit that aligns with the long-term (2050) goals of Executive Order S-3-05 (CARB 2014). In 2017, CARB approved the Second Update to the Climate Change Scoping Plan (2017 Scoping Plan). The 2017 Scoping Plan identified progress made to meet the near-term (2020) objectives of AB 32 and defined California's climate change priorities and activities for the next several years (CARB 2017b). The 2017 Scoping Plan identified the 2020 emissions limit as 431 million metric tons of CO₂e and the 2020 business-as-usual forecast as 509 million metric tons of CO₂e.

In 2022, CARB approved the Third Update to the Climate Change Scoping Plan (2022 Scoping Plan), which lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279 (CARB 2022). The 2022 Scoping Plan:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030;
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels;
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs;
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document;
- Incorporates the contribution of natural and working lands to the state's GHG emissions, as well as their role in achieving carbon neutrality;
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture;
- Evaluates the substantial health and economic benefits of taking action; and
- Identifies key implementation actions to ensure success.

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The recommended measures in the 2022 Scoping Plan and previous Scoping Plans are broad policy and regulatory initiatives that will be implemented at the state level and do not relate to the construction and operation of individual projects.

Executive Order S-3-05

Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

The executive order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is required to submit biannual reports to the Governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts.

California Renewables Portfolio Standard Program

In 2002, a California State law established the basic policy framework for the increased use of renewable energy resources in California, known as the Renewables Portfolio Standard (RPS). The RPS requires renewable energy resources to serve a certain percentage of electricity sales by all electricity utilities in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. Major eligible renewable energy resources, as defined by the California Energy Commission (CEC), include biomass, geothermal, solar, wind, and small hydroelectric facilities. The CEC and the California Public Utilities Commission (CPUC) work collaboratively to implement RPS (CPUC 2024).

Electric utilities in California must procure a minimum quantity of sales from eligible renewable energy resources as specified by RPS requirements. To integrate renewable generators on the grid, optimize the delivery of growing amounts of renewable energy production, and facilitate achieving the targeted GHG reductions, the California legislature has also authorized energy agencies to establish energy storage procurement targets.

The Clean Energy and Pollution Reduction Act of 2015 (Senate Bill 350 [SB 350]) established California's state policy objectives on long-term energy planning and procurement as signed into law on October 7, 2015. The 100 Percent Clean Energy Act of 2018 (Senate Bill 100 [SB 100]) revised the RPS targets to establish the policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045.

With SB 350 and SB 100, California's objectives include the following:

- To set the RPS for the procurement of California's electricity from renewable sources at 33 percent by 2020, 50 percent by 2026, and 60 percent by 2030

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- To plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045
- To double the energy efficiency savings on electricity and natural gas end uses by retail customers by 2030

California State legislation has steadily increased the renewable energy target, most recently from SB 100 (September 2018), which increased the RPS targets to 60 percent of California's electricity by 2030 and 100 percent of all retail electricity sold in California by 2045.

Cap-and-Trade Program (17 CCR 95801 to 96022)

The California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Program) was initially approved by CARB in 2011. The Cap-and-Trade Program applies to covered entities that fall within certain source categories, including petroleum refiners and suppliers of transportation fuels, and is triggered when facility emissions exceed 25,000 MTCO_{2e} in a year. The covered entities must hold compliance instruments sufficient to cover the actual GHG emissions, as evidenced through CARB's Mandatory Reporting Regulation requirements. This means that transportation fuel suppliers bear the GHG-compliance obligation in the Cap-and-Trade Program for the GHG emissions from motor vehicle and off-road equipment fuels used by construction workforces and crews.

Emission Reductions of SF₆ from Gas Insulated Switchgear (17 CCR 95350 to 95359)

In 2010, CARB adopted a regulation for reducing or phasing out SF₆ emissions from electric power system gas insulated switchgear. Amendments to the regulation became effective on January 1, 2022, that established phase-out dates for SF₆. In accordance with the amendments, no person may acquire SF₆ *gas-insulated equipment* (GIE) for use in California unless a SF₆ phase-out exemption was approved by the Executive Officer, the SF₆ GIE device was present in California and reported to CARB for a data year prior to the phase-out date, the SF₆ GIE was purchased prior to the phase-out date, or the SF₆ GIE manufacturer is replacing a defective already existing SF₆ GIE device. Phase-out dates for SF₆ GIE begin on January 1, 2025 (CARB 2019).

California Governor's Office of Planning and Research, Guidelines on GHG (SB 97)

The California Natural Resources Agency originally adopted amendments to the State CEQA Guidelines for reviewing the topic of GHG emissions to implement the California Legislature's directive in PRC section 21083.05 (enacted as part of Senate Bill 97 [Chapter 185, Statutes, 2007]). With the amendments that became effective in March 2010, the Natural Resources Agency developed a Final Statement of Reasons that guides the scope of GHG analyses for CEQA documents and addresses the subject of life-cycle analysis.

Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in developing a given project and infrastructure) depends on emission factors or econometric factors that are not well established for all processes. The basis of State CEQA Guidelines set forth by the Natural Resources Agency

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indicate that a full life-cycle analysis would be beyond the scope of a given CEQA document because of a lack of consensus guidance on life-cycle analysis methodologies.

Local

Riverside County Climate Action Plan

The Riverside County Climate Action Plan (CAP) Update was approved in December 2019 to present the current GHG inventory, forecasts, and targets for the County of Riverside (Riverside County 2019). The CAP includes GHG inventories of community-wide and municipal sources based on the data available for the year 2017. The County's 2017 inventory amounted to 4.9 million metric tons of CO_{2e} for all activities within the unincorporated communities served by the County of Riverside as well as for County government operations alone. The CAP Update identifies various policies to promote renewable energy as a means of achieving GHG emissions reductions goals (Riverside County 2019).

Riverside County General Plan

The County of Riverside General Plan Air Quality Element includes a GHG emissions reduction strategy for the County to establish goals and policies to incorporate sustainability features and reduce of GHG emissions (Riverside County 2018). The GHG emissions reduction strategy would ensure that Riverside County activities and project approval would not result in emissions of significant amounts of GHGs. The Air Quality Element contains the following policy relevant to the analysis of GHGs for the Project:

Policy AQ 20.19

Facilitate development of renewable energy facilities and transmission lines in appropriate locations.

3.9.3 Methodology for Analysis

Evaluation of potential GHG-related impacts is based on the on the Savira Solar Project - Air Quality Technical Report, prepared by RCH Group (Appendix C; (RCH Group 2024). The GHG analysis was conducted to determine the GHG impacts, in terms of GHG emissions, using the significance levels identified by South Coast Air Quality Management District (SCAQMD). The GHG analysis includes a review of criteria pollutant emissions such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Regulatory models used to estimate GHG impacts include the following:

- CARB's EMFAC emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California (CARB 2021). This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.
- CARB OFFROAD emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road

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equipment such as loaders, excavators, and off-road haul trucks operating in California (CARB 2017a). This model reflects CARB's current understanding of how various equipment types operate and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

- EPA's AP 42 Compilation of Air Pollutant Emission Factors contains emission factors for stationary point and area emission sources such as those associated with vehicle travel on paved roads and unpaved surfaces, and material handling and storage (EPA 2025a).

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For GHG, the Checklists ask, would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Impact GHG-1)
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Impact GHG-2)

The SCAQMD adopted an interim screening level threshold of 10,000 metric tons of CO₂e per year for stationary source/industrial projects for which the SCAQMD is the lead agency (SCAQMD Resolution No. 08-35, December 5, 2008) (SCAQMD 2008). Per guidance from the SCAQMD, construction emissions are amortized over a 40-year period to account for the contribution of construction emissions over the lifetime of the project and then added to a project's operational emissions to account for the contribution of construction to GHG emissions for the project lifetime (SCAQMD 2008).

The Riverside County CAP uses a threshold level of 3,000 MTCO₂e per year to identify projects that require a project-specific technical analysis to quantify and mitigate project emissions (Riverside County 2019). This analysis uses the 3,000 MTCO₂e per year significance threshold to assess potential GHG emissions impacts from the Project and compatibility with the Riverside County CAP. Project emissions of less than 3,000 metric tons of CO₂e per year would indicate that the Project's contribution to global climate change would be less than cumulatively considerable.

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3.9.4 Impacts and Mitigation Measures

Impact GHG-1: Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment?

Construction, operation, and eventual decommissioning activities would result in GHG emissions from fossil-fuel combustion in the engines of construction equipment and the vehicles carrying construction materials and workers to and from the site. Diesel fuel or gasoline is used in mobilizing the heavy-duty construction equipment, site development and preparation, facility construction, and roadway construction in addition to eventual decommissioning. Decommissioning activities would create a temporary phase of emissions similar to those of construction after the end of the Project's useful life of 40 years.

Equipment and vehicle use over the duration of construction would amount to 3,241 MTCO₂e emissions. The construction GHG emissions were averaged over the 40-year life of the Project when compared to the annual significance threshold, as recommended by SCAQMD. The Project would generate a total of 3,241 MTCO₂e during construction, as shown in Table 3.9-2. The estimated 40-year amortized construction GHG emissions are 81 MTCO₂e, which does not exceed the SCAQMD significance threshold of 3,000 MTCO₂e per year. Decommissioning of the Project would generate similar GHG emissions to construction activities. Operational GHG emissions would generate approximately 185 MTCO₂e, as shown in Table 3.9-2. The estimated 40-year amortized construction plus operational GHG emissions are 266 MTCO₂e per year, below the significance threshold of 3,000 MTCO₂e per year.

Table 3.9-2 Estimated Project GHG Emissions (metric tons)

Source	One-time GHG Emissions (MTCO ₂ e)	Annual Emissions (MTCO ₂ e)
Construction total	3,241	
Decommissioning total	3,241	
Construction 40-year amortized		81 ^a
Decommissioning 40-year amortized		81
40-Year construction plus operational plus decommissioning GHG emissions		347
Land use conversion		314 to 4,948
Avoided by producing electricity		134,845
Total GHG emissions		-134,184 to -129,550

Note:

^a The 40-year amortized is the sum of construction GHG emissions from 2026 through 2028 divided by the 40-year life of the project.

Source (RCH Group 2024)

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Effects of Land Use Conversion

The Project would result in ground disturbance that would disturb soils and remove vegetation that sequesters carbon. Existing vegetation and soil on the Project site serve as a natural carbon sink by removing CO₂ from the atmosphere. Land use conversion for solar development would limit the natural sequestration of carbon. The loss of carbon uptake depends on the amount of vegetation that would be removed for construction of the Project. As described in Section 2.0, the level of site disturbance has not been determined for the Project, but site preparation would generally involve vegetation clearing, grubbing, and grading. Carbon loss as a result of the Project is uncertain because it would depend on site characteristics, the vegetation and soils on site, and the available data on carbon sequestration rates. Annual carbon sequestration rates vary from 0.16 metric tons of carbon per acre per year to 2.52 metric tons of carbon per acre per year. One ton of carbon is equivalent to 3.67 tons of CO₂ (Allen, Jenerette, and Santiago 2013). As vegetation regrows following the construction of the Project, carbon sequestration loss would be reduced.

The conversion of up to approximately 535 acres of land for the construction of the solar facility, BESS, access roads, and impervious areas would result in approximately 314 to 4,948 MTCO_{2e} per year of carbon sequestration being lost during the lifetime of the Project, as shown in Table 3.9-2. This estimate is conservative as the analysis assumes the whole Project site would be cleared and grubbed of vegetation and accumulative soil carbon sequestration for the site would be entirely lost. Construction strategies such as restoring portions of the site to pre-project conditions, controlling fugitive dust, and minimizing impacts to vegetation, habitat, and soil erosion contribute to preserving some of the natural carbon storage process for effective carbon sequestration.

Emissions Avoided by Producing Electricity

The electrical power produced using renewable energy would displace power produced by carbon-based fuels that would otherwise be used to meet electricity demand. The displaced power is incremental power provided by power-generating facilities elsewhere on the grid, typically natural gas power plants. Potential GHG emissions that could be offset by the Project are compared with average emissions from combustion electric power systems for California to evaluate how solar projects would reduce emissions that could be emitted from fossil-fuel power plants generating the same quantity of electrical power to meet demands.

The Project would produce approximately 373,176 MWh of electricity per year for delivery to California's end-users. Some of the electricity produced from the Project would displace fuel-burning by California's flexible natural-gas-fired resources or electricity imported to California. This would avoid GHG emissions that could otherwise be emitted by fuel-burning power plants. The rate of GHG emissions offset would vary with the mix of fuel-burning-generated and imported electricity displaced, with the least efficient and highest-emitting power plants normally being turned down in response to the additional renewable generation; in California, there is a single dominant dispatchable fuel (natural gas) (CEC 2019). To estimate the GHG emissions avoided by solar production, this analysis assumes that the BESS component would dispatch its stored electrical power after the solar output decreases for the day. Because natural gas provides most of the flexible capacity, this analysis uses an avoided emissions displacement

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factor of approximately 0.373 MTCO₂ per MWh, which is a conservatively low emission factor for efficient, conventional generation using natural gas, combined-cycle generators (CEC 2019).

The proposed energy storage component would allow solar facilities to shift the solar output to the grid-wide system during peak (evening) hours, when solar production has the most benefits (or is most valuable in deferring use of natural gas elsewhere). The effects of the emissions avoidance quantified indicates that implementation of the Project would result in a net GHG reduction by avoiding 134,845 MTCO₂e annually. While accounting for the effects of land use conversion, the range of net GHG reduction would be 129,550 to 134,184 MTCO₂e annually. The impact would be less than significant, and no mitigation is required.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the substation upgrades would be minimal and short-term and would not generate significant greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Project would produce electricity in a manner that improves California's ability to supply renewable energy to end-use customers and to achieve statewide renewable energy goals. Electricity from the Project would be used to serve the needs of customers and would facilitate compliance with the RPS, as set forth by California's Clean Energy and Pollution Reduction Act of 2015 [Senate Bill 350 (SB 350)]. Energy storage provided by the Project would help optimize and integrate the delivery of renewable energy from the Project, consistent with California's energy storage policies.

GHG emissions avoided by using renewable energy to produce electricity would be consistent with and would not conflict with California's GHG emissions reduction targets. The GHG emissions reduction goals are set forth by the California Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 32 (SB 32) of 2016, which codifies the GHG emissions target to 40 percent below the 1990 level by 2030. The GHG targets are implemented through the CARB Climate Change Scoping Plan. Overall, the electricity produced by the Project would contribute to the continued reduction of GHG emissions in California's power supply.

Other activities related to construction and operation of the Project would be either exempt from or required to comply with CARB rules and regulations to reduce GHG emissions and would cause no other potential conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

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As the total GHG emissions generated during construction and operation of the Project would be considerably less than the GHG emissions avoided, implementation of the Project would result in a net reduction in GHG emissions across the State's electricity system, which would contribute to meeting the State's GHG emissions reduction goals under AB 32 and subsequent targets for 2030 and beyond. The Project would not conflict with any applicable GHG management plan, policy, or regulation. This impact would be less than significant, and no mitigation is required.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the substation upgrades would be minimal and short-term and would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

3.9.5 Cumulative Impacts

This impact assessment describes the Projects' contribution towards global climate change through GHG emissions that occur because of the Project. GHG emissions are inherently a cumulative concern with a cumulatively global scope because the direct environmental effect of GHG emissions is to influence global climate change. No single project could, by itself, result in a substantial change in climate. As the project-specific analysis for the Project analyses cumulative global impacts, there is no separate cumulative impacts analysis for global climate change. Furthermore, the evaluation of GHG emissions impacts presented here assessed the inherent contribution of the Project to mitigating cumulative effects of climate change and demonstrated that the Project would result in a long-term net reduction of GHG emissions and rather than conflict with any applicable GHG reduction goals. The Project-specific incremental impact on GHG emissions would therefore not be cumulatively considerable.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed on the substation upgrades would be minimal and short-term. The upgrades incremental impact on GHG emissions would not be cumulatively considerable.

Significance Determination before Mitigation

Less than Significant

3.9.6 References

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3.10 Hazards and Hazardous Materials

This section presents the environmental setting and analysis of potential hazards and hazardous materials impacts resulting from the Project. This section describes existing hazards and hazardous materials information for the Project, applicable regulations, environmental impacts, and mitigation measures that would reduce or avoid significant effects.

3.10.1 Environmental Setting

Land Use

Existing and past land use activities are commonly used as indicators of sites or areas where hazardous material storage and use may have occurred or where potential environmental contamination may exist. For example, many historic and current industrial sites have soil or groundwater contaminated by hazardous substances. Other hazardous materials sources include leaking underground tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes. Current and former agricultural properties commonly have herbicide, pesticide, and/or fumigant soil contamination.

The Project is located on private lands north of I-10 and approximately 8.5 miles east of Desert Center, California. The Project site is primarily surrounded by BLM-administered lands that have been designated as Development Focus Areas (DFAs) and have been developed with existing solar projects. Solar facilities adjacent to the Project site include the Arica and Victory Pass Projects to the northwest, the Athos Solar Project to the northeast, and the Palen Solar Project to the east.

The Project site consists of undeveloped vacant land partially planted with date farms and equipped with water wells, farming equipment, irrigation equipment, an irrigation reservoir, a mobile home, shipping containers, office area, and natural gas engines (Terracon Consultants, Inc. 2024).

Formerly Use Defense Sites

There are three formerly used defense sites within the vicinity of the Project site: the Desert Training Center/California-Arizona Maneuver Area (DTC/CAMA), Desert Center Division Camp, and Desert Center Army Airfield. The Project site is within the historic boundary of the DTC/CAMA. The DTC/CAMA was developed in 1942 to train soldiers for combat during World War II (WWII). The DTC/CAMA encompassed 18,000 square miles within the Mojave and Colorado Deserts in California, Arizona, and Nevada (BLM n.d.). Within the DTC/CAMA there were 11 camps which provided hospitals, medical units, supply depots, and communication logistics for the divisional camps (BLM n.d.). Each divisional camp was up to 3 miles long and a mile wide and consistent of primarily tents which could house up to 15,000 soldiers. The DTC/CAMA was decommissioned in April 1944, and the land was later returned to the Department of Interior in 1947 (BLM n.d.).

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The Desert Center Division Camp was one of the 11 DTC/CAMA camps developed during WWII. The Desert Center Division Camp was located near the Desert Center community, approximately 8.5 miles west of the Project site, and encompassed approximately 35,000 acres. Between 1942 and 1944, the camp was used as a hospital and maneuver area. No division camp was constructed in this area; the units stationed at Desert Center included an evacuation hospital, an observer detachment, an ordnance maintenance company, a quartermaster truck unit, and ammunition depot (USACE 1996).

The Desert Center Army Airfield was located 1 mile northeast of the community of Desert Center and approximately 4.5 miles northwest of the Project site. The airfield was constructed in the early 1940s and was located within the Desert Center Division Camp. The airfield included two 5,500-foot runways with taxiways and a parking apron. Approximately 40 buildings were constructed at the airfield, including an operations building, powerhouse, link trainer building, hangar, and supply buildings. The Desert Center Army Airfield is now the Desert Center Airport at the Chuckwalla Raceway (Military Museum, n.d.).

Valley Fever

Valley fever (also called *coccidioidomycosis* or “cocci”) is a disease caused by the inhalation of fungus spores that grow in the soil in California and the southwestern United States (CDPH n.d.-c). Approximately 97 percent of Valley fever cases are reported in California and Arizona (California Medical Association 2024). Most cases of Valley fever in California occur in the central valley and central coast regions. People get sick from Valley fever from inhaling dust that contains the fungus. The Valley fever fungus is released into the air when the soil surface is disturbed through wind, digging, or vehicles (CDPH n.d.-a).

Valley fever can be serious and even fatal. The fungus infects the lungs and respiratory system, and can cause coughing, difficulty breathing, fever, and fatigue (CDPH n.d.-a). Valley fever is not contagious and cannot be transmitted between people. Symptoms often develop 1 to 3 weeks after exposure to the fungus. Approximately 6 out of 10 people who are infected with Valley fever have no symptoms (CDPH n.d.-b). Most people who get sick with Valley fever have symptoms that go away without treatment. However, Valley fever can result in more severe infections called disseminated disease which can cause infections in the skin, bones, joints, or brain (CDPH n.d.-a).

The rate of Valley fever is increasing across California. Between 2000 and 2018, the incidences of Valley fever increased by nearly 800 percent (Cooksey 2020). In Riverside County, rates of Valley fever increased from less than 5 cases per 100,000 people in 2014 to 9 cases per 100,000 people in 2018 (CDPH n.d.-d). In 2022, a total of 7,451 cases of Valley fever were reported, which is approximately 19 cases per 100,000 people of which approximately 349 cases were reported in Riverside County (CDPH n.d.-d).

Construction workers and others who work outdoors in areas where Valley fever is present are vulnerable to the fungus, especially if their work involves soil disturbance and the operation of heavy machinery (CDPH n.d.-a). In 2016, a solar farm in Monterey County confirmed nine cases

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of Valley fever among 2,410 workers. The incidence among workers at the solar farm was 1,095 per 100,000 people per year, which was 4.4 to 210.6 times higher than county rates (Laws et al. 2018). An investigation conducted by the California Department of Public Health into the nine cases at the solar farm found that water trucks were unable to control dust levels, workers were working in or near trenches, use of respiratory protection was infrequent, and worker training on Valley fever was deficient. In San Luis Obispo County, among 3,572 workers at two solar power-generating facilities, 44 workers were identified with Valley fever symptoms (Wilken et al. 2015). Workers interviewed at the two solar facilities reported frequently performing soil-disruptive exposure activities, infrequent use of respiratory protection, and driving home in work clothes.

Environmental Contamination

A Phase I Environmental Site Assessment (ESA) was conducted for the Project site. The Phase I ESA included a records review to identify any recognized environmental conditions (RECs) and results from a site reconnaissance survey (Terracon Consultants, Inc. 2024). Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed. Two listings for facilities in the California Integrated Water Quality System (CIWQS) regulatory database were mapped at the Project site: the US Solar Desert Center II Phase II and the US Solar Desert Center Phase I. Based on the nature of this database for stormwater permitting and the absence of reported violations, these regulatory database listings do not represent a REC at the site. The remaining listed facilities do not constitute RECs based upon facility characteristics.

A visual site reconnaissance was performed for the Phase I ESA on June 21, 2024 (Terracon Consultants, Inc. 2024). During the site reconnaissance, the following features were observed: natural gas-fueled generators and engines, a water treatment system, filtration and irrigation equipment, three 1,000-gallon diesel *aboveground storage tanks* (ASTs), one 5,000-gallon gasoline AST, 55-gallon drums of motor oil, natural gas pipeline markers, an existing transmission line, trash and debris, and 5-gallon containers of debris, water, and motor oil. Other notable site features included surface waterbodies and wells.

A review of the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) EnviroStor websites revealed no known listed hazardous sites within or adjacent to the Project site. The nearest contamination site to the Project site is the Corn Spring Gap Filler Annex, a military evaluation site located approximately 2.9 miles south of the Project site (DTSC n.d.). The GeoTracker database identified one closed leaking underground storage tank (LUST) approximately 7.8 miles west of the Project site in the Desert Center community (SWRCB n.d.).

Wildfires

The Project site is within a designated California Department of Forestry and Fire Protection's (CAL FIRE's) *local responsibility area* (LRA). The Project is within a moderate *fire hazard severity zone* (FHSZ) (CAL FIRE 2007). According to the Wildfire Susceptibility Map in the County of Riverside General Plan Safety Element, very high and high FHSZ in local, state, and federal responsibility areas are concentrated in the western portions of Riverside County (Riverside

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County 2024). Because the Project is not located in a state responsibility area, CAL FIRE would not be responsible for fire management or suppression activities in this area. Rather, since the Project is within an LRA, the Riverside County Fire Department would provide wildfire protection services to the Project site (see Section 3.19 Wildfire for more information).

Schools

There are no schools within 0.25 mile of the Project site. The nearest school to the Project site is the Eagle Mountain Elementary School, located over 20 miles northwest of the Project site.

Airports and Airstrips

The nearest airport to the Project site is the Desert Center Airport, a private airport located approximately 4.5 miles northwest of the Project site. The Desert Center Airport is a single runway airport and is part of the Chuckwalla Valley Raceway (Chuckwalla Valley Raceway, n.d.). No master plan has been prepared for the Desert Center Airport. The Project site is not located within the Airport Influence Area Boundary or any of the Airport Compatibility Zones in the Desert Center Airport Land Use Compatibility Plan (Riverside County 2004a).

The nearest public airport to the Project site is the Blythe Airport, located approximately 32 miles east of the Project site. Blythe Airport has two runways and is a general aviation facility (Riverside County, n.d.). Other airports in the vicinity of the Project site include the private Julian Hinds Pump Plant Airstrip and the public Chiriaco Summit Airport, located approximately 21 and 25 miles west of the Project site, respectively.

Electromagnetic Fields

Sources of *electric and magnetic fields* (EMFs) include aboveground and underground power lines. The Project region includes numerous high-voltage electric transmission lines in established energy corridors. Numerous years of studies on the health effects from EMFs have generated evidence that is inconclusive.

3.10.2 Regulatory Framework

Federal, State, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

USEPA California Toxics Rule (40 Code of Federal Regulations [CFR] 131)

In 2000, the U.S. Environmental Protection Agency (EPA) promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to waters in California to protect human health and the environment. Under Clean Water Act section 303(c)(2)(B), the EPA requires states to adopt numeric water quality criteria for priority toxic pollutants for which the EPA has issued criteria guidance and the presence or discharge of that could reasonably be expected to interfere with maintaining designated uses. These federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries.

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Resource Conservation and Recovery Act (RCRA) (42 USC § 6901 et seq.)

The RCRA authorizes the EPA to control hazardous waste from “cradle-to-grave” (i.e., generation, transportation, treatment, storage, and disposal). RCRA’s Federal Hazardous and Solid Waste Amendments of 1984 include waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. The Department of Toxic Substances Control is the lead State agency for corrective action associated with RCRA facility investigations and remediation.

Toxic Substances Control Act (TSCA) (15 USC § 2601–2692)

The TSCA authorizes the EPA to require reporting, record-keeping, testing requirements, and restrictions related to chemical substances and/or mixtures. It also addresses production, importation, use, and disposal of specific chemicals, such as *polychlorinated biphenyls* (PCBs), asbestos-containing materials, lead-based paint, and petroleum.

Comprehensive Environmental Response, Compensation, and Liability Act (42 USC § 9601 et seq.)

CERCLA, including the Superfund program, was enacted by Congress on December 11, 1980, and is administered by the EPA. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes 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. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also establishes the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act/SPCC Rule (33 USC section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972

As part of the CWA, the EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, part 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if a single oil (or gasoline, or diesel fuel) storage tank has a capacity greater than 660 gallons or if the total aboveground oil storage capacity exceeds 1,320 gallons or if the underground oil storage capacity exceeds 42,000 gallons and, if due to its location, the facility could reasonably be expected to discharge oil into or upon the *navigable waters* of the United States.

Occupational Safety and Health Administration (OSHA)

OSHA is the agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in Title 29 of the CFR, as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials

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handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Federal Aviation Administration (FAA)

The Federal Aviation Regulation (49 CFR Part 77) establishes standards and notification requirements for objects that may impact navigable airspace. Airports and navigable airspace that are not administered by the DoD are under the jurisdiction of the FAA. This regulation includes (a) FAA notification requirements for proposed construction, or the alteration of existing structures, that meet specific standards; (b) the standards used to determine obstructions to air navigation, and navigational and communication facilities; (c) the process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and (d) the process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

State

California Environmental Protection Agency

The creation of the California Environmental Protection Agency (CalEPA) in 1991 unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board (IWMB), Department of Toxic Substance Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the CalEPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (HWCL) is administered by CalEPA to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the EPA approves the California program, both the State and federal laws apply in California. The HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Department of Toxic Substance Control

DTSC is a department of CalEPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous

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waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. DTSC recently finalized revisions to its hazardous waste regulations (revisions in CCR Title 22, division 4.5, sections and articles in chapters 10, 11, and 23) that allows PV panels to be managed as “universal waste” as of January 1, 2021. By being classified as universal waste, PV solar panels will now be subject to a streamlined set of standards that are intended to ease regulatory burden and promote recycling.

California Fire Code (CFC)

Chapter 12 of the CFC provides provisions related to the installation, operation, and maintenance of energy systems used for generating or storing energy to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises and to provide safety and assistance to fire fighters and emergency responders during emergency operations. Section 1206 of the 2019 CFC provides requirements for Electrical ESS. *Battery energy storage systems* (BESSs) greater than 600 kWh are required by the CFC to be UL (Underwriter’s Laboratory) listed and have full-scale testing using the testing standard UL9540A. UL9540A tests a variety of fire and life safety features on the battery including thermal runaway, gas venting, and fire propagation.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act is a State law that provides a comprehensive water quality management system for the protection of California waters. The act designates the SWRCB as the ultimate authority over State water rights and water quality policy and established nine RWQCBs to oversee water quality on a day-to-day basis at the local and regional level. The Colorado River Basin RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the area. The Colorado River Basin RWQCB adopted the Water Quality Control Plan for the Colorado River Basin Region (Basin Plan) in 1993 and amended it in 2019. This Basin Plan set forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Project discharges to surface waters are subject to the regulatory standards set forth in applicable regional basin plans, which prevent the discharge of hazardous materials into waters of the State.

National Pollutant Discharge Elimination System (NPDES)

The NPDES Program is a federal program that has been delegated to the State of California for implementation through the SWRCB and the nine RWQCB. The SWRCB and RWQCBs have the responsibility of granting NPDES permits and setting waste discharge requirements for stormwater runoff from construction sites. Section 402 of the Clean Water Act authorizes the SWRCB to issue a NPDES General Construction Storm Water Permit (Water Quality Order 2009 0009 DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit if they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies *best management practices* (BMPs) that will prevent all construction

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pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters;

- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and
- Perform inspections of all BMPs.

The Project site is located within the Colorado River Regional Water Control Board jurisdiction.

Unified Program

In 1993, the State (CalEPA) was mandated by Senate Bill 1082 (Health and Safety Code Chapter 6.11) to establish a “unified hazardous waste and hazardous materials management” regulatory program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs: Hazardous Materials Release Response Plans and Inventories (Hazardous Material Business Plan [HMBP]), California Accidental Release Prevention (CalARP) Program, Underground Storage Tank Program, Aboveground Petroleum Storage Act, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements. The Unified Program is implemented at the local level by local government agencies certified by the Secretary of CalEPA. These agencies, known as Certified Unified Program Agencies (CUPAs), implement all the Unified Program elements and serve as a local contact for area businesses. The CUPA for the area is the Riverside County Department of Environmental Health Hazardous Materials Branch. The CUPA also oversees the two Participating Agencies (Corona Fire and Riverside Fire) that implement hazardous materials programs within the County.

The California Public Resources Code (CPRC) Sections 4292 and 4293

CPRC sections 4292 and 4293 specify requirements related to fire protection and prevention in transmission line corridors. CPRC section 4292 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas and shall maintain around and adjacent to any pole or tower that supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak that consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower (CPRC 4292). CPRC section 4293 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land that has primary responsibility for the fire protection of such area, shall maintain a clearance of the respective distances.

California Department of Industrial Relations, Division of Occupational Safety and Health Administration

The 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 generally more stringent than federal regulations. The employer is

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required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR §§ 337 340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Fire Plan

The Strategic California Fire Plan was finalized in June 2010 and directs each CAL FIRE unit to prepare a locally specific Fire Management Plan. In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of CAL FIRE's 21 units and six contract counties. The plans include stakeholder contributions and priorities and identify strategic areas for pre-fire planning and fuel treatment, as defined by the people who live and work with the local fire situation. The plans are required to be updated annually.

Assembly Bill 203

Assembly bill 203 added to the Labor Code section 6709, which addresses occupational safety and health in regard to Valley fever. This "section applies to a construction employer with employees working at worksites in counties where Valley fever is highly endemic, including, but not limited to, the counties of Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura, where work activities disturb the soil." This includes, but is not limited to, digging, grading, or other earth moving operations, vehicle operation on dirt roads, or high winds. Highly endemic means that the annual incidence rate of Valley fever is greater than 20 cases per 100,000 persons per year. An employer subject to this section shall provide effective awareness training on Valley Fever to all employees by May 1, 2020, and annually by that date thereafter, and before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance. Substantial dust disturbance means visible airborne dust for a total duration of one hour or more on any day. The training may be included in the employer's injury and illness prevention program training or as a standalone training program. Riverside County's Valley Fever incidence rates are currently not high enough to be considered highly endemic and require Valley fever awareness training under AB 203.

Local

County of Riverside General Plan

The County of Riverside General Plan Safety Element aims to reduce death, injuries, property damage, and economic and social impact from hazards. The Safety Element's goals and policies relevant to the analysis of hazards and hazardous materials for the Project are as follows:

Policy S 4.1:

All development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire Department and Building and Safety Department for consistency with the following requirements before the issuance of any building permits: (AI 25, 81.1, 81.2, 104.1)

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- a) All proposed development and construction shall meet minimum state, county, and local standards and other legal requirements for fire safety, as defined in the Riverside County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency, based on building type, design, occupancy, and use.
- b) In addition to the standards and guidelines of the California Building Code, California Fire Code, the Riverside County Code of Ordinances, Title 14 of the California Code of Regulations, and other appropriate fire safety provisions, developments shall incorporate additional standards for high-risk, high-occupancy, and dependent facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- c) Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County ordinances, where required. There shall be multiple points of ingress and egress that allow for emergency response vehicle access. Points of access shall also include visible street addresses and signs and sufficient water supplies, infrastructure for structural fire suppression, and other applicable local and state requirements.
- d) Proposed development and construction in Fire Hazard Severity Zones shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the Riverside County Fire Chief.
- e) Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, constructed, and maintained to provide adequate defensibility from wildfires.
- f) Prior to the approval of all parcel maps and tentative maps, the County shall require, as a condition of approval and as feasible and appropriate, the developer meet or exceed the State Responsibility Area Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access (see Gov. Code, Section 66474.02.)
- g) Proposed development and construction of more than four residential units or more than 10,000 square feet of nonresidential space located in Very High Fire Hazard Severity Zones, or other appropriate zones as determined by the Riverside County Fire Department, shall submit and implement a fire protection plan as feasible and appropriate. This plan shall include provisions for roadways and access, firefighting infrastructure, signage, vegetation management, construction materials, and evacuations.

Policy S 5.8:

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Ensure that the use and disposal of hazardous materials in the County complies with local, state, and federal safety standards.

Policy S 5.9:

Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to install automatic fire and hazardous materials detection, reporting and shut-off devices; and install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.

County of Riverside Department of Environmental Health (DEH)

The DEH is responsible for protecting the health and safety of the public and the environment of Riverside County by assuring that hazardous materials are properly handled and stored. The DEH accomplishes this through inspection, emergency response, site remediation, and hazardous waste management services. The County of Riverside DEH also acts as the CUPA for Riverside County and is responsible for reviewing Hazardous Materials Business Plans. A CUPA is a local agency that has been certified by CalEPA to implement State environmental programs related to hazardous materials and waste. The specific responsibilities of the DEH include the following:

- Inspecting hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations
- Implementing CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of underground storage tanks and the handling, storage and transportation and disposal of hazardous wastes
- Providing 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities
- Overseeing the investigation and remediation of environmental contamination due to releases from underground storage tanks, hazardous waste containers, chemical processes or the transportation of hazardous materials
- Conducting investigations and taking enforcement action as necessary against anyone who disposes of hazardous waste illegally or otherwise manages hazardous materials or wastes in violation of federal, state, or local laws and regulations

Riverside County Airport Land Use Compatibility Plan

The Riverside County Airport Land Use Compatibility Plan (RCALUCP) sets forth the criteria and policies that the Riverside County Airport Land Use Commission (ALUC) uses in assessing the compatibility between the principal airports in Riverside County and proposed land use development in the areas surrounding them. The RCALUCP primarily deals with review of local general plans, specific plans, zoning ordinances, and other land use documents covering broad geographic areas. Certain individual land use development proposals also may be reviewed by the ALUC as provided in the policies identified in the RCALUCP. The ALUC does not have

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authority over existing incompatible land uses or the operation of any airport (Riverside County 2004b).

The ALUC adopts Airport Land Use Compatibility Plans for the areas surrounding the airports within its jurisdiction. Local development approvals must be found consistent with the RCALUCP unless approved by a 4/5 supermajority vote. The RCALUCP identifies Airport Influence Areas (AIAs) to protect the public from the adverse effects of aircraft noise, ensure that facilities and people are not concentrated in areas vulnerable to aircraft accidents, and ensure that no structures or activities adversely affect or encroach upon the use of navigable airspace. The Desert Center Airport became private in 2004. The Desert Center Area Plan Public Review Draft dated February 2015 removes the discussion regarding the Desert Center Airport Influence Area. No Compatibility Plan has been prepared for Desert Center Airport, and there are no additional compatibility policies with respect to Desert Center Airport (Riverside County 2004a).

3.10.3 Methodology for Analysis

Evaluation of potential hazard-related impacts is based on the Savira Solar Project – Phase I Environmental Site Assessment, prepared by Terracon Consultants, Inc. (Appendix G) (Terracon Consultants, Inc. 2024). The hazardous materials analyzed include those potentially existing on the site and those that would be used as part of construction, operations and maintenance, and decommissioning. Potential existing hazards were assessed based on review of information State hazard databases and maps for the parcels comprising the Project area.

Some hazardous materials would be used on a short-term basis during construction and decommissioning. Others would be stored on site for use during operation and maintenance. Therefore, this analysis was conducted by examining the specific chemicals to be used, the amount of those chemicals to be used, how the chemicals would be used, how they would be transported to the facility, and how the materials would be stored on site.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For Hazards and Hazardous Materials, the Checklists ask if a project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Impact Hazards – 1)

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- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Impact Hazards – 2)
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Criteria Requiring No Further Evaluation)
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. (Impact Hazards – 3)
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area. (Criteria Requiring No Further Evaluation)
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Impact Hazards – 4)
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Impact Hazards – 5)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Result in an inconsistency with an Airport Master Plan. (Criteria Requiring No Further Evaluation)
- Require review by the Airport Land Use Commission. (Criteria Requiring No Further Evaluation)

Criteria Requiring No Further Evaluation

Due to the nature of the Project and the Project area, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

- **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.** No schools are located within one-quarter mile of the Project site. Further, the Project would not use acutely hazardous materials, and the limited amounts of hazardous materials used during construction and operation and maintenance would be used, stored, transported, and disposed of in accordance with all applicable laws and regulations. Therefore, the Project would not result in hazardous materials impacts to existing or proposed schools.
- **For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area;**
 - It would result in an inconsistency with an Airport Master Plan; and

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- **It would require review by the Airport Land Use Commission.**

The Project is not located within an airport land use plan or within 2 miles of a public or public use airport. The closest airport to the Project site is the Desert Center Airport, located approximately 4.5 miles northwest of the Project site. Furthermore, the Desert Center Airport is a private airport and does not have an airport land use plan. Therefore, there would be no safety hazard or excessive noise exposure for people residing or working in the area related to proximity to an airport.

3.10.4 Impacts and Mitigation Measures

Impact Hazards – 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction

Construction of the Project would require small quantities of hazardous materials, such as fuel, oil, and hydraulic fluid used in on-site vehicles and equipment. Fuel tanks may be stored on site during construction and would contain between 500 and 1,000 gallons of fuel. The fuel tanks would be removed from the site once construction is complete. Fueling and maintenance that would occur on site would be done in a designated area that includes secondary containment. If quantities exceed regulatory thresholds, storage would be required to be undertaken in compliance with the Spill Prevention, Control, and Countermeasure (SPCC) Plan and a Hazardous Materials Business Plan (HMBP), which would be developed prior to construction. The SPCC Plan and HMBP would contain specific performance standard requirements for storage, secondary containment, emergency and spill response, and the handling and storage of hazardous materials on the Project site. Material Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel.

The Project may use a variety of PV technologies including, but not limited to, cadmium telluride panels, crystalline silicon panels, or copper indium gallium diselenide panels. None of the panels being considered contain materials that are classified as hazardous wastes because the chemicals within PV modules are highly stable and would not be available for release to and interaction with the environment. If a panel is broken during construction or operation, the pieces would be cleaned up completely and returned to the manufacturer for recycling. During decommissioning, the solar panels would be removed and placed in secure transport containers for storage and transported to another facility for reuse, materials recycling, or disposal in accordance with regulations in effect at the time of closure.

Construction waste would be managed in accordance with applicable State and local regulations. Waste produced on site would be transported to the appropriate waste management facilities. Limited hazardous waste would be generated from construction activities and would be sent to an approved off-site hazardous waste disposal facility in accordance with applicable policies. Hydraulic fluids and lubricating oils would be recycled when possible. All construction waste

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would be stored on site and handled in accordance with the Hazardous Materials Business Plan. Workers would be trained to properly identify and handle all hazardous wastes.

Herbicides may be used during construction activities for weed management. The use of herbicides would be approved by Riverside County and applied in accordance with the manufacturer's recommendations. There are no nearby sensitive receptors, including residences or workers, that would be exposed to substantial concentrations of herbicides. Use of any herbicides would comply with all local, state, and federal guidelines. Therefore, the application of herbicides during construction would not have an adverse effect on workers or the public and would result in a less-than-significant impact.

The Project site is located within the historic World War II DTC/CAMA training camp/maneuver area, where military exercises with tanks and troops, including practice artillery fire, weapons training, and land mine placement and removal, were conducted. Construction, operation and maintenance, and decommissioning of the Project would require ground disturbance that could unearth World War II *unexploded ordnance* (UXO) and munitions, including land mines, personnel mines, shells, mortars, and bullets. The detonation of such unexploded munitions could pose a safety hazard to construction workers on site. Implementation of Mitigation Measure Hazards-1 (UXO Training and Reporting Plan) would formalize UXO training, investigation, removal, and disposal to ensure that potential UXO impacts would be less than significant.

Operation and Maintenance

Project operation would involve the routine storage and use of quantities of commercially available hazardous materials for routine maintenance. These materials may include diesel fuel, gasoline and motor oil for vehicles, mineral oil to be sealed within the transformers, and lead-acid-based and/or lithium-ion batteries for emergency backup. The storage and use of these small quantities of commercially available hazardous materials would not pose a significant hazard to the public or environment. Hazardous materials would be stored, transported, and disposed of as required by the HMBP. Herbicides may be used for weed control during operations. As discussed above, herbicides would be used in accordance with all applicable local, State, and federal requirements. Operation of the Project would produce small quantities of hazardous waste associated with maintenance activities, which could include broken and rusted metal, defective modules, electrical materials, paint, solvents, cleaners, waste oil, oily rags, and batteries. Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. The required SPCC Plan and HMBP and associated emergency response plan and inventory will be prepared and implemented during Project operation. Preparation and compliance with the required SPCC and HMBP and compliance with applicable State and federal regulations would minimize the risk of damage or injury from use, disposal, and transport of hazardous materials to less-than-significant levels during the Project operation and maintenance.

Southern California Edison Activities

The SCE activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Although there would be materials brought in to construct the improvements, and use of some hazardous materials, the work will

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be completed within the existing footprint of the substations and adhere to the existing O&M plans within those areas. Impacts would be less than significant.

Significance Determination before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measure Hazards - 1

Mitigation Measure Hazards-1: UXO Training and Reporting Plan

Where ground disturbance work is involved, the construction contractor(s) should have a representative that be OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) trained in accordance with standard 29 CFR section 1910.120 and hold a current certification. The Applicant shall prepare a UXO Training and Reporting Plan to properly train all site workers in the recognition, avoidance, and reporting of military debris and ordnance that will meet all applicable requirements. The Applicant shall submit the plan to Riverside County for review prior to the start of construction. The plan shall contain, at a minimum, the following:

- A description of the training program outline and materials, and the qualifications of the trainers
- Notification and avoidance requirements where potential UXO, or munitions debris are noted by site workers
- Identification of available trained experts and appropriate agencies that will respond to notification of discovery of any munitions debris or ordnance (unexploded or not)

Work plan to recover, remove and dispose of discovered ordnance

Significance Determination after Mitigation

Less than significant

Impact Hazards – 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Construction

Hazardous materials (e.g., fuel, oils, paints) would be transported, stored, and used at the Project site routinely during construction activities. Routine transportation of hazardous materials to and from the site could create a hazard to the public or the environment if materials were improperly handled or were accidentally released. The small quantities of chemicals to be stored at the Project site during construction would be stored in their appropriate containers in an enclosed and secure location. All use, storage, transport, and disposal of hazardous materials would be in strict accordance with all regulations and guidelines. The Project would prepare and implement a

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SPCC Rule and a HMBP to address the transport, on-site storage, disposal, and clean-up of any spills.

In addition, a SWPPP or equivalent would be prepared to establish procedures that would minimize the effect of accidental releases on water quality. Industry BMPs would be used for spill prevention, managing hazardous materials and waste, containment and cleanup, and proper handling and disposal of wastes. Should any spills occur, they would be cleaned up completely, quickly, and safely and the spill reported to the appropriate authorities as required in accordance with the construction Stormwater Pollution Prevention Plan (SWPPP) or similar document if a SWPPP is not required. The Project would implement the SWPPP and would comply with all applicable local, State, and federal regulations to reduce the potential that spills or leaks of hazardous materials would occur. If quantities of hazardous materials would exceed regulatory thresholds, the Project would prepare and implement a SPCC Rule and a HMBP, which would include additional hazardous materials requirements. Therefore, there would be a less-than-significant impact due to the use, storage, and disposal of the small amounts of hazardous materials anticipated to be used during Project construction.

As discussed above, Valley fever is a disease caused by *Coccidioides* fungal spores commonly found in the soils of the region that can become airborne when soils are disturbed by construction or similar activities. Construction activities such as grading, excavation, vegetation removal, and construction vehicles and equipment could disturb the soil and release *Coccidioides* fungal spores. Dust generated by construction activities could put workers at risk of developing Valley fever from exposure to released *Coccidioides* fungal spores. Per Section 3.4 Air Quality, the Project would be required to comply with SCAQMD Rules 402 and 403 regarding fugitive dust control. SCAQMD Rule 402 does not allow emissions of fugitive dust that creates a nuisance to nearby populations while Rule 403 requires dust control measures, such as wetting construction areas, wetting or covering stockpiles, monitoring fugitive dusts, limiting vehicle track-out and, for larger construction projects, monitoring. Implementation of Mitigation Measure Air-1 would require the preparation of a Fugitive Dust Control Plan that would include measures to limit fugitive dust emissions during construction, operation and maintenance, and decommissioning of the Project. In addition, Mitigation Measure Hazards-2 (Worker Environmental Awareness Program) would require preparation of a health and safety plan, which would include measures to further reduce dust and provide protections from Valley fever. Implementation of SCAQMD Rules, Mitigation Measure Air-1, and Mitigation Measure Hazards-2 would reduce the potential for workers to be exposed to *Coccidioides* fungal spores to less-than-significant levels.

Operation and Maintenance

As described under Impact Hazards-1, operation of the Project would use small quantities of hazardous materials. If the quantity of hazardous materials exceeds the regulatory thresholds, a SPCC Plan would be prepared and implemented. Appropriate spill containment and cleanup kits would be maintained during Project operations. Employees would be properly trained on spill prevention, response, clean-up, and hazardous waste disposal. In addition, a HMBP would be prepared and implemented. Therefore, there would be a less than significant impact due to the

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use, storage, and disposal of the small amounts of hazardous materials anticipated to be used during Project operation.

The Project would include the operation of a 250 MW BESS with batteries that would be fully enclosed in the manufacturer's battery container. Due to the chemical composition of the batteries, the BESS has a risk of thermal runaway events. Other risks associated with the BESS would include electrical failures, explosions, and combustible gas release. The Project BESS would be designed and operated in compliance with all applicable requirements including the 2022 California Fire Code, which has been adopted by the State of California and the County, to minimize the risk of fire from stationary BESSs and contain fire in the event of such an incident. The California Fire Code, Chapter 12, has specific, detailed design requirements for stationary electrical energy storage systems such as the Project to ensure fire safe construction, operation, and decommissioning. The Project will be designed to comply with Chapter 12 of the California Fire Code and applicable National Fire Protection Association standards, which contain strict fire safety requirements for stationary electrical energy storage facilities. The Project will also comply with the requirements of California Public Utilities Code Section 761.3, which requires BESS facilities to have an emergency response and emergency action plan covering the premises of the facility that is prepared in coordination with local emergency management agencies, unified program agencies, and local first responders. The Applicant will work with first responders to develop these plans and to coordinate site-specific training for first responders. The BESS would be designed and installed according to the latest National Fire Protection Association (NFPA) 855 standards. The BESS enclosures would also include fire detection systems.

Monitoring that has occurred during and after BESS fires have not detected air quality indicating a public health concern. For example, following a BESS fire at a San Diego Gas & Electric facility in Escondido, San Diego on September 5, 2024, County Hazmat conducted air monitoring over a four-hour period during the incident. The monitoring found only normal products combustion of a structure fire were detected and at levels considered by National Institute for Occupational Safety and Health and Occupational Safety and Health Administration to be well below exposure thresholds. A third-party contractor conducted additional air quality monitoring during the incident and for an additional 12 hours after the fire was extinguished and concluded that at no time during the incident did the levels of oxygen deviate from 20.9 percent, which is considered normal atmospheric level. Any decrease in the percentage of oxygen would indicate that there was some unknown gas in the atmosphere that was not able to be detected by monitoring equipment. No such deviation was detected. (<https://www.escondido.gov/CivicAlerts.aspx?AID=96>.) Similarly, air quality testing of a battery ESS fire in New York likewise revealed no off-site air pollutants (New York State Interagency Fire Safety Working Group 2023).

Additionally, Mitigation Measure Fire-1 would require components specific to fire response and safety at the BESS be included in the proposed Fire Management and Prevention Plan for the Project. Implementation and compliance with these design and safety regulations and Mitigation Measure Fire-1 would reduce the impact to a less-than-significant level.

3.10-HAZARDS AND HAZARDOUS MATERIALS

Southern California Edison Activities

The SCE activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Although there would be materials brought in to construct the improvements, and use of some hazardous materials, the work will be completed within the existing footprint of the substations and adhere to the existing O&M plans within those areas. Impacts related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Air-1, Mitigation Measure Fire-1 and Mitigation Measure Hazards - 2

Measure Hazards-2: Health and Safety - Worker Environmental Awareness Program

A Worker Environmental Awareness Program shall be prepared, and all construction crews and contractors shall be briefed on the plan prior to starting work on the Project. The plan shall address health and safety issues associated with normal and unusual (emergency) conditions. The program shall include, but not be limited to, the following information and guidance:

- Environmental health and safety protocol (including, but not limited to, hazards of Valley fever, including the identification of symptoms, proper work procedures, when and how to use personal protective equipment, and informing supervisors of suspected symptoms of work-related Valley fever)
- An emergency response plan
- Environmental awareness training, which shall include environmental, cultural, health, and safety training
- Noise/ear protection protocol
- First aid training
- Fire protection and extinguisher maintenance, guidance, and documentation
- Disposal of hazardous materials and waste guidance in accordance with local, state, and federal regulations

Significance Determination after Mitigation

Less than Significant

Impact Hazards – 3: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

A visual site reconnaissance was performed for the Phase I ESA on June 21, 2024 (Terracon Consultants, Inc. 2024). While the Phase I ESA did not identify any potential for releases of

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hazardous materials or petroleum products on the Project site (Appendix G), Riverside County Department of Environmental Health, Environmental Cleanup Program (DEH) requested sampling and analysis of shallow soils to evaluate for residual contamination from past agricultural use. These areas include:

1. Open 55-gallon drum labeled as motor oil in photo #5 of the Phase I ESA,
2. Dispenser site of diesel above ground storage tank (AST) in the water pump area in photo #17 of the Phase I ESA,
3. Dispenser side of 10,000-gallon diesel AST and 20,000-gallon gasoline AST stored on dirt and equipment storage area in photo #21 and 22 and the Phase I ESA; and
4. Stained soil area of numerous 5-gallon buckets seen in photo #22 and #23 in the Phase I ESA.

Implementation of proposed Mitigation Measure Hazards – 3 (Phase II ESA) would require soil sampling investigation at the locations described above. Any contaminants found would be removed and disposed of to ensure that potential hazardous materials impacts would be less than significant.

Additionally, as noted above, the Project site is within the historic boundary of the WWII DTC/CAMA, where maneuvers included weapons training, firing exercises, and laying out and removing landmine fields. Therefore, there is the potential to encounter unexploded ordnances (UXOs) or munitions debris during construction activities. Implementation of proposed Mitigation Measure Hazards-1 (UXO Training and Reporting Plan) would require UXO training, investigation, removal, and disposal to ensure that potential UXO impacts would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. The work will be completed within the existing footprint of the substations. Impacts related to being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Hazards-1 and Mitigation Measure Hazards - 3

Measure Hazards-3: Perform a Phase II Environmental Site Assessment

Prior to issuance of grading permits, the Applicant shall perform a limited Phase II Environmental Site Assessment (Phase II ESA) to ensure that potentially

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contaminated soils are identified, characterized, removed, and disposed of properly. The Phase II ESA would be limited to the following areas:

1. Open 55-gallon drum labeled as motor oil in photo #5 of the Phase I ESA,
2. Dispenser site of diesel above ground storage tank (AST) in the water pump area in photo #17 of the Phase I ESA,
3. Dispenser side of 10,000-gallon diesel AST and 20,000-gallon gasoline AST stored on dirt and equipment storage area in photo #21 and 22 and the Phase I ESA; and
4. Stained soil area of numerous 5-gallon buckets seen in photo #22 and #23 in the Phase I ESA.

The Phase II ESA shall be submitted to the County for approval prior to Project construction. The Phase II ESA shall include:

- Description of soil testing methodology and results, which shall include the collection of soil samples at the above-mentioned areas. This soil profiling shall be performed prior to initiation of Project construction.
- In the event that contamination is identified above action levels, procedures for handling contaminated soil.

Any contaminated soils identified by testing conducted and found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations. Contaminated soil excavated from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

Significance Determination after Mitigation

Less than significant

Impact Hazards – 4: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Project site is located in rural Riverside County, with the nearest residence located approximately 4.9 miles northwest of the Project site in the community of Desert Center. Access to the Project site would be via the I-10 access at Corn Springs Road and would use the BLM route 950 to BLM route 511 to reach the site. Access routes 950 and 511 are graveled. The Project would not require any lane or road closures during construction and operation that would impede emergency vehicle movements. Access roads within the Project site would be able to accommodate emergency vehicles and would meet the County Fire Department policy #TP 15-002. The sites would have controlled access points for ingress and egress into the solar facility (See Section 3.18 Traffic and Transportation for detailed discussions regarding access in and around the area). Thus, construction and operation of the Project would result in less-than-significant impacts related to implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan.

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Southern California Edison Activities

The SCE activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. Although there would be materials brought in to construct the improvements, and use of some hazardous materials, the work will be completed within the existing footprint of the substations and adhere to the existing O&M plans within those areas. Impacts related to impairing implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan would be less than significant.

Significance Determination before Mitigation

Less than significant

Impact Hazards – 5: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Construction

The Project is within a LRA in a moderate FHSZ, as designated by CAL FIRE. The Project site is located in a remote area of Riverside County and adjacent to the existing Victory Pass Solar Project to the west, existing Arica Solar Project to the north, and BLM undeveloped land to the east that has been proposed for solar development. The site is undeveloped and contains sparse vegetation. The solar facility would be designed and constructed to industry safety design standards (i.e., Institute of Electrical and Electronic Engineers, National Electric Code) and Riverside County Building and Safety Department requirements to reduce the risk of electrical fires at the site. Solar PV panels would be largely assembled from fire-resistant materials.

The BESS would be designed and constructed per all applicable design, safety, and fire standards for the installation of energy storage systems, including, but not limited to, NFPA 855 and section 1206 of the California Fire Code. These standards would require installation of fire suppression systems in the BESS.

The Project would prepare and implement a Fire Management and Prevention Plan that would outline fire prevention practices, establish fire protection requirements, and determine emergency response protocols in the event of a wildfire. As described in Section 3.19 Wildfire, the Project would implement Mitigation Measure Fire-1, which includes additional measures that would be included in the Fire Management and Prevention Plan, such as restricting work on high fire hazard days, requiring spark arrestors for equipment, and prohibiting of smoking in all vegetated areas and within 50 feet of combustible materials (See Section 3.19, Wildfire, for detailed discussions regarding wildfires and wildland fires in the Project area). Therefore, construction of the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. The impacts would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance of the Project would include regular site visits and inspections of vehicles and equipment. The Project would be designed, constructed, and operated in accordance

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with applicable fire protection and other environmental, health, and safety requirements. Effective maintenance and monitoring programs are vital to productivity as well as to fire protection, environmental protection, and worker protection. A fire suppression system would be used during Project operation. A water storage tank would be constructed if required per County or Fire Department coordination for fire safety purposes and in accordance with applicable fire protection requirements. Fire hazards during operation of the solar facility would be further reduced with the Fire Management and Prevention Plan.

A thermal runaway is an incident where one exothermal process triggers other processes, finally resulting in an uncontrollable increase in temperature. These events can generate combustible gases that may rapidly combust (deflagrate) if not managed properly and therefore can pose a risk to human safety if appropriate fire mitigation techniques are not implemented. The BESS facility design, construction, and operation would follow and comply with applicable fire and building codes. In accordance with these codes, the enclosures would include fire detection systems specific to the type and design of the selected battery systems. In case of thermal runaway event, certain detection sensors would be able to shut off each battery enclosure, thus preventing fire propagation. The BESS would be designed and installed according to the latest National Fire Protection Association (NFPA) 855 standards.

Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal and within the existing footprint of the substation. Impacts related to exposing people or structures either directly or indirectly, to a significance risk of loss, injury, or death involving wildland fires would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Fire-1

Significance Determination after Mitigation

Less than significant

3.10.5 Cumulative Impacts

As hazards and hazardous materials impacts are generally localized and site-specific, the geographic scope of the cumulative impacts from hazards and hazardous materials is a 1-mile radius around the Project site. The Redonda Solar Project would be located within 1-mile of the Project site and could therefore combine with the Project and result in a cumulatively considerable impact.

As described under Impact Hazards-1, the Project would require the routine storage, handling, and transport of hazardous materials. The Project would comply with all applicable regulations and the SPCC Plan and a HMBP if quantities of hazardous materials exceed regulatory

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thresholds. Cumulative projects within 1 mile of the Project site may include the storage, handling, transport, and disposal of hazardous materials. The cumulative projects would use similar roadways as the Project to transport hazardous materials, including I-10. A cumulative impact would occur if multiple releases of hazardous materials occurred from the Project and cumulative projects. Like the Project, the cumulative projects would be required to adhere to existing local, State, and federal regulations regarding the transport, handling, and disposal of hazardous materials. Compliance with existing regulations would ensure that the combined effects related to hazards and hazardous materials from the Project and the cumulative projects would not result in a cumulatively significant impact.

Construction of the Project would occur within the historic World War II DRC/CAMA that contain unexploded munitions that could be a hazard to workers on site. Pursuant to Mitigation Measure Hazards – 1, the Project would be required to implement a UXO Training and Reporting Plan, which includes specific performance standards and procedures for potential encounter of UXO and munitions debris and includes a WEAP that addresses hazardous materials handling and disposal training and information. All the cumulative projects would also be located within a World War II DRC/CAMA and have the potential for encountering UXOs and munitions debris. The cumulative projects would likely require a similar UXO Training and Reporting Plan or other measures to minimize the potential risk of encountering UXOs. Under cumulative conditions, implementation of the Project in conjunction with development of projects listed in Tables 3.1-1 and 3.1-2 are not anticipated to present a cumulatively significant impact to public health and safety hazard to residents and workers.

Construction of the Project would require ground-disturbing activities that would disturb soils and may release *Coccidioides* fungal spores in airborne dust. Therefore, construction of the Project could expose construction workers to the risk of developing Valley fever. The Project would be required to comply with SCAQMD Rules 402 and 403 and would implement Mitigation Measure Air-1, which requires the preparation of a Fugitive Dust Control Plan. Cumulative projects would be required to comply with existing fugitive dust regulations, which may include SCAQMD's Rules 402 and 403. Therefore, existing regulations and mitigation would ensure that the combined effects related to contracting Valley fever from the Project with cumulative projects within the geographic scope of analysis would not present a cumulatively significant impact.

Construction of the Project would use vehicles and equipment that could generate sparks that may ignite a wildfire. The Project would be required to comply with County fire protection requirements and would prepare and implement a Fire Management and Prevention Plan in accordance with Mitigation Measure Fire-1. Cumulative projects would be required to comply with local, State, and federal requirements and policies regarding fire safety and hazards.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, and would have no impacts related to hazards, as the substations are already disturbed and routine

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maintenance is occurring on a regular basis. Therefore, they would not contribute to any cumulatively significant impacts on hazards.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measure Air-1, Hazards-1, Hazards-2, Hazards-3, and Fire-1 would be implemented to address potential hazards and hazardous materials impacts for the Project.

Significance Determination after Mitigation

The Project's incremental contribution to hazards and hazardous materials impacts would not be cumulatively considerable.

3.10.6 References

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3.11 Hydrology and Water Quality

This section presents the environmental setting and analysis of impacts to Hydrology and Water Quality resulting from the Project. This section describes existing local and regional water resources, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.11.1 Environmental Setting

Regional Setting

A Water Supply Assessment (WSA) was prepared for the Project (Appendix H) by GSI Water Solutions, Inc. (GSI Water Solutions, Inc. 2025). The information presented below is based on information presented in the WSA and other published reports, as cited.

The Project site is located in the California Department of Water Resources (DWR) Bulletin 118 Chuckwalla Valley Groundwater Basin (CVGB) (Basin No: 7-5), which is in eastern Riverside County and encompasses an area of approximately 940 square miles (GSI Water Solutions, Inc. 2025). Groundwater has been identified as the primary source of water in the CVGB. DWR has categorized the CVGB as a very low priority basin under the Sustainable Groundwater Management Act (SGMA) (GSI Water Solutions, Inc. 2025).

The CVGB is located within the Southern Mojave watershed (Hydrologic Unit Code 8-18100100). The Chuckwalla Valley watershed, a subunit of the South Mojave watershed, contributes to the CVGB via percolation of precipitation. Percolation of precipitation occurs within the Chuckwalla Valley watershed via runoff from the surrounding mountains and from precipitation to the Chuckwalla Valley floor (GSI Water Solutions, Inc. 2025).

There are no perennial streams in the Chuckwalla Valley. Drainage in the valley is to Palen Dry Lake and Ford Dry Lake, located in topographic low points (GSI Water Solutions, Inc. 2025). Surface water in the western portion of the valley generally flows toward Palen Dry Lake, located approximately 10 miles east of the community of Desert Center and 3 miles north of the Project site. Surface water in the eastern portion of the Chuckwalla Valley generally flows toward Ford Dry Lake, located approximately 10 miles southeast of the Palen Dry Lake (GSI Water Solutions, Inc. 2025). Documented springs and seeps in the area are in the surrounding mountains.

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Climate and Precipitation

The local climate is arid with high summer temperatures and mild winter temperatures. Average annual precipitation in the CVGB is 3.39 inches (NOAA n.d.-a, n.d.-b). Average summer maximum temperatures are above 100 degrees Fahrenheit (NOAA n.d.-a). Precipitation is seasonal.

Wetlands and Jurisdictional Waters

Aquatic resource delineations were conducted for the entire Project area, the results of which are discussed in Section 3.5 Biological Resources. No wetlands are located within the Project site. Unvegetated ephemeral washes, desert dry wash woodland, a detention pond, and an excavated depression are located on the Project site and could potentially be considered waters of the State).

Tsunamis and Seiches

A *tsunami* is a seismically induced wave generated by sudden movements of the ocean bottom during earthquakes, landslides, or volcanic activity. Several active and potentially active earthquake faults are located within the Project area. However, due to the distance of the Project area from the coastline, it is not located in a tsunami inundation area.

A *seiche* is a wind or earthquake-induced “standing wave” within an enclosed water body such as a bay, lake, or reservoir. Movement on any of the active or potentially active faults located in the Project area or its vicinity could create a seiche on a closed waterbody; however, there are no closed waterbodies in the Project area or vicinity. Therefore, the Project would not be located in an area susceptible to seiches.

Flooding Potential and Dam Failure Inundation Areas

The Federal Emergency Management Agency (FEMA) has not prepared flood insurance rate maps for the Project site. However, Westwood Professional Services has prepared a flood analysis appropriate for unconsolidated alluvial fan flooding on the Project site (Westwood 2024). The Project site is subject to storm flows due to its location on an active desert alluvial fan. Northeasterly flowing ephemeral streams and washes that fan out from the Eagle Mountains in the west flow through and around the Project site, primarily as sheet flows. The entire watershed within which the Project site is situated is designated a FEMA Zone D flood hazard, which is an area with a moderate to high risk of flooding. During a 100-year storm, the modeled flood depths across the majority of the Project site are less than 0.5 foot, with velocities less than 1 foot/second, with the exception of the northwest corner of the Project site and the low areas in the northern portion of the Project site, where the depths can reach as high as 2.2 feet. Table 3.11-1 Flood Depths on the Project Site shows the breakdown of flood depths within the Project site.

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Table 3.11-1 Flood Depths on the Project Site

Peak flow depth (feet)	Percentage of Project Site covered by peak flow depths
0.00–0.49	97.6%
0.50–1.00	1.2%
1.01–1.50	0.4%
1.51–2.00	0.8%
2.01–2.50	<0.1%
2.51–3.00	0%
3.01–4.00	0%
4.01–6.00	0%
6.01+	0%

Source: (Westwood 2024)

Dam Inundation Areas

Maps were reviewed within the Safety Element of the Riverside County General Plan, and there are no dams or levees located within the Project area and, therefore, no dam inundation areas (Riverside County 2024).

Groundwater

The groundwater information presented below is based on information presented in the WSA and other published reports, as cited.

The CVGB underlies the Palen and Chuckwalla Valleys. The CVGB is bound by the consolidated rocks of the Chuckwalla, Little Chuckwalla, and Mule Mountains on the south; the Eagle Mountains on the west; and the Mule and McCoy Mountains on the east. Rocks of the Coxcomb, Granite, Palen, and Little Maria Mountains bound the valley on the north (GSI Water Solutions, Inc. 2025).

The CVGB is bordered by the Pinto Valley, Cadiz Valley, Rice Valley, and Ward Valley Groundwater Basins on the north; the Palo Verde Mesa Groundwater Basin on the east; the Arroyo Seco Valley and Chocolate Valley Groundwater Basins on the south; and the Orocopia Valley Groundwater Basin on the west. The CVGB is located within the jurisdiction of the Colorado River Basin Regional Water Quality Control Board (RWQCB) and is subject to management direction of the Water Quality Control Plan for the Colorado River Basin (Region 7) (GSI Water Solutions, Inc. 2025).

Depths to groundwater are as deep as about 400 feet *below ground surface* (bgs) in many parts of the CVGB (GSI Water Solutions, Inc. 2025). Groundwater in the CVGB moves from the north and west toward the gap between the Mule and McCoy Mountains at the southeastern end of the Chuckwalla Valley (GSI Water Solutions, Inc. 2025). Available data indicate groundwater levels

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were stable as of 1963 and that a total groundwater extraction of 9,100 acre-feet (AF) was obtained in 1966 and 9,023 AF in water year 2018 (GSI Water Solutions, Inc. 2025). Historically, there have been notable changes in groundwater levels, especially localized around areas of increased extraction. For example, data from wells in the Desert Center area show a period of water level decline from the mid-1980s through the early 1990s during periods of expanded agricultural operations. During the mid-1980s, combined pumping exceeded 21,000 acre-feet per year (AFY), which is well above historical water usage for the Desert Center area of the CVGB (GSI Water Solutions, Inc. 2025).

Recent groundwater levels near the Project are available from adjacent renewable energy projects' groundwater monitoring reports from 2019 to 2024. These data generally indicate a groundwater flow direction consistent with regional flow, with temporary localized cones of depression around project production wells but otherwise stable groundwater levels. Northwest of the Project site, the groundwater elevation is approximately 450 to 470 feet *above mean sea level* (amsl). Southeast of the Project site, the groundwater elevation is approximately 400 feet amsl (GSI Water Solutions, Inc. 2025).

Water Quality

The Water Quality Control Plan developed by the Colorado River Basin RWQCB establishes water quality objectives, including narrative and numerical standards, to protect the beneficial uses of surface water and groundwater in the region. The Water Quality Control Plan describes implementation plans and other control measures designed to ensure compliance with Statewide plans and policies and documents comprehensive water quality planning.

Beneficial uses of waters, designated by the RWQCB, are of two types: consumptive and non-consumptive. Consumptive uses are those normally associated with people's activities, primarily municipal, industrial, and irrigation uses that consume water and cause corresponding reduction and/or depletion of water supply. Non-consumptive uses include swimming, boating, waterskiing, fishing, hydropower generation, and other uses that do not significantly deplete water supplies. Historical beneficial uses of water within the Colorado River Basin Region have largely been associated with irrigated agriculture and mining. Industrial use of water has become increasingly important in the Region, particularly in the agricultural areas (RWQCB 2019).

The RWQCB Water Quality Control Plan for the Colorado River Basin Region (RWQCB 2019; California Department of Water Resources [DWR] 2018) lists the *beneficial use* for waterbodies, including surface water and groundwater. Surface waters on the Project site are classified as washes (ephemeral streams), for which beneficial uses are as follows:

- Groundwater Recharge (GWR)
- Non-contact Water Recreation (REC II)
- Warm Freshwater Habitat (WARM) (to be established on a case-by-case basis)
- Wildlife Habitat (WILD)

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Beneficial uses of the CVGB are as follows:

- Municipal and Domestic Supply (MUN)
- Industrial Service Supply (IND)
- Agriculture Supply (AGR)

Total dissolved solids (TDS) concentrations across the CVGB range from 274 milligrams per liter (mg/L) to 12,300 mg/L. The lowest TDS concentrations are in the western portion of the CVGB, where TDS concentrations range from 275 to 730 mg/L (DWR 2004). In the northwestern portions of the CVGB, arsenic concentrations have ranged from 9 micrograms per liter (µg/L) to 25 µg/L (GEI Consultants 2010). Water in the CVGB has concentrations of sulfate, chloride, fluoride, and TDS that are higher than recommended levels for drinking water use. Likewise, elevated concentrations of boron, TDS, and percent sodium impair groundwater for irrigation use. In general, groundwater in the CVGB is sodium chloride to sodium sulfate-chloride in character (DWR 2004).

Surface Water

Section 303(d) of the CWA requires states to assess surface water quality and prepare a list of waters (known as the Section 303[d] list of water quality limited segments) considered to be *impaired*, indicating they do not currently meet the water quality standards necessary to support their beneficial uses. Impairment may result from point-source pollutants or non-point-source pollutants. None of the waters in or near the Project are currently listed as impaired (California State Water Resources Control Board [SWRCB] 2024).

Groundwater

Reported groundwater quality results from adjacent renewable energy projects' groundwater monitoring networks indicate constituent concentrations that exceed drinking water *maximum contaminant levels* (MCLs) for electrical conductivity, pH, TDS, fluoride, sulfate, and arsenic (GSI Water Solutions, Inc, 2025). There are no known contaminant plumes near the Project (SWRCB 2024). Therefore, there are no known contaminants in groundwater near the Project as a result of a release of potential contaminants from a discrete source (e.g., discharge pipe or leaking underground storage tank).

3.11.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Clean Water Act (33 USC Section 1251 et seq.)

Clean Water Act (33 U.S.C. §§ 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA, enforced by the U.S. Environmental Protection Agency (EPA), requires states to set standards to protect, maintain, and

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restore water quality through the regulation of point-source and certain non-point-source discharges to surface water.

Section 402 of the CWA requires that direct and indirect discharges and stormwater discharges into waters of the United States (WOTUS) be pursuant to a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits contain industry-specific, technology-based limits and may include additional water-quality-based limits and pollutant-monitoring requirements. An NPDES permit may include discharge limits based on federal or state water quality criteria or standards. NPDES permitting authority is delegated to, and administered by, the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

Section 404 of the CWA authorizes the U.S. Army Corps of Engineers (USACE) to regulate the discharge of dredged or fill material to the waters of the United States and adjacent wetlands. Discharges to waters of the United States must be avoided where possible and minimized and mitigated where avoidance is not possible. The USACE issues Section 404 permits to authorize these discharges when they are found to be compliant with environmental regulations and in the public interest.

Section 401 of the CWA requires that any activity that may result in a discharge into waters of the United States be certified by the jurisdictional RWQCB. Section 401 certification ensures that the proposed activity follows state and/or federal water quality standards.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws led to mapping of regulatory floodplains and to local management of floodplain areas according to federal guidelines, which include prohibiting or restricting development in flood hazard zones.

Colorado River Accounting Surface

Based on the Colorado River Compact of 1922 and the 1928 apportionment of lower Colorado River water by the U.S. Congress, groundwater in the river aquifer beneath the floodplain is considered Colorado River water, and water pumped from wells on the floodplain is presumed to be river water and is accounted for as Colorado River water (Wiele et al. 2009). The accounting-surface method was developed in the 1990s by the U.S. Geological Survey (USGS), in cooperation with the U.S. Bureau of Reclamation (USBR) to identify wells outside the floodplain of the lower Colorado River that yield water that will be replaced by water from the river. This method was needed to identify which wells require an entitlement for diversion of from the Colorado River and need to be included in accounting for consumptive use of Colorado River water, as outlined in the Consolidated Decree of the U.S. Supreme Court in *Arizona v. California*. Wells within the Chuckwalla Valley Groundwater Basin (CVGB) that draw water from below the accounting surface require an entitlement for the use of that water (Wiele et al. 2009). Within the Project site, the accounting surface is at an elevation of 238 to 240 feet amsl (Wiele et al. 2009). Extractions of

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water below that elevation are prohibited without an entitlement. Entitlements to extract and use the groundwater below the accounting surface are granted by USBR through its designated representative in California, the Colorado River Board of California. Entities in California are using California's full apportionment of Colorado River water, meaning that all water is already contracted, and no new water entitlements are available in California.

State

California Streambed Alteration Agreement

Sections 1600 through 1616 of the California Fish and Game Code require that any entity that proposes an activity that will substantially divert or obstruct the natural flow of any river, stream, or lake, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit material into any river, stream, or lake, must notify the California Department of Fish and Wildlife (CDFW). If the proposed alteration would impact a state jurisdictional river, stream, or lake, a Lake or Streambed Alteration Agreement must be prepared.

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 196 (California Water Code §§ 13000 et seq.) requires SWRCB to adopt water quality standards to protect state waters. Each RWQCB has developed a Water Quality Control Plan (Basin Plan) specifying water quality objectives, beneficial uses, numerical standards of pollution concentrations, and implementation procedures for waters of the state. Waters of the state are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the State." General objectives of the Basin Plans state that all waters (of the state) shall be maintained free of pollutants in such concentrations as to be toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. The Basin Plans are intended to protect the beneficial uses of waters, avoid altering the sediment discharge rate of surface waters, and avoid introducing toxic pollutants to the water resource. The Porter-Cologne Water Quality Control Act requires anyone proposing to discharge waste that could affect the quality of the waters of the state to report the waste discharge to the appropriate RWQCB. The Project is located within Colorado River Basin Region (Region 7), which is under the jurisdiction of the Colorado River Basin RWQCB.

SWRCB Storm Water Program Construction General Permit (Construction General Permit)

The Construction General Permit, issued under the federal CWA, regulates stormwater runoff from construction sites of 1 acre or more in size. The Construction General Permit is a statewide, general order issued by the SWRCB and implemented and enforced by the RWQCBs. Qualifying construction activities obtain coverage under the permit by filing a Notice of Intent with RWQCB and by developing and complying with a Stormwater Pollution Prevention Plan (SWPPP) describing *best management practices* (BMPs) the discharger will use to protect stormwater runoff. The SWPPP must contain a visual monitoring program, a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody included on the Section 303(d) list (described below) for sediment.

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The Construction General Permit prohibits the discharge of pollutants other than stormwater unless specifically authorized by the permit as a permitted non-stormwater discharge. The Construction General Permit also prohibits all discharges that contain a hazardous substance in excess of reportable quantities established in CCR, title 40, sections 117.3 and 302.4 of the Code of Federal Regulations (pursuant to section 311 of the CWA) unless a separate NPDES permit has been issued to regulate those discharges. In addition, the Construction General Permit incorporates discharge prohibitions contained in Basin Plans. Discharges to Areas of Special Biological Significance are prohibited unless covered by an exception that SWRCB has approved.

The SWPPP provides specific construction related BMPs to prevent soil erosion and loss of topsoil, which may include runoff control, soil stabilization, sediment control, proper stream crossing techniques, waste management, spill prevention and control, and a wide variety of other measures depending on the site and situation.

Water Rights

California water law is embodied in the California Water Code and the Water Commission Act of 1914. There are two basic kinds of rights to surface water: riparian and appropriative. As the Project does not propose the use of surface waters, these rights are not relevant to the Project. Percolating groundwater, under which category the CVGB falls, has no SWRCB permit requirement. The CVGB supports two types of water rights: (a) overlying rights, a correlative right of equal priority shared by all who own overlying property and use groundwater on the overlying property; and (b) groundwater appropriative rights for use of the overlying property or on overlying property for which the water rights have been severed. The right to use groundwater on property that is not an overlying right is junior to all overlying rights but has priority among other appropriators on a first in time use basis. Overlying users cannot take unlimited quantities of water without regard to the needs of other users.

The California Water Code allows any local public agency to adopt and implement a groundwater management plan if its water service area includes a groundwater basin or portion thereof that is not subject to groundwater management pursuant to a judgment or other order (California Water Code §§ 10750 et seq.). Groundwater management plans often require reports of pumping and some restrictions on usage. The California legislature has found that, by reason of light rainfall, concentrated population, the conversion of land from agricultural to urban uses, and heavy dependence on groundwater, the Counties of Riverside, Ventura, San Bernardino, and Los Angeles have certain reporting requirements for groundwater pumping. Any person or entity that pumps more than 25 AF of water in any 1 year must file a Notice of Extraction and Diversion of Water with SWRCB (California Water Code §§ 4999 et seq.).

The Project is located on land that overlies the CVGB, for which a method was developed by USGS, in cooperation with USBR, to identify groundwater wells outside the floodplain of the lower Colorado River that yield water that will be replaced by water from the river. The specific method to determine whether wells draw water from the Colorado River (referred to as the accounting surface) has not been promulgated by USBR.

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California Senate Bill (SB) 610.

SB 610, passed in 2002, amended the California Water Code to require detailed analysis of water supply availability for certain types of development projects and to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires detailed information regarding water availability to be provided to the city and county decision makers prior to approval of specified large development projects. SB 610 requires that a project be supported by a Water Supply Assessment (WSA) if it is subject to CEQA and meets any of the following criteria as a “project,” as defined under California Water Code section 10912(a):

1. A proposed residential development of more than 500 dwelling units
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
4. A proposed hotel or motel, or both, having more than 500 rooms
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
6. A mixed-use project that includes one or more of the projects specified in this subdivision
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project

SB 610 indicates that if the projected water demand associated with a proposed project was not accounted for in the most recently adopted urban water management plan, or if the public water system has no urban water management plan, the WSA for a Project shall include a discussion of whether the public water system’s total projected water supplies available during normal, single dry, and multiple dry water years over a 20-year projection would meet the projected water demand associated with the Project in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.

Sustainable Groundwater Management Act.

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739, SB 1168, and SB 1319—collectively known as the Sustainable Groundwater Management Act (SGMA), which requires local and regional Groundwater Sustainability Agencies with management authority over high- and medium-priority basins to manage their respective basins within their sustainable yield, in line with minimum thresholds, to avoid undesirable results, including chronic lowering of groundwater levels. Under the SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over drafted basins, the agencies must develop planning goals and criteria to achieve sustainability by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through the SGMA, the California Department of Water Resources (DWR) provides ongoing support to local agencies through sustainability plan review, guidance, financial assistance, and

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technical assistance. The SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably and requires completion of Groundwater Sustainability Plans (GSPs) for crucial (i.e., medium- to high-priority) groundwater basins in California. Among other requirements, GSPs must consider the interests of all beneficial uses and users of groundwater, including environmental users of groundwater, and develop planning goals and criteria to avoid impacts such as significant and unreasonable depletions of interconnected surface water. GSPs must also identify and consider impacts to groundwater-dependent ecosystems within the basin. As trustee for California's fish and wildlife resources, CDFW engages as a stakeholder in groundwater planning processes where resources allow to represent the groundwater needs of groundwater-dependent ecosystems and fish and wildlife beneficial uses.

State Water Resources Control Board Policies

Antidegradation Policy (Resolution No. 68-16)

This policy requires RWQCB, in regulating the discharge of waste, to (1) maintain existing high-quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in SWRCB or RWQCB policies; and (2) ensure that any activity that produces or may produce a waste or increased volume or concentration of waste, and that discharges or proposes to discharge to existing high-quality waters, meets waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to ensure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained.

Source of Drinking Water Policy (Resolution No. 88-63).

This policy designates all groundwater and surface waters of the state as potential sources of drinking water, worthy of protection for current or future beneficial uses except under certain specific exemptions.

Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under California Water Code Section 13304 (Resolution No. 92-49).

This policy establishes requirements for investigation as well as cleanup and abatement of discharges. Under this policy, cleanup and abatement actions are to implement applicable provisions of CCR title 27 (formerly CCR title 23, chapter 15) to the extent feasible. The policy also requires the application of title 27, section 20415 when approving any alternative cleanup levels less stringent than background. It requires remediation of the groundwater to the lowest concentration levels of constituents technically and economically feasible, which must at least protect the beneficial uses of groundwater but need not be more stringent than is necessary to achieve background levels of the constituents in groundwater.

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Local

Riverside County Ordinance

Riverside County Ordinance No.682 (as amended through 682.4)

This ordinance provides minimum standards for construction, reconstruction, abandonment, and destruction of all wells to (1) protect underground water resources and (2) provide safe water to persons within Riverside County (County).

Riverside County Ordinance No.650 (as amended through 650.6)

This ordinance protects water quality and public health by establishing regulations for installation, replacement, and performance of on-site wastewater treatment systems.

3.11.3 Methodology for Analysis

This section analyzes impacts on hydrology and water quality from the implementation of the Project based on changes to the environmental setting as described above, identified drainage conditions in the Project site, and the current regulatory framework. The Project's potential impacts to hydrology and water quality were evaluated using the Water Supply Assessment (Appendix H) and the Preliminary Hydrology Study (Appendix I) prepared for the Project. Using the aforementioned reports, impacts were analyzed according to CEQA impact criteria described below. Mitigation measures to avoid or reduce potential impacts are provided. The analysis also considers the potential for incremental impacts of the Project to combine with impacts of other projects and activities to adversely affect hydrology and water quality.

The gen-tie, access road, and medium-voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For impacts to hydrology and water quality, the Checklists ask if the Project would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Impact Hydro-1)
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (Impact Hydro-2)

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- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - result in a substantial erosion or siltation on- or off-site;
 - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - impede or redirect flood flows. (Impact Hydro-3)
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. (Impact Hydro-4)
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Impact Hydro-5)

3.11.4 Impacts and Mitigation Measures

Impact Hydro-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

The construction phase of the Project would involve mowing and grading for the solar panels, access roads, gen-tie line, operations and maintenance (O&M) building, substation, a battery energy storage system (BESS), and other Project components. Ground disturbance and vegetation removal have the potential to loosen and expose the soil and increase the risk of erosion and sedimentation into nearby washes. Downstream beneficial uses could be adversely affected through violation of RWQCB water quality standards and objectives for suspended solids, TDS, sediment, and turbidity. In addition, construction equipment would require the use of fuels and other hazardous materials, which could result in the accidental release of pollutants that could make their way into nearby washes.

The dry nature of the alluvial fan washes is such that, should material spills occur during construction, they could be cleaned up prior to any possibility of water being contaminated. Groundwater is well below the maximum depth of excavation, resulting in little likelihood that groundwater could be directly affected from spills during construction. As discussed in Section 2 Project Description, the Spill Prevention, Control, and Countermeasure (SPCC) Plan and a Hazardous Materials Business Plan (HMBP) would be implemented during construction of the Project. Contractor personnel would be properly trained to control and clean up any spills. Industry BMPs would be used to prevent spills in accordance with the construction Stormwater Pollution Prevention Plan (SWPPP) per Mitigation Measures Hydro-2, which will require BMPs to prevent and control erosion and siltation during construction; prevent, contain, and mitigate accidental spills during construction; and prevent violation of water quality objectives or damaging beneficial uses identified in the water quality control plan. Fuel, oil, and hydraulic fluid

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used in on-site vehicles and equipment would be transferred directly from a service truck to construction equipment and would be stored on site. Decommissioning of the Project is expected to result in impacts related to water resources similar to construction impacts. Work could result in potential increases in sediment loads to adjacent streams and washes and/or accidental spills of hydrocarbon fuels and greases and other materials associated with motorized equipment and construction work. However, decommissioning activities would be subject to the same state and federal water quality regulations discussed above, which would minimize potential water quality impacts.

Therefore, with incorporation of the MM Hydro-2, the SPCC Plan and the HMBP, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and, therefore, impacts would be less than significant.

Operation and Maintenance

During operation, one panel cleaning is anticipated per year. Cleaning would occur utilizing power washers carried by small trucks or the best available technology at the time that minimizes trips and water usage. The Project site would include drainage controls, including berms and potentially channels, in some areas to capture and direct stormwater flow around Project facilities, including water use on site.

Potential threats to surface water quality during operation and maintenance activities include potential increases in erosion and associated sediment loads to adjacent or downstream washes, and accidental spills of hydrocarbon fuels, greases, and other materials associated with operation of equipment on site. There would be regulated hazardous materials on site. These materials are not intended to be released to the environment, but if spilled or otherwise accidentally released they could have the potential to contaminate surface. The SPCC Plan and HMBP would provide protocols for containment and clean-up of spills.

In addition, the O&M building would produce sanitary wastewater, which would be treated and disposed of on-site using a proposed septic system and leach field. The County Department of Environmental Health has permit and design requirements for wastewater treatment system design, including requirements for percolation, vertical distance from the groundwater table, and setbacks from the nearest groundwater well. The use and application of septic systems is an established practice as a method of wastewater treatment and disposal.

Finally, the Project is located in the jurisdiction of the Colorado River Basin RWQCB, as described above in the Environmental Setting. Due to the limited magnitude of the simulated drawdown due to Project pumping, groundwater levels would not be lowered to a level that would cause a degradation of groundwater quality that affects other beneficial uses. Additionally, groundwater levels would not be lowered to a level that causes pumping wells near the Project to begin to capture deeper/older groundwater within the CVGB. Deeper/older groundwater typically contains increased salts and nutrients as a result of prolonged exposure to the aquifer material (leaching of minerals from the host rock into groundwater). In addition, there are no known point

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source plumes near the Project. Therefore, there are no known contaminant plumes that the Project pumping could potentially mobilize.

As a result, operation of the Project would not violate any groundwater quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality. Therefore, the Project would result in less-than-significant impacts.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and impacts would be less than significant.

Significant before Mitigation

Less than Significant Impact

Mitigation Measures

None required

Impact Hydro-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction and Decommissioning

Project construction is scheduled to begin in June 2026 and anticipated to be completed within 2 years. The Project would operate for a minimum of 40 years (through 2067). At the end of its useful life, the Project would be decommissioned in accordance with applicable Project plans. Project decommissioning is anticipated to begin in 2068 and would be completed within 2 years. Water for the Project would be obtained from an existing well or a proposed on-site groundwater well to be located near the Project's O&M building and origination point of the gen-tie line. Water use during the construction phase is expected to require a maximum of 100 AF, to be used for dust suppression, truck wheel washing, and other purposes during the 2-year construction phase (average of 50 AFY). During construction, restroom facilities would be provided by portable units to be serviced by licensed providers.

Although SB 610 requires the evaluation of water supplies during a 20-year period, the total Project life is estimated to be 44 years (including construction, operation, and decommissioning). Therefore, estimated total water use over the life of the Project (construction plus operations and decommissioning) is approximately 550 AF. A Project specific Water Supply Assessment was prepared and assumed a projected period of 44 years and total Project water use of 550 AF (GSI Water Solutions, Inc. 2025).

3.11-HYDROLOGY AND WATER QUALITY

Water required for construction, operation, and decommissioning would be sourced from the CVGB. Based on the groundwater budget terms presented in the WSA, the CVGB's 2026 annual change in groundwater in storage is a surplus of approximately 1,100 AFY, and all estimated groundwater demand for the Project could be sourced from the CVGB without resulting in an annual groundwater deficit under average climatic conditions. The calculated normal-year groundwater budget surplus for the CVGB is greater than the estimated water use for the 2-year construction phase of the Project as well as the estimated annual water requirements for the operational and decommissioning phases of the Project). Consequently, assuming a normal year projected groundwater budget, an annual deficit of groundwater in storage would not occur during the 44-year period. Based on the 2030 and 2070 DWR climate change data, decreased average precipitation and increased evapotranspiration (ET) would decrease the baseline groundwater budget by approximately 30 and 50 AFY, respectively. This relatively small change does not substantially affect the projected groundwater budgets. The available water supplies during normal, single dry, and multiple dry water years from the CVGB would meet the projected water demands of the Project during construction and decommissioning in addition to existing uses and planned future uses. Although there would be a temporary groundwater deficit during single dry and multiple dry years, the deficit would be recovered when periods of normal precipitation returned. Further, the likelihood that a dry or critical dry year would occur during Project construction is low. If a dry year or critical dry year were to occur during Project construction or decommissioning, it would not result in groundwater overdraft of the CVGB, which is defined as the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of many years during which water supply conditions approximate average conditions. The deficit associated with a dry or critical dry year during construction or decommissioning does not approximate average conditions and, further, would be limited to those years, after which average conditions (resulting in an annual groundwater surplus, as discussed above) would be expected to return.

Groundwater extraction for the Project's construction, operation, and future decommissioning water supply would cause drawdown in the immediate vicinity of the well(s) used to produce groundwater for the Project, at least temporarily, during active pumping. This would occur whether the wells used were on- or off-site. The Project impacts are discussed in terms of the *zones of influence* of the total *cone of depression*, considering cumulative drawdown as a result of the Project, cumulative projects, and the CVGB projected agricultural, municipal, and domestic pumping. The zone of influence after 2 years of Project construction pumping (50 AFY) is an approximately 1.1-mile radius cone of depression out to 0.5 feet of drawdown. Project operational pumping (10 AFY) for 40 years would result in a cumulative drawdown with an approximate 0.2-mile radius out to 0.5 feet of drawdown, and Project decommissioning (25 AFY) would have cumulative drawdown with an approximate 0.7-mile radius out to 0.5 feet of drawdown. This zone of influence also includes pumping from cumulative projects (GSI Water Solutions, Inc. 2025). Therefore, the water level drawdown may have the potential to affect nearby wells by lowering localized water levels such that other wells' operational capability is affected, causing pumping rates to decline or resulting in increased costs for pumping and operation.

3.11-HYDROLOGY AND WATER QUALITY

Incorporation of Mitigation Measure Hydro-1 includes the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP) prior to the onset of groundwater pumping for the Project. The GMRMP would require monitoring groundwater levels and water quality in the Project production well(s) and closest accessible private well(s). Should monitoring indicate an adverse effect on existing private wells, then reduction of pumping, cessation of pumping, and/or compensation for affected nearby wells would be required to substantially reduce the impact.

One potential concern is whether Project-related groundwater use could affect flows in the Colorado River. Any use of Colorado River water requires an entitlement and is subject to the Colorado River accounting surface requirements. However, the Colorado River Accounting Surface is at an elevation between approximately 238 and 240 feet above mean sea level (amsl) in the Chuckwalla Valley. Given the distance of the Project from the Colorado River and the current elevation of the groundwater table being more than 100 feet above the lower Colorado River accounting surface, Project pumping is not anticipated to have any adverse effects on the Colorado River flows. Regardless, because of the sensitivity and critical conditions of water levels in the Colorado River, MM Hydro-1 (GMRMP) is included to reduce the possibility of potential impacts related to local groundwater resources and Colorado River water supplies through monitoring and a requirement to decrease or stop pumping before water levels reached the Accounting Surface.

Operation and Maintenance

During operation, the Project would require the use of approximately 10 AFY for panel washing and other uses. Water for the Project would be obtained from an existing well or a proposed groundwater well near the O&M building (GSI 2025). The estimate of 550 AF, above, includes the water required for the life of the Project. As described above, the available water supplies during normal, single dry, and multiple dry water years from the CVGB would meet the projected water demands of the Project in addition to existing uses and planned future uses. Although there would be a temporary groundwater deficit during single dry and multiple dry years, the deficit would be recovered when periods of normal precipitation returned.

The Project has a limited overall water demand and, further, would require very little water each year for operation; however, the GMRMP under MM Hydro-1 would apply to Project operation to ensure pumping would not impact nearby wells. Therefore, with the incorporation of mitigation, the Project is not anticipated to cause lowering of groundwater levels such that there would be an annual deficit of groundwater storage, and the Project would not interfere substantially with groundwater recharge. The Project would result in less-than-significant impacts during construction, operation, and decommissioning with mitigation.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and

3.11-HYDROLOGY AND WATER QUALITY

minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin and impacts would be less than significant.

Significant before Mitigation

Potentially significant.

Mitigation Measure

Mitigation Measure Hydro - 1

Mitigation Measure Hydro-1: Groundwater Monitoring, Reporting, and Mitigation Plan

Prior to the Project's use of water from any well that extracts groundwater from the Chuckwalla Valley Groundwater Basin, the Applicant shall prepare and implement a Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP) for the Project. The GMRMP shall be prepared by a certified hydrogeologist registered in the State of California and submitted by the Applicant to the County for review and approval prior to the start of Project construction.

The GMRMP shall provide detailed methodology for monitoring groundwater levels and water quality in the Project production well(s) and closest accessible private well(s). Monitoring shall be performed prior to construction to establish pre-construction groundwater levels that can be used as a baseline against which later measurements can be compared.

Monitoring of groundwater levels and water quality shall be conducted on a quarterly basis during Project construction and a semi-annual basis during Project operation and maintenance for at least the first 5 years of the Project (including the construction period). All Project production wells shall be metered, and total monthly and annual usage in gallons recorded for the life of the Project. Monitoring reports shall be prepared and submitted to the County for review and comment following each monitoring event.

The reports shall include, at a minimum, the following information:

- Tabulated groundwater level, quality, and production data
- Total monthly water use in gallons and acre-feet
- Hydrographs that show groundwater level trends
- Trend analysis of water quality data
- Comparison of monitoring results to baseline conditions

If groundwater monitoring results indicate that Project-related pumping has resulted in a static groundwater level decline of 5 feet or more below the baseline trend,

3.11-HYDROLOGY AND WATER QUALITY

determined by the past 5 years of static groundwater level data, at any of the nearby private monitoring wells, the Project Applicant shall consult with the County to determine what remedial activities are needed, which could include the following:

- Cessation or reduction of pumping until groundwater levels recover to within 5 feet from the baseline trend
- Compensation for whatever additional equipment is necessary to lower nearby well pumps to levels that can adequately continue pumping
- Compensation to repair or replace wells found to be damaged or inoperable due to lowered groundwater levels
- Compensation for increased energy cost due to Project-related groundwater level drawdown in wells

If groundwater level declines are occurring, pumping by other local users will be evaluated in the monitoring reports and, if possible, differentiated from Project-related pumping. This analysis could include comparing changes in the timing and amounts of groundwater level fluctuations to pre-Project baseline data, production at other locations, and seasonal changes.

Additionally, the Colorado River Accounting Surface is at an elevation between approximately 238 and 240 feet above mean sea level (amsl) in the Chuckwalla Valley, and groundwater elevation in the Project area is approximately XXX feet amsl. GRRMP-required groundwater monitoring activities and reporting shall include proximity of the depth of Project-related groundwater pumping to the Colorado River Accounting Surface to ensure that Project-related groundwater pumping does not draws water from below the accounting surface. If groundwater monitoring results indicate that Project-related pumping is approaching the accounting surface, the Project shall implement water conservation measures, including cessation of pumping, to reduce the amount of water withdrawn from Project wells.

Significance Determination after Mitigation

Less than significant.

3.11-HYDROLOGY AND WATER QUALITY

Impact Hydro-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- (i) result in 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?**

Construction and Decommissioning

Ground disturbance that would occur during Project construction would require the use of heavy machinery for vegetation removal, grading, installation of roads, the solar field, transmission facilities, the O&M building, the substation, the BESS, and other facilities. Construction and future decommissioning of these facilities would involve the use of tractors, bulldozers, graders, trucks, and various other types of heavy equipment and would involve minor changes to on-site topography. These activities would loosen existing surface soils and sediments, increasing the potential for erosion during storm events, along with associated effects such as increased downstream sediment yields from on-site disturbed areas. Increased impervious areas could also lead to erosion by increasing the rate and frequency of runoff.

Final grading plans would be required and submitted to the County and would be designed to minimize alteration of drainages as the Project site is relatively flat to gently sloping and would require minimal grading to allow for installation of the solar arrays. The site would be contour-graded level, and the overall topography and drainage patterns would remain unchanged. Limited cut and fill would be completed within specific arrays to limit slope steepness and produce a consistent grade in each solar field area.

The Project would include the preparation of a Project SWPPP (Mitigation Measure Hydro-2) that would address potential erosion and siltation on- or off-site during construction activities, and a similar project SWPPP would be prepared during the decommissioning phase of the Project. In addition, the County requires final Project drainage plans to be submitted prior to receiving grading permits. The final Project drainage plans would be developed that would be designed to control runoff and prevent long-term erosion during operations.

There is a minor potential for the Project to increase the magnitude and frequency of runoff rates through the construction of impervious areas and by altering the ground surface characteristics through grading and removal of vegetation. Impervious areas would be minimal and limited to the foundations for the proposed solar panels, foundations for the transmission structures, the proposed buildings, BESS, substation equipment, and switchyard. However, the Drainage Plan that would be submitted to the County as part of the Grading Permit Application would include

3.11-HYDROLOGY AND WATER QUALITY

pre-development and post-development peak flow estimates and hydraulic calculations to determine flood conditions, floodplain limits, flood depths, and velocities. The Drainage Plan would demonstrate the relationship of drainage and flood features to the components of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports. The Drainage Plan would demonstrate adequate design to protect the Project site from flooding, erosion, and scour without adversely affecting adjacent property, inducing erosion, or concentrating or diverting flows. The Drainage Plan would include detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates, including but not limited to retention basins and swales, thus minimizing the potential for off-site erosion and siltation of downstream washes. Finally, future decommissioning would involve site restoration, which would improve site conditions to approximate pre-Project conditions.

There are no existing or planned stormwater drainage systems at or downstream of the Project site. Drainage in the area and downstream of the Project consists of natural desert with natural watercourses. Some increase in runoff potential is possible due to increased impervious area and compacted roadway surfaces, but a large increase is not anticipated due to the small amount of new impervious area and compacted roadways. Any increase in runoff would be addressed in the Drainage Plan submitted to the County as part of the Grading Permit Application.

Finally, most of the Project site would be subject to flooding at varying depths mostly less than one foot. Any structures placed in those areas would have the potential to redirect flood flows. The solar panels would be installed on posts/piles and would offer minimal obstruction to flows. The substation, BESS and O&M building would be protected by berms or other drainage features which could redirect flood flows locally. The access roads, being at-grade, would offer minimal obstruction. The internal power lines would be protected from flooding by burying or being installed on poles, but if on poles would offer minimal obstruction to flow. The gen-tie line would have similar minimal potential to obstruct flood flows. The required final Drainage Plans to be submitted to the County as part of the Grading Permit Application, as well as incorporation of Mitigation Measure Hydro-2 (SWPPP) would ensure that the site design include consideration of flood flows and diversions.

With incorporation of the Mitigation Measure Hydro-, BMPs, preparation of the final drainage plans and implementation of the Closure, Decommissioning, and Reclamation Plan, 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 or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on- or off-site, flooding, or redirecting flood flows during construction or decommissioning. Therefore, the Project would result in a less-than-significant impact with mitigation.

Operation and Maintenance

Once developed, the solar site would maintain sheet flow where possible, with water exiting the site in existing natural contours and flows. Post-construction flows would follow the same general drainage patterns as existing conditions. The soil is very permeable, so following the natural terrain would allow for maximum infiltration, thereby reducing runoff. Permanent

3.11-HYDROLOGY AND WATER QUALITY

retention basins would be installed as needed to limit runoff and maintain existing conditions to the extent possible. Therefore, impacts would be less than significant with mitigation.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities 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 or through the addition of impervious surfaces, in a manner which would result in a substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Impacts would be less than significant.

Significant before Mitigation

Potentially significant

Mitigation Measure

Mitigation Measure Hydro-2: SWPPP Development and Implementation

At least 60 days prior to site mobilization, the Applicant shall submit to Riverside County Civil Engineering for review and approval a SWPPP for the project. The SWPPP shall address adequate procedures and standards required for specific project activities including, but not limited to, BMPs for drainage erosion and sedimentation control; dewatering; hazardous materials identification, handling, storage, and disposal; and emergency response and cleanup.

The SWPPP and BMP materials shall be stored and available on site prior to initiating ground-disturbing activities and throughout the construction period.

All necessary erosion and sediment control BMPs shall be installed prior to conducting grading or vegetation clearing activities during the wet season and before the onset of any anticipated storm events. Temporary BMPs such as silt fences or wattles, which are intended to minimize sediment transport from temporarily disturbed areas, shall remain in place until disturbed areas have stabilized

Significance Determination after Mitigation

Less than significant

3.11-HYDROLOGY AND WATER QUALITY

Impact Hydro-4: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The Project would not be located within a tsunami inundation zone or an area that could be subject to a seiche (i.e., adjacent a lake).

As described in the Project's Preliminary Hydrology Report (Appendix I), during a 100-year storm, the flood depths across most of the Project area are less than 0.5 feet, with velocities less than 1 foot/second, with the exception of the northwest corner of the Project site and the low areas in the northern portion of the Project site, where the depths can reach as high as 2.2 feet. As discussed in impact Hydro-3 above, a project final drainage plan will be developed prior to issuance of a grading permit. The final drainage plan would be developed that would be designed to control runoff and prevent long-term erosion during operations. The final drainage plan would include the following:

- Pre-development and post-development peak flow estimates and hydraulic calculations to determine flood conditions, floodplain limits, flood depths, and velocities
- Relationship of drainage and flood features to the components of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports
- Adequate design to protect the Project site from flooding, erosion, and scour without adversely affecting adjacent property, inducing erosion, or concentrating or diverting flows
- Detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates, including but not limited to retention basins and swales, thus minimizing the potential for off-site erosion and siltation of downstream washes

In addition, as discussed in Section 2 Project Description, a SPCC Plan and HMBP would be implemented during construction of the Project.

Therefore, with development of the final drainage plan, the SPCC Plan and HMBP, the Project would not result in significant impacts due to a risk of release of pollutants due to Project inundation.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities would not be located within a flood hazard, tsunami, or seiche zones, and therefore would not risk release of pollutants due to project inundation. Impacts would be less than significant.

3.11-HYDROLOGY AND WATER QUALITY

Significant before Mitigation

Less than significant

Impact Hydro-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed in Impact Hydro-1, existing state and federal water quality regulations, including the proposed SWPPP (Mitigation Measure Hydro-2), are intended to ensure that water quality standards and waste discharge standards are not violated during construction, operation, and future decommissioning. The SWPPP would address and mitigate site-specific erosion-induced siltation impacts during construction, operation, and future decommissioning. In addition, construction and design of the Project's septic system would be subject to the Department of Environmental Health permit and design requirements. Thus, the Project would not conflict with or obstruct implementation of a Water Quality Control Plan.

Groundwater production in the CVGB is not managed by an entity, and no groundwater management plan or GSP has been submitted to DWR. In addition, no urban water management plan or integrated regional water management plan has been prepared for the Project site. Therefore, the Project would result in less-than-significant impacts.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Significance before Mitigation

Less than significant

3.11.5 Cumulative Analysis

The geographic scope for the cumulative impacts is the Chuckwalla Valley Hydrologic Unit and CVGB. The cumulative projects listed in Section 3.1 located in the Desert Center area would be within the Chuckwalla Valley Hydrologic Unit and pull groundwater from the CVGB. Projects in proximity to Blythe would not cumulatively combine with the Project.

Surface Water

Cumulative impacts to hydrology and water quality include the impacts of the Project with those likely to occur from other existing, proposed, and reasonably foreseeable projects, many of which are similar solar power projects. These cumulative projects have the potential to contribute to cumulative significant hydrologic and water quality impacts in the Chuckwalla Hydrologic Unit. These cumulative projects have the potential to introduce new or exacerbate existing pollutant generation associated with construction, operation, and future decommissioning. These projects

3.11-HYDROLOGY AND WATER QUALITY

could contribute to increased runoff due to increases in impervious surfaces. These cumulative projects also may be crossed by watercourses that could generate flooding, with similar flooding impacts as described for the Project.

All foreseeable future projects in the Chuckwalla Valley Hydrologic Unit would be subject to similar measures as the Project when obtaining the required permits and would be required to comply with state and federal clean water regulations and County floodplain development regulations. As these projects would go through an environmental review process, they would be subject to similar measures as the Project to address potential water quality impacts for the Project. Many of the projects would likely avoid major drainages if any traverse those sites. Because the cumulative projects are in a similar hydrologic setting and most are similar types of projects, individual project impacts are expected to be reduced to less than significant through compliance with regulations and mitigation. Accordingly, the combined effects to water quality from the cumulative projects within the geographic scope would not be considered cumulatively significant and the Project's incremental contribution to the cumulative effects to water quality caused by other past, present, and probable future projects would be less than significant with incorporating Mitigation Measures Hydro-2.

Groundwater

A cumulative groundwater analysis is provided in the WSA in Appendix H (GSI Water Solutions, Inc, 2025), which considers the entire CVGB. The modeled Project impacts are discussed in terms of the zones of influence of the total cone of depression considering cumulative drawdown as a result of the Project, cumulative projects, and the CVGB projected agricultural, municipal, and domestic pumping. The modeling results indicate that impacts to groundwater levels as a result of Project and cumulative project pumping are confined to the Project vicinity in the western portion of the CVGB. Although most of the non-cumulative project pumping in the CVGB occurs in the western portion of the CVGB (the total agricultural, municipal, and domestic pumping is limited to approximately 7,900 AFY [CEC 2010]), cumulative Project pumping is not anticipated to adversely affect existing water users and water rights claimants in the CVGB resulting from the limited magnitude of the modeled regional drawdown.

Based on the limited magnitude of the modeled drawdown resulting from Project and cumulative project pumping, groundwater levels would not be lowered to a level that would cause a degradation of groundwater quality that affect other beneficial uses. Furthermore, groundwater levels would not be lowered to a level that causes pumping wells near the Project to begin to capture deeper/older groundwater in the CVGB. Deeper/older groundwater can contain increased salts and nutrients as a result of prolonged exposure to the aquifer material (leaching of minerals from the host rock into groundwater). There are no known point source plumes near the Project. Therefore, there are no known contaminant plumes that Project pumping or cumulative pumping could potentially mobilize (GSI Water Solutions, Inc. 2025).

Similar to the Project, many of the other cumulative projects listed above may install or use existing wells on or near each project site, drawing directly from the CVGB. Therefore, as all the cumulative projects listed above would overlap for some period during operation, it is possible

3.11-HYDROLOGY AND WATER QUALITY

that some projects could overlap in construction and/or future decommissioning in timing and groundwater withdrawal could combine such that cumulatively the projects would cause local CVGB groundwater levels to decline.

Lowered groundwater levels as a result of cumulative projects pumping could impact pumping rates and capability in other nearby wells, a potentially significant cumulative impact. Mitigation Measure Hydro-1 would require the development and implementation of a GMRMP prior to construction of the Project that would result in implementation of measures to mitigate any adverse effects on nearby wells. This measure would reduce the Project's incremental contribution to a less-than-significant level because it would ensure that all Project-related impacts to local groundwater levels would be addressed through cessation or reduction of pumping and/or compensation for affected nearby wells. Therefore, the Project would not result in cumulatively considerable impacts related to hydrology and water quality.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction activities that would be performed for the upgrades would involve short-term and minimal, if any, ground disturbance and would occur within the existing footprint of the substations and no new major structures would be constructed. The activities would not result in impacts to surface waters or groundwater and therefore, the activities would not result in cumulatively considerable impacts related to hydrology and water quality.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measure Hydro-1 and Hydro-2

Significance Determination after Mitigation

The Project's incremental contribution to hydrology and water quality impacts would not be cumulatively considerable and is therefore considered less than significant with mitigation.

3.11.6 References

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3.11-HYDROLOGY AND WATER QUALITY

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3.12 Land Use and Planning

This section presents the environmental setting and analysis of impacts to Land Use and Planning resulting from the Project. This section describes the existing Land use and Planning for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.12.1 Environmental Setting

Project Setting

The Project site is located on private land in Riverside County in the Chuckwalla Valley. The proposed gen-tie line alignment and access road are located on land administered by the Bureau of Land Management (BLM). The Project site is located approximately 7 miles east of the unincorporated community of Desert Center, California, 8.5 miles east of the Lake Tamarisk Desert Resort, and approximately 38 miles west of Blythe, California. The Project site is located directly north of I-10 and surrounded by land managed by the BLM. Land uses in the vicinity of the Project site include agriculture, renewable energy development, recreation, and energy transmission.

The area surrounding the Project site is relatively flat and flanked by mountain ranges to the north and south. The Chuckwalla Valley is characterized by alluvial fans that are sourced from the surrounding mountain ranges. Vegetation communities within the Chuckwalla Valley generally consist of desert wash woodlands, creosote bush scrub, sand dunes, desert fan palm oases, Joshua tree woodlands, alkali sink scrub, and pinyon-juniper forests (UC Riverside 2022).

There are several solar power-generation developments currently in operation adjacent to the Project site, including the Maverick Solar Energy Farm to the east, the Arica Solar Project and the Victory Pass Solar Project to the west, and the Athos Project to the northeast. The currently proposed Redonda Solar Project is located immediately east and north of the Project (see Figure 2.3). All of these solar projects have existing or proposed gen-tie lines connecting to the Southern California Edison Red Bluff Substation. Other nearby solar projects include the Oberon Solar Project, the approved Easley Renewable Energy Project, and the approved Sapphire Solar Project.

The Project site is located within the County's Desert Center Area Plan (DCAP), a subset of the Riverside County General Plan. The Project site is designated as Open Space: Rural (OS: RUR) in the Area Plan (as shown in Figure 3.12-1). Little new development was envisioned within the Area Plan, except for infill and/or revitalization of the Eagle Mountain Townsite and contiguous expansion of the Desert Center community and the Lake Tamarisk Desert Resort, which are located 8.5 miles west of the Project site. Much of the Project site was used as agriculture in the 2000s; however, the majority of the parcels have been out of agricultural use since then and are not currently used for agriculture.

3.12-LAND USE AND PLANNING

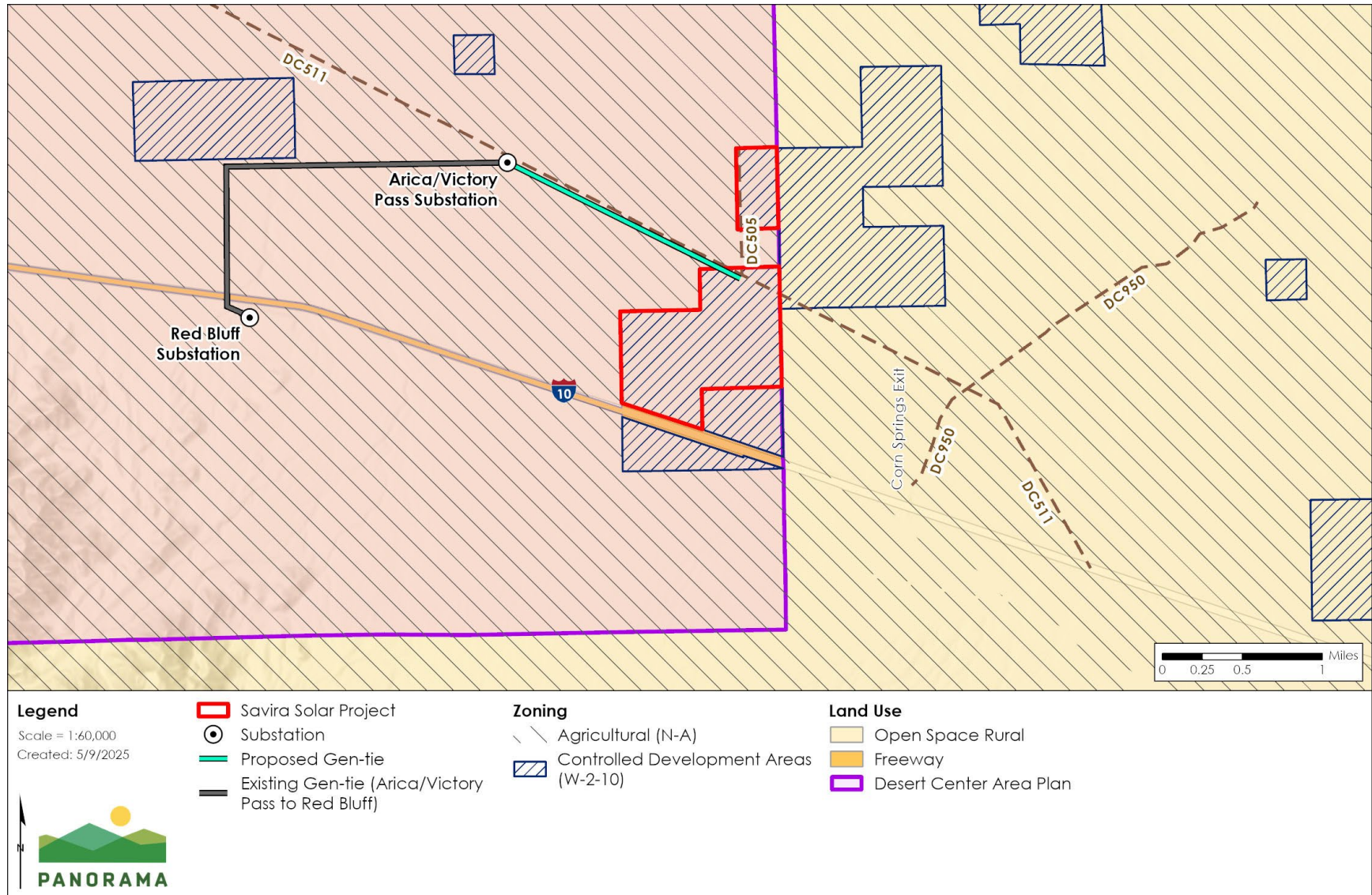
The lands within the Project site boundary subject to County jurisdiction under the Riverside County Zoning Ordinance are shown in Figure 3.12-1. These consist of 6 parcels on private land (~535 acres), including Assessor Parcel Numbers (APN) 811-231-001, 811-231-003, 811-231-004, 800-231-008, 811-190-004, , and 811-190-005. and are zoned as W-2-10 (Controlled Development Areas, 10-acre minimum). Solar power plants on lots of 10 acres or larger are allowed in this zone subject to a Conditional Use Permit (Riverside County 2023).

The Project includes multiple linear facility routes on adjacent BLM-administered land, including the gen-tie, access roads, and a segment of the collection line. The BLM parcels are part of the lands allocated under the Desert Renewable Energy Conservation Plan (DRECP) as a Development Focus Area (DFA), as shown in Figure 3.12-2, which are areas with substantial energy potential, access to existing or planned transmission, and low resource conflicts.

To interconnect the Project, Southern California Edison (SCE) would require work on the existing Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and at the Project Substation. The Red Bluff Substation is located within lands allocated under the DRECP as Areas of Critical Environmental Concern (ACEC).

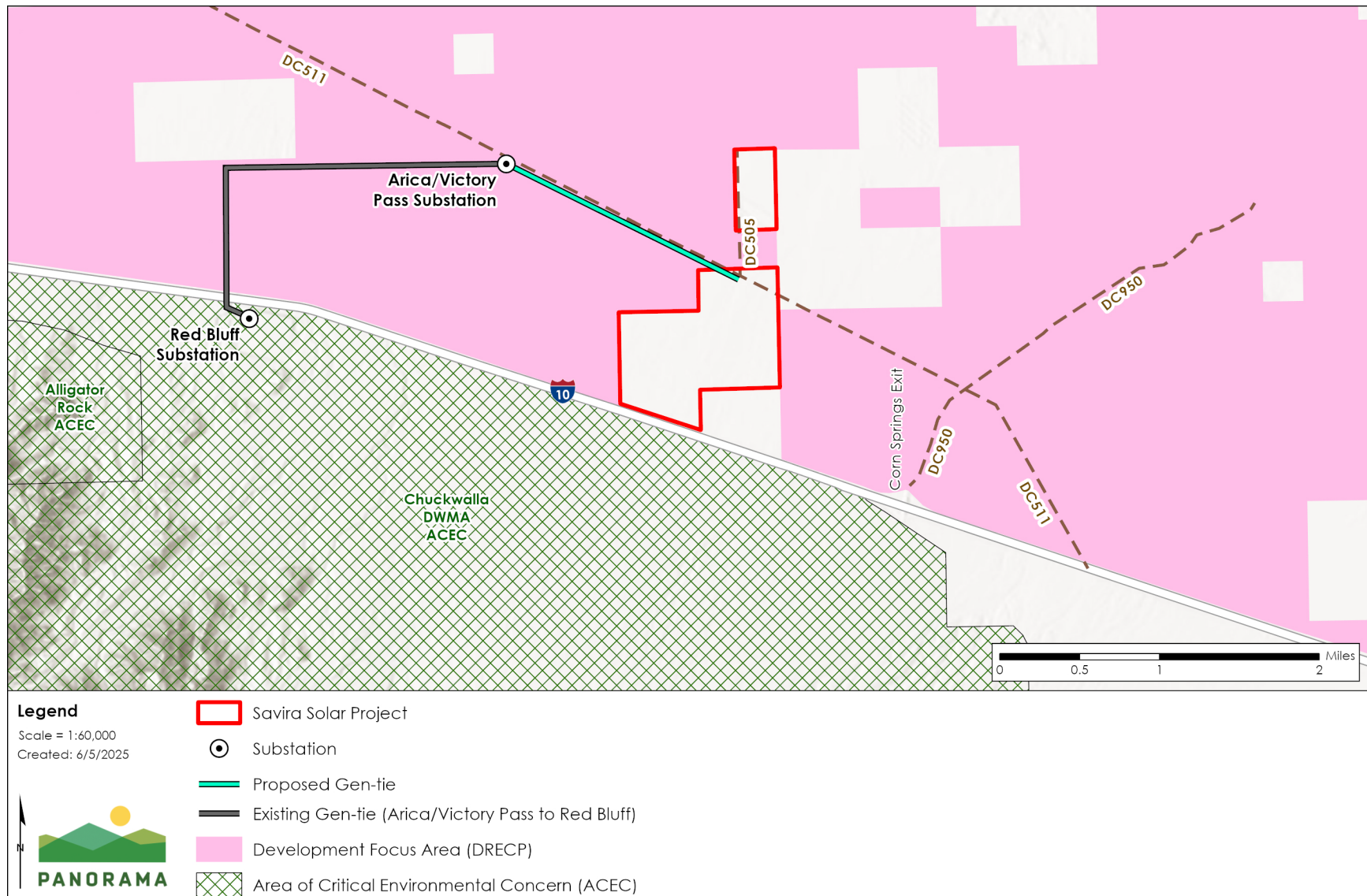
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Figure 3.12-1 Riverside County Land Use and Zoning Designations



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Figure 3.12-2 BLM Desert Renewable Energy and Conservation Plan Allocations



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3.12.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Land Policy and Management Act, 1976. As Amended.

The United States Congress passed the Federal Land Policy and Management Act (FLPMA) in 1976 to establish public land policy, guidelines for administration, and provisions for the management, protection, development, and enhancement of public lands. Title V, “Rights-of-Way,” of the FLPMA specifically authorizes the Secretary of the Interior, through the BLM, to grant rights-of-way (ROWs) across public lands for certain purposes. Authorization of systems for generation, transmission, and distribution of electric energy is addressed in section 501(4) of Title V. In addition, section 503 specifically addresses “Right of Way Corridors” and requires common ROWs “to the extent practical.” FLPMA, Title V, Section 501(a)(6) states the following:

[t]he Secretary, with respect to the public lands (including public lands, as defined in Section 103(e) of this Act, which are reserved from entry pursuant to Section 24 of the Federal Power Act (16 USC 818)) [P.L. 102-486, 1992] and, the Secretary of Agriculture, with respect to lands within the National Forest System (except in each case land designated as wilderness), are authorized to grant, issue, or renew ROW over, upon, under, or through such lands for roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System.

The primary directive guiding all of BLM’s decisions under the FLPMA is to put public lands to their highest and best use.

Savira Renewables, LLC, is submitting a Standard Form 299 application for a ROW Grant from BLM to construct, operate, maintain, and decommission the linear facilities on lands under BLM jurisdiction.

California Desert Conservation Area Plan, 1980. As Amended.

Section 601 of the FLPMA requires preparation of a long-range plan for the California Desert Conservation Area (CDCA). The CDCA Plan was adopted in 1980 to provide for the use of public lands and resources of the CDCA in a manner that enhances, wherever possible, and does not diminish, on balance, the environmental, cultural, and aesthetic values of the desert and its productivity. The CDCA Plan is a comprehensive, long-range plan covering 25 million acres. Approximately 10.7 million acres of this total are public lands administered by BLM on behalf of the CDCA.

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The CDCA Plan contains goals and specific actions for the management, use, development, and protection of the resources and public lands within the CDCA and is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality.

Desert Renewable Energy and Conservation Plan Amendment to the CDCA.

The Desert Renewable Energy Conservation Plan (DRECP) is a collaboration between the California Energy Commission, California Department of Fish and Wildlife, BLM, and the U.S. Fish and Wildlife Service. The DRECP is a landscape level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. The Record of Decision for the DRECP Land Use Plan Amendment (LUPA) was signed in 2014 and is intended to facilitate the development of utility-scale renewable energy and transmission projects in the Mojave and Colorado deserts in California to reach federal and state energy targets while conserving sensitive species and habitats, as well as cultural, scenic, and social resources. The LUPA applies to nearly 11,000,000 acres of BLM-managed federal lands.

The linear facilities on BLM-managed land are located within an area designated as a DFA. DFAs are locations where renewable energy generation is an allowable use, is incentivized, and could be streamlined for approval under the DRECP LUPA.

The Red Bluff Substation is on land designated as ACEC. ACECs provide the special management and delivery mechanism where that management is necessary to achieve the overarching conservation goals for the nationally significant ecological, cultural, and scientific values of the California Desert National Conservation Lands. ACECs have limits on new ground disturbance activities.

State

There are no specific state laws, regulations, or policies that are applicable to land use and planning at the Project site. Planning is the responsibility of the agencies having jurisdiction over the land, i.e., Riverside County and the BLM, respectively.

Local

Riverside County General Plan

The Riverside County General Plan (RCGP) was adopted on October 7, 2003. Through a series of resolutions, the Board of Supervisors adopted an update on December 8, 2015. The RCGP consists of a vision statement and the following elements: Land Use, Circulation, Multi-purpose Open Space, Safety, Noise, Housing, Air Quality, and Administration.

As noted above, the land use designation for the Project is Open Space: Rural (OS:RUR). This land use designation is applied to remote, privately owned open space areas with limited access and a lack of public services. Single-family residential uses are permitted at a density of one dwelling unit per 20 acres. The extraction of mineral resources subject to an approved surface mining permit may be permissible, provided that the proposed Project can be undertaken in a manner that is consistent with maintenance of scenic resources and views from residential neighborhoods

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and major roadways and that the Project does not detract from efforts to protect endangered species (Riverside County 2021).

Policies at the General Plan and Area Plan levels implement the vision and goals of Riverside County. The County of Riverside Vision details the physical, environmental, and economic qualities that the County aspires to achieve. Using that Vision as the primary foundation, the RCGP establishes policies for development and conservation within the entire unincorporated County territory. Policies contained within the RCGP that are potentially relevant to land use for the Project are provided below.

Land Use Element

LU 2.1c:

Provide for a broad range of land uses, intensities, and densities including a range of residential, commercial, business, industry, open space, recreation, and public facility uses.

LU 2.1g:

Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.

LU 5.1:

Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers, transportation systems, and fire/police/medical services.

LU 7.1:

Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.

LU 8.1:

Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity.

LU 9.1:

Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

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LU 9.2:

Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.

LU 10.1:

Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.

LU 14.1:

Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

LU 14.5:

Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.

LU 17.2:

Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside.

LU 26.3:

Ensure that development does not adversely impact the open space and rural character of the surrounding area.

LU 26.4:

Encourage parcel consolidation.

LU 26.5:

Provide programs and incentives that allow Open Space-Rural areas to maintain and enhance their existing and desired character.

Multipurpose Open Space Element

OS 11.1:

Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.

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OS 11.2:

Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

OS 11.3:

Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.

OS 11.4:

Encourage site-planning and building design that maximizes solar energy use/potential in future development applications.

Desert Center Area Plan

The Project site is located at the easternmost edge of the Desert Center Area Plan. The Desert Center Area Plan provides customized direction specifically for this portion of the County and guides the evolving character of the agricultural and desert area. The Desert Center Area Plan envisioned little new development for the planning horizon (through 2020) apart from infill and/or revitalization of the Eagle Mountain Townsite and contiguous expansion of the Desert Center and Lake Tamarisk communities. The Desert Center Area Plan was published in 2010 and updated in 2015. Policies contained within the Desert Center Area Plan that are potentially applicable to the Project are as follows:

DCAP 3.1:

Protect farmland and agricultural resources in Desert Center through adherence to the Agricultural Resources section of the General Plan Multipurpose Open Space Element and the Agriculture section of the General Plan Land Use Element, as well as the provisions of the agriculture land use designation.

DCAP 4.1:

When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.

DCAP 5.2:

Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.

DCAP 8.1:

Protect the scenic highways within the Desert Center Area Plan from change that would diminish the aesthetic value of adjacent properties through adherence to the policies

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found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

DCAP 9.1:

Encourage clustering of development for the preservation of contiguous open space.

DCAP 9.2:

Work to limit off-road vehicle use within the Desert Center Area Plan.

DCAP 9.3:

Require new development to conform with Desert Tortoise Critical Habitat designation requirements.

Riverside County Land Use Ordinance No 348.4705

Ordinance No. 348.4705 amends Ordinance No. 348 to authorize solar power-generation plants on lots 10 acres or larger, subject to a Conditional Use Permit (CUP) in the following zone classifications: General Commercial (C-1/C-P), Commercial Tourist (C-T), Scenic Highway Commercial (C-P-S), Rural Commercial (C-R), Industrial Park (I-P), Manufacturing Servicing Commercial (M-SC), Medium Manufacturing (M-M), Heavy Manufacturing (M-H), Mineral Resources (M-R), Mineral Resource and Related Manufacturing (M-R-A), Light Agriculture (A-1), Light Agriculture with Poultry (AP), Heavy Agriculture (A-2), Agriculture-Dairy (A-D), Controlled Development (W-2), Regulated Development Areas (R-D), Natural Assets (N-A), Waterways and Watercourses (W-1), and Wind Energy Resource Zone (W-E). The Project site is zoned as W-2-10 (Controlled Development Areas, 10-acre minimum). Thus, implementation of the Project would not require a zone change. Implementation of the Project would require approval of a CUP by the County. CUP240027 is proposed for the construction, operation, and decommissioning of the Project.

Board of Supervisors Policy B-29/Development Agreement.

Policy B-29 affects Land Use Element Policies LU 2.1.c, LU 5.1, LU 7.1, LU 8.1, LU 13.1, and LU 15.15. The purpose of Policy B-29 (Solar Power Plant Policy) is to ensure that the County does not disproportionately bear the burden of solar energy production and ensure the County is compensated in an amount it deems appropriate for the use of its real property. It requires a Development Agreement between the Board of Supervisors and solar power plant owners. The policy states that the solar power plant owner shall annually pay the County \$150 for each acre of land involved in the power production process, with the fee increasing 2 percent annually. It also lists requirements for solar power plant owners relating to sales and use taxes payable in connection with the construction of a solar power plant. The term of a Development Agreement under this policy shall be for a term coextensive with the operation of the solar power plant.

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3.12.3 Methodology for Analysis

The potential impacts resulting from the Project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses in consideration of applicable planning goals, described above in Section 3.12.2. Compliance with the aforementioned policies is demonstrated in consistency tables below in Sections 3.12.4 and 3.12.5. An evaluation of potential land use conflicts that may result from the Project was based on a review of relevant planning documents, including the RCGP, Zoning Ordinance, and the CDCA Plan and Amendments, and a review of the nearby proposed solar power-generation projects and surrounding area. The focus of the land use analysis is on land use conflicts that would result from implementation of the Project. Land use conflicts are identified and evaluated based on existing or authorized land uses, land uses proposed as part of the Project, land use designations, and standards and policies related to land use. As previously stated, the Project solar facility site is located entirely on private lands and only linear facilities are located on BLM-administered public lands.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For Land Use, the Checklists ask whether the Project would:

- Physically divide an established community (Criteria Requiring No Further Evaluation).
- 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 (Impact LU-1).

Criteria Requiring No Further Evaluation

Due to the nature of the Project, for the reasons stated below, there would be no impacts related to the following criterion and, therefore, no impact discussion is provided.

- **Would the project physically divide an established community?** The Project site is located on currently undeveloped land, portions of which were previously used for agriculture. The land uses in the immediate Project site vicinity are existing and proposed solar energy projects, the I-10, and existing agriculture. The nearest established community, Lake Tamarisk, is 8.5 miles west of the Project site. The Project would not divide an established community and no impact would occur.

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3.12.4 Impacts and Mitigation Measures

Impact LU-1 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Solar Facility Site (Private Lands)

The solar facility portion of the Project site is located on private lands and is therefore required to be consistent with local land use policies. Table 3.12-1 includes a review of the applicable local land use policies. The solar facility site would be consistent with the local and regional policies. Additionally, the solar facility site would be consistent with the County's policies to promote alternative energy supply sources and provide solar opportunities. The Project would be subject to the Riverside County General Plan, Desert Center Area Plan, and the County Ordinances. Table 3.12-1 describes how the Project would be consistent with applicable local land use plans, policies, or regulations.

Table 3.12-1 Consistency with Regional and Local Land Use Plans, Policies, and Regulations

Policy/Regulation/ Goal	Description	Consistency Analysis
GP Land Use Element LU 2.1.c	Provide for a broad range of land uses, intensities, and densities, including a range of residential, commercial, business, industry, open space, recreation, and public facility uses.	Consistent. The Project would not limit the range of land uses throughout the project region because it would not restrict the use of any other private or public land in the County because all of the Project infrastructure would be limited to the proposed parcels and it would not impact adjacent parcels. Additionally, at the end of the life of the Project, the solar facility would be removed and the land would be available for other uses.
GP Land Use Element LU 2.1.g	Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.	Consistent. The Project site is located in an area surrounded by solar development and has been reviewed under CEQA to ensure it is not in areas subject to severe natural hazards. Environmental effects have been analyzed in this EIR and would be mitigated to reduce impacts. The majority of the site has been used previously for agriculture purposes, reducing the environmental sensitivity of the site.
GP Land Use Element LU 5.1	Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers, transportation systems, and fire/police/medical services.	Consistent. The Project would not result in a permanent increase in population or associated infrastructure or services. Roads and other infrastructure that must be improved to accommodate the Project will be improved as needed by the Applicant.

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Policy/Regulation/ Goal	Description	Consistency Analysis
GP Land Use Element LU 7.1	Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.	Consistent. The Project would be consistent with the Riverside County General Plan and Desert Center Area Plan. Subject to a Conditional Use Permit, the Project is allowed under the zoning ordinance. As part of the CEQA review, all environmental resources have been considered and mitigation has been incorporated to minimize impacts.
GP Land Use Element LU 8.1	Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity.	Consistent. The Project would help maintain the County's fiscal viability by increasing the revenue of the County through increase in workforce during construction and operation of the Project as well as through a Development Agreement with the County for the Project.
GP Land Use Element LU 9.1	Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.	Consistent. While the Project is in an Open Space land use designation, it was previously used for agriculture and is surrounded by solar projects. As such, the Project is not within an area with important natural resources such as cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values. Compliance with mitigation measures identified in this EIR would also mitigate impacts on natural resources. Refer to Sections 3.2, 3.5, 3.6, and 3.17 of this EIR for more information.
GP Land Use Element LU 9.2	Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.	Consistent. The Project would comply with CEQA, NEPA, and other federal and local resource conservation laws and regulations. Additionally, compliance with mitigation measures identified in this CEQA document for impacts to air resources (Section 3.4) and water resources (Section 3.11) and the Conservation and Management Actions from the BLM Desert Renewable Energy Conservation Plan Land Use Plan Amendment would ensure protection of environmental resources on the Project site.

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Policy/Regulation/ Goal	Description	Consistency Analysis
GP Land Use Element LU 10.1	Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.	Consistent. The Project is not anticipated to cause additional impacts to public facilities because it would not require any new County public facilities. A Development Agreement would be developed with the County which would require the Project contribute its fair share to the County.
GP Land Use Element LU 14.1	Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.	Consistent. The Project site is located on disturbed former agricultural and undeveloped land adjacent to existing and proposed solar projects and existing electrical facilities. As evaluated in Section 3.2 Aesthetics, of this EIR, construction, operation, and decommissioning of the Project would not significantly impact scenic vistas or scenic features that are available to the traveling public from roads, primarily Interstate 10. Refer to Section 3.2 of this EIR for more information.
GP Land Use Element LU 14.5	Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.	Consistent. The Project's gen-tie line would parallel existing electrical lines and be indistinct in views from the interstate. Refer to Section 3.2 of this EIR for more information.
GP Land Use Element LU 17.2	Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside.	Consistent. The Project is a renewable energy project and is being reviewed under CEQA and NEPA and mitigation will be incorporated to reduce the environmental impacts of the Project. The Project will comply with all requirements of the CUP including a Development Agreement with the County.
GP Land Use Element LU 26.3	Ensure that development does not adversely impact the open space and rural character of the surrounding area.	Consistent. The Project site is located on disturbed former agricultural and undeveloped land adjacent to existing solar projects and existing electrical facilities. The Project site is surrounded by federal land identified in the BLM DRECP Land Use Plan Amendment as appropriate for solar energy development in a landscape-scale planning document.

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Policy/Regulation/ Goal	Description	Consistency Analysis
GP Land Use Element LU 26.4	Encourage parcel consolidation.	Consistent. The Project site comprises multiple parcels, and the development is considering consolidation as an option in discussions with the County.
GP Land Use Element LU 26.5	Provide programs and incentives that allow Open Space-Rural areas to maintain and enhance their existing and desired character.	Consistent. The Project site is located on private lands consisting of disturbed former agricultural and undeveloped land adjacent to existing solar projects and existing electrical facilities. The County allows for renewable energy in W-2-10 (Controlled Development Areas, 10-acre minimum). The gen-tie and access route are located on BLM land identified as appropriate for renewable energy within a DRECP DFA. SCE Activities would occur entirely within existing substations' footprints. Open space areas not occupied by Project facilities would maintain their character.
GP Open Space Element OS 11.1	Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.	Consistent. The Project would be a renewable energy power-generation project and would use alternative energy supply. It would not shade other nearby solar infrastructure.
GP Open Space Element OS 11.2	Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.	Consistent. The Project would be a renewable energy power-generation project.
GP Open Space Element OS 11.3	Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.	Consistent. The Project would be a renewable energy power-generation project.
GP Open Space Element OS 11.4	Encourage site-planning and building design that maximizes solar energy use/potential in future development applications.	Consistent. The Project would be a renewable energy power-generation project.

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Policy/Regulation/ Goal	Description	Consistency Analysis
DCAP 3.1	Protect farmland and agricultural resources in Desert Center through adherence to the Agricultural Resources section of the General Plan Multipurpose Open Space Element and the Agriculture section of the General Plan Land Use Element, as well as the provisions of the agriculture land use designation.	Consistent. While the Project site is located on land available for agricultural use, the site does not currently support active agricultural activity. The portion of the Project site comprising private lands formerly supported agricultural operations; however, agricultural operations have not occurred on site for several years. The Project would not convert any land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (i.e., Farmland Mapping and Monitoring Program designated Farmland) as it is not mapped by the Farmland Mapping and Monitoring Program. Following decommissioning of the Project, the land could be returned to agricultural use. See Section 3.3 Agriculture and Forest Resources. The Project would be consistent with this goal.
DCAP 4.1	When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.	Consistent. Aesthetic impacts are evaluated in Section 3.2, Aesthetics, of this EIR. Security lights around the entrance/driveway, parking area, substation, battery energy storage system enclosure area, and operations and maintenance building substation would be motion-sensitive or operated by switches and directional. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties.
DCAP 5.2	Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.	Consistent. The Project would not have a long-term, permanent impact on LOS of surrounding roadways and would comply with Vehicle Miles Traveled requirements (see Section 3.18).

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Policy/Regulation/ Goal	Description	Consistency Analysis
DCAP 8.1	Protect the scenic highways within the Desert Center Area Plan from change that would diminish the aesthetic value of adjacent properties through adherence to the policies found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.	Consistent. I-10 is not a state Scenic Highway. It is a County-eligible Scenic Highway. No views of the Project site are available from a state Scenic Highway. Views of the site from I-10 would be similar to existing views because the Project site would be adjacent to existing solar development projects to the east and west. Refer to Section 3.2 of this EIR for more information.
DCAP 9.1	Encourage clustering of development for the preservation of contiguous open space	Consistent. The Project would be located near an existing solar project, and several proposed or approved solar projects.
DCAP 9.2	Work to limit off-road vehicle use within the Desert Center Area Plan.	Consistent. The Project would not encourage off-road vehicle use.
DCAP 9.3	Require new development to conform with Desert Tortoise Critical Habitat designation requirements.	Consistent. The Project site is not located in Desert Tortoise Critical Habitat (see Section 3.5 and the Biological Resources Technical Report).
Ordinance No. 348.4705 for zoning W-2 (Controlled Development Areas)	This zone permits solar power plants on lots 10 acres or larger upon issuance of a CUP.	Consistent. Subject to the approval of the CUP, the Project would be an allowable use under this zone.

Riverside County General Plan.

The Project would be a conditionally permitted use within the land use designation Open Space: Rural (OS:RUR) with approval of a CUP and completion of an environmental review. Table 3.12-1 demonstrates how the Project would be consistent with the Land Use and Multipurpose Open Space Elements. The existing and planned land uses surrounding the Project are similar in nature and include existing renewable development and federal lands identified for renewable energy development.

The Project is consistent with the surrounding zoning and land use, and the Project site is located approximately 8.5 miles from the nearest residential area. This EIR also addresses in detail the Project's potential impacts related to noise, traffic and access, views of the open desert, night lighting, water usage, and dust. Noise is address in Section 3.14 Noise, traffic and access are addressed in Section 3.19 Transportation, views of the open desert and night lighting are addressed in Section 3.2 Aesthetics, water usage is addressed in Section 3.21 Utilities and Service Systems, and dust is addressed in Section 3.4 Air Quality. These impacts are less than significant or less than significant with implementation of mitigation measures addressing construction noise, traffic plans, aesthetics, dust abatement, and public notification.

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Desert Center Area Plan and Riverside County Zoning Ordinance.

The Project would be a conditionally permitted in the W-2-10 zone. The Project would not conflict with the Desert Center Area Plan and Riverside County Zoning Ordinance (see Table 3.12-1).

Board of Supervisors Policy B-29.

The Project is subject to Policy B-29, and the developer is proposing to enter into a development agreement with the County following the guidelines noted in the regulatory setting. Thus, the Project would comply with this policy.

Desert Renewable Energy Conservation Plan.

The County recognizes the DRECP as a “land use plan” for the purpose of its lead agency review as a guide for identifying the most appropriate lands for solar development within the County. By virtue of its location, which is surrounded by a DFA, the Project site is appropriate for utility-scale solar development.

Linear Facility Routes (Public Lands)

The linear facilities routes (gen-tie, access roads, and collection line segment) are on BLM-administered lands that are located within a DFA for solar, wind, and geothermal projects as designated by the DRECP. The DFA designation identifies land well-suited for development of renewable energy facilities and associated infrastructure, including gen-tie lines, without requiring a LUPA if a project complies with relevant DRECP Conservation and Management Actions. The DRECP is a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities.

The Project’s linear infrastructure would be consistent with the CDCA Plan, as amended by the DRECP LUPA, and its Conservation and Management Actions for the reasons explained in the Savira BLM Linear Facilities Plan of Development, including DFA-VPL-BIO-IFS-1 which recommend siting infrastructure in previously disturbed areas, DFA-VPL-BIO-COMP-1 which requires compensation identified in the DRECP LUPA, and LUPA-CTTM-1 and LUPA-CTTM-2 which include managing for access. Because this land is specifically designated for developments such as the Project, there would be no conflicts with BLM land use, and the Project would not conflict with federal policies, regulations, and goals. The existing access routes (DC 950 and DC 511) are used by other BLM right-of-way holders for existing access as well as for casual recreation. Portions of route DC 511 are located within the Project site. The Project would not close the DC 511 to other easements and users such that it would impact the existing use of the access route. No other open BLM routes on public lands would be impacted by the Project.

One existing BLM route, DC 902, continues onto private land on the Project site for approximately 0.85 mile. While OHV routes cannot be officially designated on private land, some routes cross private land and may be used by recreationists via unauthorized travel. This route does not lead to any authorized recreational use. Effects on BLM open routes would be considered by the BLM in its NEPA document for open routes on public land and would be considered an implementation decision, consistent with BLM regulations. BLM would not consider closure of

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the portion of the route on private land an effect because it does not have jurisdiction over this land and the route would not be considered a BLM open route.

Existing Rights and Potential Conflicts.

Grants, including the Project's requested ROW Grant, are subject to the valid existing rights of others, including rights retained by the United States. Other valid, existing rights pertain to collocated transmission lines, such as the existing SCE 161kV line that would parallel the Project gen-tie line and does not conflict with the Project. The proposed Redonda Solar Project gen-tie line would also parallel the proposed Savira gen-tie line and would not conflict with the Project because each project would be required to meet all applicable regulations. If there are other applications in the Project area, the BLM retains the right to require common use of ROW for compatible uses, including facilities or access routes and the right to change grants to protect public health or safety of the environment.

The BLM retains the right to issue other compatible ROWs. If subsequent ROWs are granted along the access road for the Project, the BLM would be required to notify those with valid existing rights, per Code of Federal Regulations section 2807.14. Grant holders would have an opportunity to respond in writing as to how the actions would impact their existing operations/rights. The BLM would consider the potential effects prior to granting subsequent ROWs. There are multiple active, approved, and proposed projects in the vicinity of the Project solar facility site and gen-tie and access road, as shown in Tables 3.1-1 and 3.1-2, in Figure 2-3 Project and Other Solar Projects, and in the cumulative impact analyses section within each resource section in Chapter 3 Environmental Analysis. These include existing and proposed solar projects.

Prior to ROW Grant approval, the Applicant is required to coordinate with any legally existing ROWs or conflicting uses to ensure the Project would not impact these uses, including bearing the cost of this coordination. This includes coordinating the construction of the gen-tie line and any improvements to the existing access road with construction of other approved projects. The Applicant would coordinate this process, in consultation with BLM, by submitting documentation to the various existing and planned land users to ensure the gen-tie line would not infringe on their existing rights. This coordination would occur once additional engineering for the gen-tie line is complete, and the Applicant anticipates continued discussions with developers as well as working with the BLM to resolve any potential conflicts.

The Project would not conflict with applicable land use plans, policies, and regulations and would not result in an alteration of the present or planned land use of the area. The Project is not inconsistent or incompatible with the site's existing, proposed, or surrounding land uses. The Project would not indirectly cause a significant environmental impact due to conflicts with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The Project would result in less-than-significant impacts related to the use of the land and other conflicts.

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Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. All activities would be similar in nature to the existing Substation infrastructure and, therefore, consistent with the existing land uses at the Substations and the underlying land use plans and zoning. The SCE Activities would not 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 because no new ground disturbance would occur outside of the existing Substations and all the proposed work would be similar and consistent with the existing Substations' infrastructure. No impact would occur.

Significance Determination before Mitigation

Less than significant.

Mitigation Measures

None required.

3.12.5 Cumulative Impact Analysis

The geographic scope for cumulative impacts to land use consists of eastern Riverside County. This is because the uses and users of the land from Desert Center to Blythe are similar, and this region is often considered as a whole for land use planning. Past, present, and reasonably foreseeable future actions making up the cumulative scenario are identified in Tables 3.1-1 and 3.1-2 in Chapter 3 Environmental Analysis, Section 3.1.2 Cumulative Impact Scenario.

The Project site is zoned as W-2-10 which, in accordance with County Ordinance No. 348, allows for solar power plants on lots 10 acres or larger subject to a CUP. Many other solar and renewable energy projects have been proposed, approved, or constructed in the Project region, both on private and public land (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Section 3.1.2). These projects would have considered the appropriate zoning (if on private land) and land use planning on private and federal land and were found an appropriate use of the area. The DRECP specifically identified the Desert Center Area as a DFA, which is an area that allows for the development of renewable energy.

With appropriate permitting, each project would avoid impacts to land use. Potential land use impacts require evaluation on a case-by-case basis. During the permitting of the cumulative projects, multiple uses would be reviewed by BLM or the County to ensure there would be appropriate access and no direct conflicts. As part of its planning process, the BLM has set aside millions of acres for uses other than renewable energy development (e.g., recreation, mining, conservation) and has directed renewable energy development to DFAs. While the County's Desert Center Area Plan does not explicitly account for the potential for multiple solar projects in the area, the County has approved nearby solar projects (Athos, Palen, Sapphire) and has determined during the approval process that the projects do not conflict with the County plans. Because each individual project must undergo this type of review, and because the agencies have identified Desert Center as an area where renewable energy is acceptable, the Project, in

3.12-LAND USE AND PLANNING

conjunction with other past, present, and probable future projects, would not result in a significant cumulative land use impact. In addition, with approval of all discretionary requests, the Project would be an allowable use that would not conflict with the land use or zoning classifications for the site.

Southern California Edison Activities

The SCE Activities would occur entirely in existing Substations and would be consistent with the existing land use plans and zoning. As noted in the analysis in Section 3.12.4, the SCE Activities would result in no impact to land use and as such, they would not contribute to a significant cumulative land use impact.

Significance Determination before Mitigation

Less than significant

Mitigation Measures for Cumulative Impacts

None required

3.12.6 References

Riverside County. 2021. "Chapter 3: Land Use Element." In *County of Riverside General Plan*. Available: <https://planning.rctlma.org/riverside-county-general-plan>.

— — —. 2023. *Riverside County Zoning Ordinance Section 348*.

UC Riverside. 2022. "Natural Communities | PALM DESERT CENTER." January 10. <https://palmdesert.ucr.edu/calnatblog/2022/01/10/natural-communities>.

3.13 Noise and Vibration

This section presents the environmental setting and analysis of impacts to noise resulting from the Project. This section includes existing noise information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.13.1 Definitions

This subsection introduces key concepts and terms that are used in the evaluation of noise and noise and vibration.

Noise

Noise is defined as unwanted sound. Airborne sound, which is a rapid fluctuation of air pressure above and below atmospheric pressure, becomes unwanted when it interferes with regular activities (e.g., sleep, speech, recreation, tasks demanding concentration or coordination) or when it has harmful effects on human or environmental health. An individual's sound experience differs based on ambient noise levels, proximity to the sound, intensity and duration of the sound, and time of day the sound occurs.

Sound

Decibels and A-weighted Sound Levels

Various noise descriptors are used to quantify the sound experience depending on different time scales and perception. Sound levels usually are measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of human perception. Most of the sounds that we hear in the environment consist not of a single frequency but of a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency combine to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at low and extreme high frequencies than in the frequency mid-range. This is called *A-weighting*, and the decibel level measured is called the *A-weighted sound level* (dBA). Examples of A-weighted levels measured for typical noise in the environment and industry are listed in Table 3.13-1.

Not all changes in dBA level are easily perceptible by humans. A change of 1 dBA generally cannot be perceived, and a 3 dBA change is considered a just-perceivable difference (Caltrans 2013a). A change in noise level of at least 5 dBA is required before any noticeable change in community response can be expected. A 10 dBA change is heard subjectively as about a doubling in loudness and is almost certain to cause an adverse change in community response.

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Table 3.13-1 Typical Noise Levels in the Environment

Common outdoor noise source	Noise level (dBA)	Common indoor noise source
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: (Caltrans 2013b)

Equivalent Sound Level

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, creating a relatively steady background noise in which no particular source is identifiable. A single-number descriptor called the *equivalent continuous sound level*, or *Leq*, is widely used. The *Leq* is the average A-weighted noise level during a stated period of time.

3.13 NOISE AND VIBRATION

Day/Night Noise Level and Community Noise Equivalent Level

In determining the daily level of environmental noise, accounting for the difference in response of people to daytime and nighttime noises is important. Exterior background noises generally are lower during the nighttime than during the daytime. Most household noise also decreases at night, and exterior noise becomes very noticeable despite reduced noise level. At night, most people sleep and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor for day/night average sound level, L_{dn} , was developed. The L_{dn} divides the 24-hour day into daytime, between 7 a.m. and 10 p.m., and nighttime between 10 p.m. and 7 a.m. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The descriptor *community noise equivalent level*, or CNEL, is similar to L_{dn} but adds an additional 5 dB to noise occurring in the evenings between 7 p.m. and 10 p.m. (EPA 1974).

Noise from Multiple Sources

Because the measurement of sound pressure levels in decibels is based on a logarithmic scale, the sound pressure levels from multiple sources cannot simply be summed to determine the combined effect. A new noise source in combination with an existing noise source, with both producing noise at the same level, would not double the noise level. If there are two unrelated sounds of the same intensity together, the general rule is that it would represent an increase of 3 dBA. For instance, if two noise sources each produce a noise level of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA (Baker 2024).

Noise Attenuation

Stationary point sources of noise, including construction equipment, *attenuate*, or lessen, at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots, smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling) (Caltrans 1998). Sound from a roadway with moving vehicles, known as a *line source*, typically attenuates at a lower rate, approximately 3 to 4.5 dB per doubling, that also depends on ground. Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, increase the attenuation that occurs by distance alone (Caltrans 1998).

Groundborne Vibration and Noise

Groundborne vibration may occur when heavy equipment or vehicles create vibrations in the ground, which then can propagate through the ground to buildings, creating a low-frequency sound. Groundborne vibrations can be a source of annoyance to humans because of a “rumbling” effect, and such vibrations also may cause damage to buildings. Groundborne vibration is discussed in terms of these impacts on humans and structures. The annoyance potential of groundborne noise typically is characterized by the A-weighted sound level. Because of its low frequency, groundborne noise sounds louder than airborne noise at the same noise level; therefore, the impact thresholds for groundborne noise typically are lower than those for airborne noise.

3.13 NOISE AND VIBRATION

The potential for damage to structures is expressed in *peak particle velocity* (PPV). PPV often is used in construction vibration monitoring because it is related to the stresses that are experienced by buildings and is not used to evaluate human response. PPV usually is expressed in inches/second (in./sec) in the United States.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below a level that would result in damage to a structure. Except for long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. Human response to vibration often is described as the *root-mean-square* (RMS) velocity level and is denoted in the *vibration decibel scale*, or VdB. The typical background level in residential areas is about 50 VdB. Most people cannot detect levels below about 65 VdB and generally do not consider levels below 70 VdB (approximately 0.1 PPV) to be an annoyance. However, the duration of a vibration event has an effect on human response, as does its frequency. Generally, as the duration of a vibration event increases, the potential for adverse human response increases, particularly if the vibration event disturbs sleep. In addition, while people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration (FTA 2018)

Vibration in buildings caused by construction activities may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as *groundborne noise*. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range of vibration frequencies (i.e., 60 to 200 Hertz); when the structure and the construction activity are connected by foundations or utilities, such as sewer and water pipes; or when the airborne noise path is blocked, such as during tunneling activities (FTA 2018)

3.13.2 Environmental Setting

Project Setting

The description of the Projects regional noise setting is based on review of previously prepared documents, site visits to the Project area, as well as a previously prepared noise study for the Sapphire Solar Project, which is located in the regional project area (Dudek, 2024) with similar noise sources.

The most likely source of ambient noise near the project site is Interstate 10 (I-10), which is adjacent to the project site at its closest point. Historically, noise surveys conducted for the Riverside County General Plan found locations along I-10 to be exposed to approximately 81.9 dBA Ldn near the edge of the highway and over 60 dBA Ldn for any location within approximately 2,000 feet of the I-10 centerline (Riverside County 2015). Other major sources of human-induced noise include the Chuckwalla Valley Raceway, which includes a landing strip, and SR-177, which are approximately 4 miles and 6 miles northwest of the Project site,

3.13 NOISE AND VIBRATION

respectively. Ultimately, aside from the noise from I-10, few human-induced sources of noise occur around the Project site, and the noise environment is generally quiet as it is surrounded by existing solar projects, which generate minimal noise during operations, some agriculture, and open space. Based on population density in the Project area, the natural background day-night noise levels are likely 35 to 45 dBA, which corresponds to the range of levels in wilderness and rural areas (BLM 2010). This is consistent with but slightly lower than the measured long-term ambient outdoor noise levels for the Sapphire Project, which ranged between 41 to 65 day-night dBA (Dudek 2024).

Noise Sensitive Receptors

As defined in the Riverside County Noise Ordinance and County of Riverside General Plan Noise Element, *noise-sensitive* land uses include residences, passive recreation areas, schools, hospitals, rest homes, places of worship, and cemeteries (Riverside County 2015). Noise-sensitive areas are places where quiet is necessary for the intended use of the land, such as residences where noise can interfere with sleep, concentration, and communication, and where excessive noise can cause physiological and psychological stress and hearing loss. In addition, wildlife management areas where breeding could be disturbed are considered sensitive receptors to noise. Residences, hospitals, rest homes, and schools are also considered vibration-sensitive; in addition, vibration-sensitive land uses include institutional uses such as laboratories where the activities within the building are particularly sensitive to vibration.

The Project site is surrounded mostly uninhabited open space under management of the Bureau of Land Management, areas developed or soon to be developed for other solar facilities, and minor agricultural operations. The closest residence is approximately 6 miles west of the Project. The nearest school is the Eagle Mountain School, which is approximately 16 miles to the northwest of the Project site. Because there are no noise-sensitive land uses or inhabited dwellings within 0.25 mile of the Project, noise from construction would be exempt from noise standards (per Section 2 of Ordinance No. 847, listed below).

3.13.3 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Federal Noise Control Act of 1972

The Federal Noise Control Act of 1972 divides noise control authority between federal, state, and local governments. State and local governments are responsible for controlling the use of noise sources and determining the levels of noise to be permitted in their environments. Accordingly, no federal regulations or policies governing noise are applicable to the program.¹ However,

¹ Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 of the Code of Federal Regulations, part 205, subpart B. The federal

3.13 NOISE AND VIBRATION

federal standards and guidance established for noise and vibration are frequently used to establish thresholds and/or evaluate noise and vibration impacts at state and local levels. Applicable standards are described below.

Federal Transit Authority Transit Noise and Vibration Impact Assessment Manual

The Federal Transportation Authority's (FTA's) Transit Noise and Vibration Impact Assessment Manual (FTA 2018) provides guidance on quantitative assessment methodologies to estimate construction noise and vibration levels. For quantitative noise modeling, the FTA guidance evaluates the noise levels from the two loudest pieces of equipment expected to operate concurrently at a given construction site. For quantitative vibration modeling, construction vibration is assessed by evaluating each piece of construction equipment individually. The FTA Manual also provides typical noise levels from representative construction equipment at 50 feet from the noise source and typical vibration levels from representative construction equipment at 25 feet from the source.

State

California Noise Compatibility Guidelines

The Noise Element Guidelines, contained as Appendix D of the Governor's Office of Planning and Research's General Plan 2017 Guidelines provide a basis for local programs to control and abate environmental noise and to protect residents from excessive exposure (Governor's Office of Planning and Research 2017). These guidelines include a noise level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories (i.e., normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable), depending on land use.

These normally and conditionally acceptable L_{dn} ranges are intended to indicate that local conditions (existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations. These thresholds are used by many agencies, environmental planners, and acoustical specialists as a starting point to evaluate the potential for noise impacts on and by a project. The thresholds are also used to evaluate methods for achieving noise compatibility with respect to nearby existing uses. Table 3.13-2 lists these thresholds for the normally and conditionally acceptable L_{dn} exposures.

Table 3.13-2 California Noise Compatibility Guidelines

Land use category	Community noise exposure (L_{dn} or CNEL, dBA): normally acceptable	Community noise exposure (L_{dn} or CNEL, dBA): conditionally acceptable
Residential – low density	50–60	60–70
Residential – high density	50–65	65–70

truck passby noise standard is 80 dBA at 50 feet from the vehicle pathway centerline, under specified test procedures. These requirements are implemented through regulatory controls on truck manufacturers.

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Land use category	Community noise exposure (Ldn or CNEL, dBA): normally acceptable	Community noise exposure (Ldn or CNEL, dBA): conditionally acceptable
Transient lodging – motels, hotels	50–65	65–70
Schools, libraries, churches, hospitals, nursing homes	50–60	60–65
Auditoriums, concert halls, amphitheaters	NA	50–70
Sports arenas, outdoor spectator sports	NA	50–75
Playgrounds, neighborhood parks	50–67.5	NA
Golf courses, riding stables, water recreation, cemeteries	50–70	NA
Office buildings, business commercial and professional	50–67.5	67.5–77.5
Industrial, manufacturing, utilities, agricultural	50–70	70–80

Source: (Governor's Office of Planning and Research 2017)

California Department of Transportation Construction Vibration Guidance Manual

The California Department of Transportation (Caltrans) Construction Vibration Guidance Manual provides guidance and procedures to assess the potential for adverse effects related to human perception and structural damage resulting from various sources of vibration, including construction equipment (Caltrans 2020). The Caltrans Manual provides thresholds for vibration damage risk to various types of building structures, as presented in Table 3.13-3, below.

Table 3.13-3 Caltrans Guideline Vibration Damage Potential Threshold Criteria

Structure and condition	Maximum PPV (in./sec): transient sources	Maximum PPV (in./sec): continuous/frequent intermittent sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes:

^a Transient sources create a single isolated vibration event, such as blasting or drop balls.

^b Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: (California Department of Transportation [Caltrans]) 2020)

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Local

Riverside County General Plan Noise Element

The County of Riverside General Plan Noise Element (Riverside County 2015) provides the guidelines of Land Use Compatibility Noise Exposure, which are used to evaluate potential noise impacts and to set the criteria for environmental impact findings and conditions for project approval. The land use compatibility criteria adopted by Riverside County as part of the Noise Element of the General Plan are listed in Table 3.13-4, below.

Table 3.13-4: County of Riverside Land Use Compatibility Standards

Land use	Normally acceptable	Conditionally acceptable	Normally unacceptable	Clearly unacceptable
Residential- low density – (single-family)	Up to 60 dBA	55–70 dBA	70–75 dBA	Over 75 dBA
Residential – multiple-family	Up to 65 dBA	60–70 dBA	70–75 dBA	Over 75 dBA
Transient lodging, motels, hotels	Up to 65 dBA	60–70 dBA	70–80 dBA	Over 80 dBA
Schools, libraries, churches, hospitals, nursing homes	Up to 70 dBA	60–70 dBA	70–80 dBA	Over 80 dBA
Auditoriums, concert halls, amphitheaters	Category not used	Up to 70 dBA	Over 65 dBA	Category not used
Sports arenas, outdoor spectator sports	Category not used	Up to 75 dBA	Over 70 dBA	Category not used
Playgrounds, neighborhood parks	Up to 70dBA	Category not used	67.5–75 dBA	Over 72.5 dBA
Golf courses, riding stables, water recreation, cemeteries	Up to 75dBA	Category not used	70–80 dBA	Over 80 dBA
Office buildings, business commercial, professional	Up to 70dBA	67.5–77.5 dBA	Category not used	Over 75 dBA
Industrial, manufacturing, utilities, agriculture	Up to 75dBA	70–80 dBA	Category not used	Over 75 dBA

Source: County of Riverside General Plan, Noise Element (Riverside County 2015, tbl. N-1 Land Use Compatibility for Community Noise Exposures)

Policies for Noise Compatibility

The following County General Plan Noise Element policies protect noise sensitive land uses from noise emitted by outside sources and prevent new projects from generating adverse noise levels on adjacent properties (Riverside County 2015)

Policy N1.1

Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.

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Policy N1.2

Guide noise-tolerant land uses into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors or within the projected noise contours of any adjacent airports.

Policy N1.4

Determine if existing land uses will present noise compatibility issues with proposed projects by undertaking site surveys.

Policy N1.5

Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.

Policy N1.6

Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise-sensitive uses.

Policy N1.8

Limit the maximum permitted noise levels that cross property lines and impact adjacent land uses, except when dealing with noise emissions from wind turbines.

Policy N3.2

Require acoustical studies and subsequent approval by the Planning Department and the Office of Industrial Hygiene, to help determine effective noise mitigation strategies in noise-producing areas.

Policy N3.3

Ensure compatibility between industrial development and adjacent land uses. To achieve compatibility, industrial development projects may be required to include noise mitigation measures to avoid or minimize project impacts on adjacent uses.

Policy N3.5

Require that a noise analysis be conducted by an acoustical specialist for all proposed projects that are noise producers. Include recommendations for design mitigation if the project is to be located either within proximity of a noise-sensitive land use, or land designated for noise sensitive land uses.

Policy N3.6

Discourage projects that are incapable of successfully mitigating excessive noise.

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Policy N3.7

Encourage noise-tolerant land uses such as commercial or industrial, to locate in areas already committed to land uses that are noise-producing.

Temporary Construction

The County of Riverside General Plan Noise Element includes numerous policies intended to minimize noise-related conflicts between adjacent types of land uses. Policies addressing “temporary construction” activities include the following (Riverside County 2015):

Policy N 13.1

Minimize the impacts of construction noise on adjacent uses within acceptable practices.

Policy N 13.2

Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.

Policy N 13.7

Require that all construction equipment utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.

Stationary Sources of Noise

The County of Riverside General Plan Noise Element also identifies preferred noise standards for stationary noise sources that affect residential land uses, as listed in Table 3.13-5 below.

Table 3.13-5 Stationary Source Land Use Noise Standards

Land use	Time of day	Interior noise standard	Exterior noise standard
Residential	10 p.m. to 7 a.m.	40 L _{eq} dBA, 10-minute	45 L _{eq} dBA, 10-minute
Residential	7 a.m. to 10 p.m.	55 L _{eq} dBA, 10-minute	65 L _{eq} dBA, 1-minute

Source: County of Riverside General Plan, Noise Element (Riverside County 2015, tbl. N-2 Stationary Source Land Use Noise Standards)

Vibration.

Groundborne vibrations can be a source of annoyance to people or a source of structural damage to some types of buildings. Although vibration measurements can be presented in many different forms, peak particle velocity is the unit of measure used most often to assess building damage potential. The County General Plan Noise Element (Riverside County 2015) includes consideration of groundborne vibrations. Residential areas, schools, and sensitive research operations are among the land uses that are vibration sensitive. Table 3.13-6 lists typical human perception of vibration levels.

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Table 3.13-6 Human Reaction to Vibration Levels

Vibration level, peak particle velocity (in./sec)	Human perception
0.0059-0.0188	Threshold of perception, possibility of intrusion
0.0787	Vibrations readily perceptible
0.0984	Continuous vibration begins to annoy people
0.1968	Vibrations annoying to people in buildings
0.3937-0.5905	Vibrations considered unpleasant when continuously subjected and unacceptable by some walking on bridges

Source: County of Riverside General Plan, Noise Element (Riverside County 2015, tbl. N-2 Human Reaction to Typical Vibration Levels)

County of Riverside Noise Ordinance

The County of Riverside Noise Ordinance allows for different levels of acceptable noise depending on land use. The Noise Ordinance, or Ordinance No. 847 (Regulating Noise), is incorporated into the County Ordinance as Title 9 Public Peace, Morals and Welfare, Chapter 9.52 Noise Regulation. The standards outlined in Section 4 of Ordinance No. 847, and found in Title 9, Chapter 9.52.040 prohibit noise sources on any property from causing excessive exterior noise on any other nearby occupied property.. The maximum decibel level standards depend on the receiving land use, such that sound levels zoned “rural desert,” should not exceed 45 dBA L_{max} during daytime hours (7:00 a.m. to 10:00 p.m.) or nighttime hours (10:00 p.m. to 7:00 a.m.). These County standards protect noise-sensitive receptors within the very rural desert areas near the Project site.

Exceptions to the noise standards can be requested for construction-related reasons. Section 2 of Ordinance No. 847 specifies that the following construction activities are exempt from the provisions of the noise ordinance:

- Private construction projects located one-quarter mile or more from the nearest inhabited dwelling
- Private construction projects located within a one-quarter mile of an inhabited dwelling, provided that construction activities are limited to 6:00 a.m. to 6:00 p.m. during the months of June through September and are limited to 7:00 a.m. to 6:00 p.m. during the months of October through May.

3.13.4 Methodology for Analysis

The area of interest for noise and vibration issues is typically localized. Airborne noise dissipates with increasing distance from the noise source. The distances involved depend primarily on the intensity of the noise generated by the source and partially on weather conditions such as wind speed and direction, the height and strength of temperature inversions, and the height of cloud cover (Governor’s Office of Planning and Research 2017). Sound is detectable somewhat farther downwind than upwind of a noise source. Temperature inversions and cloud cover can reflect or

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refract sound that is radiated upward; this effect can increase noise levels at locations that receive the reflected or refracted sound. Such reflection and refraction effects are important primarily for high-intensity sounds. For noise sources such as construction activity and vehicle traffic, although potentially audible over large distances, the region of greatest influence is typically less than 0.25 mile (1,320 feet) from the noise source (County Noise Ordinance No. 847).

Groundborne vibrations similarly dissipate rapidly with increasing distance from the vibration source. The distances involved depend primarily on the intensity of the vibrations generated by the source and partly on soil and geologic conditions. Detectable vibrations will travel the greatest distance through solid rock and the least distance through loose, unconsolidated soils or saturated soils (California Department of Transportation [Caltrans] 2020). For vibration sources such as construction activity and vehicle traffic, the region of influence is typically less than 200 feet from the vibration source (Caltrans 2020).

The gen-tie, access road, and medium-voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

A previously prepared noise study for the Sapphire Solar Project, also located in the regional project area (Dudek, 2024) was used as comparison when assessing the impacts associated with noise due to the similar nature of the noise sources and project components.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For noise, the Checklists ask if a project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Impact NOI-1);
- Generate excessive groundborne vibration or groundborne noise levels (Impact NOI-2; or
- For project activities in the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels. (Criteria Requiring No Further Evaluation)

Criteria Requiring No Further Evaluation

Due to the nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

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- For project activities in the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels. The Project site is not located within an airport influence area or within 2 miles of a public airport. The landing strip at the Chuckwalla Valley Raceway is 4 miles from the Project. Therefore, there would be no impact.

3.13.5 Impacts and Mitigation Measures

Impact NOI-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction

Construction of the Project is anticipated to last 15 months. Construction noise levels would vary from day to day, depending on the number and type of equipment being used and the types and duration of activity being performed. Construction generally would occur during daylight hours and may occur 7 days a week. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. For instance, during hot weather, it may be necessary to start work earlier (e.g., at 5:00 a.m.) to avoid work during high ambient temperatures. Construction would require some night-time activity for installation, service or electrical connection, inspection, and testing activities, but this would occur rarely.

During this time, construction activities would include site preparation; site clearing, grading, and excavation; and construction of the PV solar array, substation, and BESS. The types of construction equipment used on the Project site would include trucks, small pile drivers, scrapers, dozers, graders, forklifts, cranes, loaders, and compactors. The noise levels associated with these pieces of construction equipment are listed in Table 3.13-7, below.

Table 3.13-7 Typical Noise Levels for Project Construction Equipment

Construction equipment	Noise level at 50 ft. (dBA Lmax)
Backhoe	78
Bulldozer	82
Crane, aerial lift	81
Forklift	75
Grader	85
Pile driver	101
Roller	74
Roller compactor	83
Scraper, skid steer, trencher	84
Water truck	88

Source: (FHWA 2006)

As shown in Table 3.13-7, above, the source of the greatest level of noise at the Project site would be the pile driver, which could generate up to 101 dBA L_{max} at 50 feet from where the activity occurs. Noise levels from construction activities would diminish with distance, substantially reducing potential effects on off-site locations (Caltrans 2013). The nearest noise-sensitive receptor, the Chuckwalla National Monument, is located approximately 1.08 miles from the Project site, across I-10. Assuming standard spherical spreading loss (a loss of 6 dB per doubling of distance), the highest unmitigated construction noise level of 101 dBA L_{max} at 50 feet would attenuate to below 60 dBA at the Chuckwalla National Monument (Caltrans 2013). This is consistent with the noise modeling prepared for the Sapphire Solar Project that found that construction noise levels diminished to between 61 and 68 dBA L_{max} at 0.4 mile and between 51 and 57 dBA L_{max} at 1.25 miles (Dudek 2024). Additionally, since portions of the Chuckwalla National Monument are located within 2,000 feet of the I-10 centerline, traffic from the freeway would likely exceed and drown out the construction noise from the Project (Riverside County 2015).

There are no residences within 1 mile of the Project site, with the closest residence approximately 6 miles west. Because the Project site is located over 0.25 mile from the nearest inhabited dwelling, the Project is considered exempt from the County of Riverside Noise Ordinance No. 847. Construction of the Project would not result in a substantial increase in noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. The impact of construction noise relative to applicable community noise standards would be less than significant.

Operation and Maintenance

During operation, there would be noise generated on site from the BESS (specifically, HVAC and internal inverters), inverters in the solar array, and substation GSU. Noise levels from these sources would be intermittent and negligible outside of the Project site. In addition, most Project operations would be conducted remotely, with minimal on-site staff presence. Operation and maintenance activities would include regular augmentation of the BESS to maintain capacity as battery performance degrades over time. Depending on battery technology and design, augmentation could begin as early as the second year of operation and may occur annually. Additionally, during the first year of operations, inspection frequencies would be increased to monitor settling and electrical termination torque values. At designated intervals, approximately every 10 to 15 years, major equipment maintenance would be performed. Routine maintenance would also include one panel cleaning per year to maintain optimal solar efficiency.

These operation and maintenance activities would require the use of light-duty vehicles such as pickup trucks for routine site visits and crane trucks for minor equipment maintenance. No heavy machinery, aside from rubber-tired water trucks, would be required for regular plant operations. Additionally, daily traffic to the site would be minimal, averaging fewer than 10 round-trips per day under normal conditions.

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The Project would be primarily operational during daytime hours. Within the solar field itself, other minor sources of noise would include tracker motors and mechanisms that allow the solar panels to tilt and track the path of the sun on a single axis throughout the day. Tracker motors and actuators would not operate on a continuous basis or in unison. For example, each set of actuators would operate for a few seconds and then pause for five minutes before operating again. This process would occur only during daylight hours, with a return to the starting position at sunrise. Noise levels from the tracker motors and inverters throughout the solar field would be intermittent and negligible outside of the Project site.

Operation of the Project would be subject to the applicable acceptable noise thresholds as listed in Riverside County Ordinances section 9.52 040 (also section 4 of Ordinance No. 847) that limit noise sources on any property from causing excessive exterior noise on any other nearby occupied property. As discussed in Section 3.13.3, the maximum noise level thresholds depend on the receiving land use. Sound levels in land uses zoned “rural desert” are not to exceed 45 dBA L_{max} during daytime hours or nighttime time hours. No occupied properties or residences are within 0.25 mile of the Project site and, at the location of the nearest residence (6 miles away), the overall sound levels generated by the operation of the Project would not be perceptible.

Given the remote location of the Project site, minimal traffic to be generated by operation of the Project, and the absence of heavy equipment operation during regular operations, noise generated from operation of the Project would be negligible. Noise generated by operation of the Project would not exceed local acceptability thresholds, and impacts would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The activities associated with the upgrades would be minimal, occur within the existing footprint, and be short-term. The noise generated during construction would be minimal and would not exceed local acceptability thresholds, and impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact NOI-2: Generate excessive groundborne vibration or groundborne noise levels.

Construction

Operation of heavy equipment has the potential to result in varying degrees of temporary groundborne vibration, depending on the equipment used and specific activities. The estimated PPV of groundborne vibration generated by each type of construction equipment that could be used during construction activities is listed in Table 3.13-8, below.

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Table 3.13-8 Vibration (PPV) Levels During Construction

Construction equipment	PPV at 25 feet (in./sec)
Roller	0.21
Bulldozer	0.089
Loaded trucks	0.076
Pile driver (impact)	1.518

Source: (FTA 2018)

Of the construction equipment used to construct the Project, the pile driver would generate the greatest level of groundborne vibration. As shown in Table 3.13-8, above, the upper range of groundborne vibration generated by an impact pile driver is approximately 1.5 in./sec PPV at the source (FTA 2018, tbl. 7-4). At a distance of 1,000 feet, the PPV would attenuate to 0.01 in./sec, the threshold at which groundborne vibration from a continuous or frequent intermittent source becomes barely perceptible to humans (Zeigler 2024; Caltrans 2020, tbl. 20).

Construction activities would be localized around the installed project components, and no vibration-sensitive structures or sensitive receptors would be close to the construction equipment or sounds of vibrations. As stated above, for vibration sources such as construction activity and vehicle traffic, the region of influence is typically less than 200 feet from the source. The closest vibration-sensitive land use to the Project site, Chuckwalla National Monument, is approximately 1.08 miles away. The attenuation of vibration over that distance would result in vibration levels below the thresholds for human disturbance. Additionally, project-related vibrations would not cause adverse physical effects to structures because no structures susceptible to damage are known to be nearby. Impacts from vibration would be localized and temporary and, therefore, would not be excessive, resulting in a less than significant impact.

Operation and Maintenance

No new, permanent sources of vibration would be introduced during Project operation. Temporary vibration increases would occur during periodic maintenance and repair activities as well as during truck deliveries. However, these activities would be intermittent and would not generate vibration levels above those generated during construction. Therefore, this impact would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The activities associated with the upgrades would be minimal, occur within the existing footprint and be short-term. The vibration that may be generated during construction would be minimal and would not exceed local acceptability thresholds, and impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

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3.13.6 Cumulative Impacts

The geographic scope for cumulative analysis of noise and vibration is generally localized. Noise sources attributable to cumulative projects may cause adverse effects within approximately 1 mile of a project site, including truck routes, but the region of greatest influence is typically within 0.5 mile of the boundary of a project site. Similarly, vibration sources that typically occur with construction activity or vehicle traffic have a region of influence that is limited to approximately 200 feet.

Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, lists existing and reasonably foreseeable projects in the region that could contribute to noise and/or vibration levels via construction, operation, or decommissioning with a potential to result in a cumulative noise or vibration impact at existing noise-sensitive receptors in the region. One project, the proposed Redonda Solar Project, is adjacent to the Project site and has the potential to generate construction noise that would overlap with that of the Project. As with the Project, there are no sensitive receptors within 1 mile of the Redonda Solar Project site, so while the construction noise generated by the projects would overlap, this would not result in a cumulatively significant noise impact during construction.

The existing Palen Solar Project, Athos Solar Project, Victory Pass Solar Project, and Arica Solar Project are within a 1-mile distance of the Project site. Operational noise levels from the projects at vicinity receptors would in all cases fall below ambient levels due to the limited operational noise levels and distance to the nearest sensitive receptors. The Project in combination with the cumulative solar projects would not result in an increase of ambient levels (the sum of two noise levels that vary by 10 dBA or greater is simply the larger of the two levels); this being the case, the Project's contribution to noise levels at vicinity receivers resulting from combined noise generation by the cumulative projects would not be measurable in the environment and would not result in a cumulatively significant noise impact during operations.

Cumulative effects due to groundborne vibration would occur if there were sensitive receptors within 200 feet of the boundaries between the Project site and cumulative project sites. There are no residences or other structures within 200 feet of these project sites and, therefore, no cumulative effects would be likely from groundborne vibration. Therefore, the Project would not result in a cumulative impact on groundborne vibration levels.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The activities associated with the upgrades would be minimal, occur within the existing footprint and be short-term. The noise and vibration that may be generated during construction would be minimal and would not exceed local acceptability thresholds and would not result in a cumulative impact on noise and groundborne vibration levels.

Significance Determination before Mitigation

Less than significant

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3.13.7 References

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3.14 Paleontological Resources

This section presents the environmental setting and analysis of impacts to paleontological resources resulting from the Project. This section describes existing paleontological information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.14.1 Environmental Setting

Definitions

Paleontological resources—or *fossils*—are the remains of ancient plants and animals. Fossils can provide scientifically significant information about the history of life on earth. *Paleontological sensitivity* is defined as the potential for a geologic unit to produce scientifically significant fossils. Paleontological sensitivity is determined by rock type, past history of the rock unit in producing significant fossils, and fossil localities that are recorded from that unit. Paleontological sensitivity is assigned based on fossil data collected from the entire geologic unit, not just at a specific site.

County of Riverside Paleontological Sensitivity. The following sensitivity categories were developed for the County in the 2015 County of Riverside Environmental Impact Report No. 521 (County of Riverside 2015b). The County paleontological sensitivity classifications are as follows:

- *Low Potential:* This classification is for lands that previous field surveys and documentation demonstrate to have a low potential for containing significant paleontological resources subject to adverse impacts. It must be noted that surface geology, such as soils, is not always indicative of subsurface geology or the potential for paleontological resources. Actual sensitivity must be ultimately determined by both a records search and a field inspection by a paleontologist.
- *High Potential:* This classification is for sedimentary rock units with a high potential for containing significant nonrenewable paleontological resources. This includes rock units in which vertebrate or significant invertebrate fossils have been found or determined likely to be present. These units include, but are not limited to, sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. High sensitivity includes not only the potential for yielding abundant vertebrate fossils but also for production of a few significant fossils that may provide new and significant data. High sensitivity areas are mapped as either “High A” or “High B,” according to the following criteria:
 - High Sensitivity A (Ha): This classification is based on geologic formations or mapped rock units that are known to contain or have the correct age and depositional conditions to contain significant paleontological resources.
 - High Sensitivity B (Hb). This classification is equivalent to High A but is based on the occurrence of fossils at a specified depth below the surface. This category

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indicates fossils that are likely to be encountered at or below 4 feet of depth and may be impacted during construction activities. This classification would be correlative to the BLM's PFYC Classes 3, 4, and 5.

- *Undetermined Potential:* This classification is for areas underlain by sedimentary rocks, for which literature or unpublished studies are not available, that have undetermined potential for containing significant paleontological resources. This classification would be correlative to the BLM's PFYC Class 3.

BLM Fossil Yield Classification System. The Bureau of Land Management (BLM) created the Potential Fossil Yield Classification (PFYC) as a tool to rapidly assess the initial paleontological resource sensitivity of a given area. The PFYC was first released in 2007 (IM-2008-09) and updated in 2016 (IM-2016-124). The following categories are used to assess paleontological significance:

- **Class 1—Very Low.** Class 1 geologic units are those not likely to contain recognizable paleontological resources. Geologic units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units. Geologic units are Precambrian in age. Management concerns for paleontological resources in Class 1 units are usually negligible or not applicable. Paleontological mitigation is unlikely to be necessary except in very rare or isolated circumstances that result in the unanticipated presence of paleontological resources, such as unmapped geology contained within a mapped geologic unit. An assignment of Class 1 normally does not trigger further analysis unless paleontological resources are known or found to exist. However, standard stipulations should be put in place prior to authorizing any land use action to accommodate an unanticipated discovery.
- **Class 2—Low.** Class 2 geologic units are those not likely to contain paleontological resources. Characteristics of Class 2 units include: field surveys have verified that significant paleontological resources are not present or are very rare; units are generally younger than 10,000 years before present; recent aeolian deposits; and/or sediments exhibit significant physical and chemical changes that make fossil preservation unlikely. Except where paleontological resources are known or found to exist, management concerns for paleontological resources are generally low and further assessment is usually unnecessary except in occasional or isolated circumstances. Paleontological mitigation is only necessary where paleontological resources are known or found to exist.
- **Class 3—Moderate.** Class 3 units are sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence. This classification includes units of moderate or infrequent occurrence of paleontological resources. Management considerations cover a broad range of options that may include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require assessment by a qualified paleontologist to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources.

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- **Class 4—High.** Class 4 geologic units are those that are known to contain a high occurrence of paleontological resources. Significant paleontological resources have been documented in Class 4 units, but may vary in occurrence and predictability. Surface-disturbing activities may adversely affect paleontological resources. Rare or uncommon fossils, including nonvertebrate (such as soft body preservation) or unusual plant fossils, may be present. The probability for impacting significant paleontological resources is moderate to high and is dependent on the proposed action. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment by a qualified paleontologist is normally required and on-site monitoring or spot-checking may be necessary during land-disturbing activities. In some cases, avoidance of known paleontological resources may be necessary.
- **Class 5—Very High.** Class 5 units are highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources. Significant paleontological resources have been documented and occur consistently in Class 5 units. Paleontological resources are highly susceptible to adverse impacts from surface-disturbing activities. A field survey by a qualified paleontologist is almost always needed. Paleontological mitigation may be necessary before or during surface-disturbing activities. The probability for impacting significant paleontological resources is high. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed, and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.

Fossils are considered non-renewable because they are the remains of prehistoric animal and plant life. Impacts to paleontological resources are identified from high to zero depending on the resource sensitivity of impacted formations and the proposed activities.

Project Area Geologic Units and Associated Paleontological Sensitivity

The information included in this analysis is from the Paleontological Resource Assessment Report for the Savira Solar Project, Riverside County, California (Chronical Heritage 2025a) and Paleontological Resource Survey Report for the Savira Solar Project, Riverside County, California (Chronical Heritage 2025b).

The Project is located within the Mojave Desert geomorphic province in southeastern California. A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and tectonic history. The Mojave Desert geomorphic province extends from the San Andreas and Garlock faults toward the Basin and Range Province and Colorado Desert. The Mojave Desert was formed as a result of uplift of the San Bernardino Mountains and Sierra Nevada during the Cenozoic Epoch (66 million years ago [Ma] to present), resulting in a rain shadow effect, creating the smallest of North America's desert provinces. The western Mojave Desert is on top of an uplifted and rotated basement block

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composed of crystalline rocks from the Proterozoic Eon (2500 to 538.8 Ma) to Mesozoic Era (298.9 to 66 Ma). The basement rock is offset by high-angle normal faults from the Neogene Period (66 to 23.3 Ma) that form grabens infilled with sedimentary rock from the Cenozoic (66 Ma to present) and alluvium from the Quaternary Period (2.58 Ma to present). In general, the Mojave Desert is dominated by broad alluvial basins and uplifted, unroofed basement rock. The Mojave Desert is entirely landlocked, and elevation averages 2,500 feet *above mean sea level* (amsl).

The Project area is in the southern portion of the Mojave Desert, at the northwestern end of the Chuckwalla Valley, southeast of the base of the Eagle Mountains and northwest of the Chuckwalla Mountains. These mountains are part of the eastern extension of the Transverse Ranges province. The mountains have a bajada (coalescing alluvial fan aprons) of angular igneous and metamorphic clasts of varied composition and age.

Geologic mapping indicates that the Project is underlain by alluvium (Qal). Alluvium (Qal) is composed of clay, silt, sand, and gravel deposited during the Holocene Epoch.

Identifying the geologic units and associated fossil productivity allows for prediction of where fossils could or could not be encountered within the project study area. The paleontological sensitivity of geologic units that underlay the Project area are rated as High Sensitivity by the Society of Vertebrate Paleontology (SVP).

Literature Review and Records Search

The paleontological potential of the Project site was evaluated based on an analysis of existing paleontological data and field surveys. The three analysis components of the existing data included a (1) A geologic map review to determine the mapped geologic units within the Project area, (2) a museum and agency record search to locate any previously documented fossil localities within the Project site or within a 3-mile radius, and (3) a literature search.

The California Geologic Survey Salton Sea sheet (1:250,000 scale) geologic map by Jennings was used as the geologic unit reference for the Project area. Chronicle Heritage requested record searches be performed at the Museum of Natural History of Los Angeles County (NHMLAC), the San Bernardino County Museum (SBCM), the San Diego Natural History Museum (SDNHM), and the Western Science Center (WSC) that included the search radius for the Project in 2024, and these record search results were used for this Project. The literature review included peer-reviewed scientific literature of the same geologic units that underlie the Project area.

Record Search Records Search and Literature Review Results

The NHMLAC, SDNHM, and WSC do not have previously recorded vertebrate fossil localities within the Project area boundary or within 1 mile. Searches of online databases and other literature did not produce any additional localities within 5 miles of the Project site. Though the museum record searches produced minimal results, four solar projects within 3 miles of the Project area have produced multiple Pleistocene vertebrate fossils. The limited results from the museum should not be considered evidence of lack of fossils in the Project vicinity but rather a lack of data and a lag in updating the museum databases with recent fossil discoveries. The

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significant vertebrate fossil localities reported in the vicinity of the Project area are summarized in Table 3.14-1.

Table 3.14-1 Vertebrate Fossil Localities Reported in the Vicinity of the Project Area

Locality number	Geologic unit	Age	Taxa
Arica Solar Project	Qs (Holocene dune sand), Qal	Pleistocene	Artiodactyl, kangaroo rat, desert iguana, hare, cottontail, rodent, gopher tortoise, rabbit, fox, antelope squirrel, heteromyid rodent, quail, turtle, lizard, snake, pit viper
Palen Solar Power Project	Not specified	Pleistocene	Vertebrate, petrified wood
Athos Renewable Energy Project	Qal	Pleistocene	Vertebrate

Source: (C.W. Jennings 1967; DeBusk and Corsetti 2009; Ollendorf et al. 2018; Aspen Environmental, Inc. 2020; Clifford et al. 2023)

According to the records search and the literature search, there are no previously recorded paleontological resource localities within the Project site. However, Los Angeles County Museum (LACM) reported localities in the vicinity of the Project site, including thirteen vertebrate localities. The reviews also identified numerous vertebrate fossils recovered from sedimentary units that are not mapped within the Project site but are within the vicinity of the Project site. Although the sedimentary units are not mapped within the Project site, they may underlie younger deposits within the Project area and, therefore, may be impacted at depth.

Pedestrian Survey

A paleontological field survey was conducted of the entire Project area on August 15, 16, and 21, 2024 by Chronicle Heritage Paleontological Field Director Matthew Witte, Ph.D., with assistance from Staff Paleontologists Christian Jarish, B.S., and Karissa Morgan, B.S. The purpose of the field survey was to inspect the ground surface visually for exposed fossils, evaluate geologic exposures for their potential to contain buried fossils, and assist in determining where additional paleontological mitigation (e.g., fossil salvage, paleontological monitoring during ground disturbance) may be necessary prior to or during the Project development. Field data were collected during the survey using a digital camera, GPS unit with submeter accuracy, and a digital database loaded on tablet computers.

An intensive pedestrian survey was accomplished, and published geologic maps were verified. Chronicle Heritage's survey team inspected the ground surface for evidence of paleontological resources. Some portions of the Project area were inaccessible because of the presence of thickets of dead and discarded trees; the extent of these areas was walked and noted.

Field Investigation Results

The terrain in the Project area consists of a wide, flat playa punctuated by the remaining alluvial wash deposits. The Project area is crossed by heavily used unpaved agricultural roads and transmission line access roads. The geologic unit mapped as Quaternary alluvium (Qal) is exposed at ground surface throughout the Project area with absent to very thin local soil

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development. The Quaternary alluvium is moderately consolidated, light brown to light tan, with clay, silt, and coarse-grained sand. Development of minor desert pavement is apparent with interspersed subangular to subrounded dark igneous pebbles to cobbles sourced from the local mountains and brought in via wash deposits.

The Project site was subject to a paleontological survey, where approximately 62 percent of the total site was surveyed via pedestrian survey and approximately 38 percent of the Project site was inaccessible because of active agricultural use or a density of dead tree groves. The geological unit mapped in the Project site, Quaternary alluvium (Qal), was well exposed and observed at ground surface. No fossil localities were observed on the surface of the Project site at the time of the survey.

Paleontological Sensitivity

The Riverside County General Plan, Figure OS-8 Paleontological Sensitivity (Riverside County 2015b) maps the majority of the Project site as low potential (L), with high sensitivity (High A) in the northern portion of the Project. This is due to the General Plan (Riverside County 2015b) mapping the largely Pleistocene valley margin deposits as high sensitivity (High A) and the Holocene surficial deposits of the valley axis as low potential (L). However, since the publication of the General Plan, paleontological monitoring of ground disturbance in the valley axis, the main direction the valley slopes down, with the valley sides rising on either side, has confirmed the presence of fossils at the surface and subsurface. The SVP paleontological sensitivity classification assesses paleontological sensitivity and the level of effort required to manage potential impacts to significant fossil resources.

Alluvium (Qal) throughout the Project area has proven conducive to the preservation of vertebrate remains and may contain an unknown number of buried fossil resources in the subsurface, particularly if fine-grained playa deposits are encountered at depth. As such, the paleontological sensitivity for alluvium (Qal) in the Project area is high in accordance with SVP.

3.14.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

National Environmental Policy Act (16 USC Section 431 et seq.)

NEPA requires analysis of potential environmental impacts to important historic, cultural, and natural aspects of our national heritage (U.S.C. §§ 431 et seq.; 40 CFR § 1502.25). NEPA directs federal agencies to use all practical means to “preserve important historic, cultural, and natural aspects of our national heritage....” (NEPA § 101(b) (4)).

Federal Land Management and Policy Act (FLPMA) (43 USC 1701)

The Federal Land Management and Policy Act (FLMPA) of 1976 (U.S.C. title 43 § 1701) includes objectives such as the evaluation, management, protection, and location of fossils on BLM-managed lands, defines fossils, and lays out penalties for the destruction of significant fossils. NEPA requires the preservation of “historic, cultural, and natural aspects of our national

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heritage.” The Omnibus Public Lands Act refines NEPA and FLMPA guidelines and strictures and outlines minimum punishments for removal or destruction of fossils from federal/public lands.

Paleontological Resources Preservation Act (PRPA)

The purpose of the Paleontological Resources Preservation Act (title VI, subtitle D in the Omnibus Public Lands Act of 2009; codified as Public Law 111-011) is to ensure the management and protection of paleontological resources on federal land using scientific principles and expertise. With the passage of the PRPA, Congress officially recognizes the importance of paleontological resources on federal lands managed by the U.S. Department of the Interior and the U.S. Department of Agriculture by declaring that fossils from federal lands are federal property that must be preserved and protected using scientific principles and expertise.

State

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their projects on any object or site of significance to the scientific annals of California (PRC division I § 5020.(b)). Appendix G of the CEQA Guidelines provides a checklist for assessing environmental impacts to paleontological resources (PRC § 15023, Appendix G, § VII, part f) that includes the following question: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?”

Although CEQA does not define “a unique paleontological resource or site,” SVP has provided guidance specifically designed to support state and federal environmental reviews. The SVP broadly defines *significant paleontological resource* as follows:

- Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).
- Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well-represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important and therefore considered significant.

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California Public Resources Code

Section 5097.5 of the California Public Resources Code (PRC) states:

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

As used in this PRC section, *public lands* means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation or any agency thereof. Consequently, public agencies are required to comply with PRC section 5097.5 for their own activities, including construction and maintenance as well as for permit actions (e.g., encroachment permits) undertaken by others.

Local

Paleontological resources are addressed under the Multipurpose Open Space Element of the County of Riverside General Plan (Riverside County 2015a), policies OS 19.6 through OS 19.9, which state the following:

OS 19.6

Whenever existing information indicates that a site proposed for development has high paleontological sensitivity, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

OS 19.7

Whenever existing information indicates that a site proposed for development has low paleontological sensitivity, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified, and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

OS 19.8

Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

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OS 19.9

Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

3.14.3 Methodology for Analysis

Significant paleontological resources are defined as *identifiable* vertebrate fossils, uncommon invertebrate, plant, and trace fossils that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, or biochronological data. These data are important because they are used to examine evolutionary relationships, provide insight into the development of and interaction between biological communities, establish time scales for geologic studies, and for many other scientific purposes.

Paleontological Resource Classifications

On nonfederal lands and in the absence of specific agency guidelines, most professional paleontologists in California adhere to SVP guidelines. These guidelines establish detailed protocols for the assessment of the paleontological resource potential (i.e., “sensitivity”) of a project area and outline measures to follow to mitigate adverse impacts to known or unknown fossil resources during project development.

Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic units (or members thereof) underlying a project area can be assigned to one of four categories defined by SVP. These categories include high, undetermined, low, and no potential as defined above.

If a project area is determined to have high or undetermined potential for paleontological resources following the initial assessment, then SVP recommends that a Paleontological Resources Mitigation Plan (PRMP) be developed and implemented during the construction phase of a project. The mitigation plan describes, in detail, when and where paleontological monitoring will take place and establishes communication protocols to be followed if an unanticipated fossil discovery is made during project development. If significant fossil resources are known to occur within the boundary of the project site and have not been collected, then the plan will outline the procedures to be followed prior to any ground-disturbing activities (e.g., preconstruction salvage efforts or avoidance measures, including fencing off a locality). Should microfossils be known to occur in the geologic units underlying the project area or suspected to occur, then the plan will describe the methodology for matrix sampling and screening.

Project Structures on BLM-Administered Lands

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of

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construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. For paleontological resources, the Checklists ask if the Project would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Impact PALEO-1)

3.14.4 Impacts and Mitigation Measures

Impact PALEO-1 would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction

The Project site would be cleared and grubbed of vegetation using a drive and crush method. Construction of the Project would also include grading, excavations, driven posts, and trenching for underground utility cables.

No paleontological resources were observed in the Project area during field surveys. However, the Project site is within a high potential classification (Riverside County 2015b), which could yield paleontological resources. The Project would have the potential to indirectly destroy a unique paleontological resource or site or unique geologic feature. Given the required excavation activities for the Project and the potential for paleontological resources to be encountered within the Project site, there is a potential for significant paleontological resources to be unearthed during ground disturbance. Mitigation Measure Paleo-1 would require construction workers and other on-site personnel to receive environmental awareness training on paleontological resources. Mitigation Measures Paleo-2, Paleo-3 and Paleo-4 would reduce potential impacts to unique paleontological resources because it would require construction monitoring and appropriate response if paleontological resources are found. Under Mitigation Measure Paleo-2, a qualified paleontologist would be retained to develop and implement a PRIMP during Project construction. With implementation of the mitigation measures, the Project would have a less-than-significant impact to paleontological resources due to the presence of monitors in sensitive areas during ground disturbance and proper handling of discovered resources.

Operation and Maintenance

Project operation and maintenance would not require excavation or disturbance of geologic units that could contain paleontological resources. Operation and maintenance activities would therefore have no potential to encounter paleontological resources and would have no impact on paleontological resources.

Southern California Edison Activities

The SCE activities would occur entirely within the Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and the Project Substation. The improvements would occur

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within the existing footprint and would not involve ground disturbing in areas not previously developed, with the exception of the Project substation. Therefore, impacts related to directly or indirectly destroying a unique paleontological resource or site or unique geologic feature would be less than significant.

Significance Determination before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Paleo-1: Worker's Environmental Awareness Program

Worker's Environmental Awareness Program. Prior to the start of construction, all field personnel should receive a worker's environmental awareness training on paleontological resources. The training should provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project site, the role of the paleontological monitor, an outline of steps to follow in the event that a fossil discovery is made and contact information for the project paleontologist. The training should be developed by the Project paleontologist and can be delivered concurrent with other training including cultural, biological, safety, and others.

Mitigation Measure Paleo-2: Paleontological Resource Impact Mitigation Program

Prior to the start of any Project-related construction activities, the Applicant shall retain a County-approved paleontologist (Project Paleontologist) to prepare and implement a project-specific Paleontological Resource Impact Mitigation Program (PRIMP) to be approved by the County.

At a minimum, information to be contained in the PRIMP, in addition to other information required under industry standard, the County CUP and grading requirements, and Society of Vertebrate Paleontology standards, is as follows:

- Identification (name) and qualifications of the Project Paleontologist and qualified paleontological monitors to be employed for grading operations monitoring.
- Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens.
- Description of the project site and planned earthwork and excavation.
- A site-specific plan and map prepared by the Project Paleontologist which identifies construction impact areas with sediments of High (PFYC 4) and Moderate (PFYC 3a) sensitivity for encountering significant paleontological resources and the approximate depths at which those resources are likely to be encountered for each Project component.

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- The PRIMP shall require the qualified paleontological monitor(s) to monitor all construction-related earth-moving activities in sediments determined to have a High (PFYC 4) sensitivity. At the discretion of the Project Paleontologist, monitoring may be adjusted based on field conditions.
- The PRIMP shall define monitoring procedures and methodology and shall specify that sediments of Moderate (PFYC 3a) or undetermined sensitivity shall be monitored on a part-time basis (as determined by the Project Paleontologist). Sediments with very low or low potential will not require paleontological monitoring (PFYC 1 and 2).

The PRIMP shall be submitted to the County for review and approval 60 days prior to start of Project construction. The PRIMP must be approved by the County prior to the Notice To Proceed.

Mitigation Measure Paleo-3: Paleontological Fossil Recovery

In the event that a paleontological resource is discovered, the paleontological monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

- **Salvage of Fossils.** If fossils are discovered, all work in the immediate vicinity shall be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) will recover them following standard field procedures for collecting paleontological as outlined in the PRIMP prepared for the Project. The Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the potentially significant fossil(s) can be removed in a safe and timely manner.
- **Fossil Preparation and Curation.** The museum that has agreed to accept fossils that may be discovered during Project-related excavations will be identified in the PRIMP. Upon completion of Project ground-disturbing activities, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens shall be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the County -approved repository (identified on the permit and in the PRIMP) and receipt(s) of collections submitted to the County no later than 60 days after all ground-disturbing activities are completed.

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Mitigation Measure Paleo-4: Paleontological Resources Monitoring Report

The Applicant shall ensure preparation of a paleontological resource mitigation and monitoring report by the Project Paleontologist following completion of ground-disturbing activities. The contents of the report shall include, but not be limited to, a description and inventory list of recovered fossil materials (if any); a map showing the location of paleontological resources found in the field; determinations of scientific significance; proof of accession of fossil materials into the pre-approved museum or other repository; and a statement by the Project Paleontologist that Project impacts to paleontological resources have been mitigated. The report shall be certified by the professionally qualified Project Paleontologist responsible for the content of the report and submitted to the County. In addition, all appropriate fossil location information shall be submitted to the Western Information Center, San Bernardino County Museum, and Los Angeles County Museum of Natural History, at a minimum, for incorporation into their Regional Locality Inventories.

Significance Determination after Mitigation

Less than significant.

3.14.5 Cumulative Impacts

Geographic Scope.

Paleontological cumulative impacts include the Project's impacts as well as those likely to occur because of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis).

Cumulative Impacts.

As discussed under Impact Paleo-1, the Project would have the potential to indirectly destroy a unique paleontological resource or site or unique geologic feature during ground-disturbing activities. Potential cumulative impacts to paleontological resources would result from projects that combine to create an environment where fossils, exposed on the surface, are vulnerable to destruction by earthmoving equipment, looting by the public, and natural causes such as weathering and erosion. A significant cumulative impact would occur if the impacts of multiple projects combined to result in the loss of paleontological resources that could provide information about ancient life in the Chuckwalla Valley. The large amount of ground disturbance proposed from projects in this region is likely to result in some loss of fossil resources; particularly, if ground-disturbing projects do not implement measures to avoid or minimize impacts. This would result in a significant cumulative impact. However, the majority of potential impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. Each project would be required to assess impacts to paleontological resources through the environmental review (NEPA and CEQA) process and would be expected to incorporate individual mitigation for site-specific geological units present on each individual project site, which would be expected to include worker training, monitoring, and recovery as

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required. Because each project, in addition to the Project, would include mitigation to reduce impacts to paleontological resources, cumulative impacts to paleontological resources would be less than significant, and the Project's contribution to those less-than-significant impacts would not be cumulatively considerable.

Southern California Edison Activities

The SCE activities contribution to the significant cumulative impact is less than considerable because all of the infrastructure would be located within the existing Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and within the Project Substation and would not result in additional ground disturbing in areas not previously developed.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measure Paleo-1, Mitigation Measure Paleo-2, Mitigation Measure Paleo-3, Mitigation Measure Paleo-4.

Significance Determination after Mitigation

Project's contribution to a cumulative significant impact would be less than significant.

3.14.6 References

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3.15 Population and Housing

This section presents the environmental setting and analysis of potential population and housing impacts resulting from the Project. This section includes existing population and housing information for the Project, applicable regulations, environmental impacts, and mitigation measures that would reduce or avoid significant effects.

3.15.1 Environmental Setting

Regional Setting

The Project is located in the Chuckwalla Valley in Riverside County. The Project site is approximately 8.5 miles east of the unincorporated community of Desert Center, California, approximately 7 miles east of the community of Lake Tamarisk, approximately 39 miles west of Blythe, California, and approximately 57 miles east of Indio, California. The Project site is directly north of I-10 and surrounded by land administered by BLM. Land uses in the vicinity of the Project site include agricultural, residential, renewable energy development, recreation, and energy transmission.

Population

Based on population estimates from the California Department of Finance for the Counties that surround the Project area, Riverside County is the fourth most populated county in California and San Bernardino County is the fifth most populated county in California (California Department of Finance [DOF] 2024).

Table 3.15-1 provides a summary of population, housing, and employment rates for Desert Center, Blythe, and Indio, California, and Riverside and San Bernardino counties.

Table 3.15-1 Estimated Population, Housing, and Employment Rates for Desert Center, City of Blythe, Riverside County, and San Bernardino County

Location	Population	Housing units		Employment rates	
		Units	Vacancy	Employment rates	Unemployment rate
Desert Center	288	175	45%	51	5.9%
Blythe	17,224	5,246	14.7%	4,549	2.9%
Indio	89,978	35,947	17%	40,757	2.7%
Riverside County	2,442,378	882,389	10.1%	1,100,000	5.6%
San Bernardino County	2,181,433	753,826	8.7%	965,700	5.3%

Source: (U.S. Census Bureau 2023, 2021, 2020; California Employment Development Department [EDD] 2024; DOF 2024b)

Population estimates, projections, and average annual growth rates for Riverside and San Bernardino counties are summarized in Table 3.15-2. Desert Center, Blythe, and Indio are not

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specifically listed because data was not available but are captured within the applicable county-level data. Population estimates between 2020 and 2024 were included to show estimated annual growth rates for these years. The Project life is anticipated to be 440 years, but projected population totals and average annual growth rates considered 45 years (2025–2070) because data was available through 2070 (DOF 2024b).

The average annual growth rate from 2025 to 2070 is projected to increase by approximately 0.43 percent in Riverside County and 0.11 percent in San Bernardino County. As shown in Table 3.15-2, the population is projected to decrease slightly in San Bernardino County between 2050 and 2070.

Table 3.15-2 Projected Population Estimates and Average Annual Growth Rates for Riverside and San Bernardino Counties 2020–2070

Population estimates	Riverside County	San Bernardino County
Population 2020	2,423,288	2,185,348
Population 2024	2,431,254	2,170,593
Average annual growth 2020–2024	0.08%	-0.17%
Projected 2025	2,452,358	2,190,839
Projected 2030	2,516,026	2,246,812
Projected average annual growth 2025–2030	0.52%	0.51%
Projected 2035	2,598,559	2,292,976
Projected average annual growth 2030–2035	0.66%	0.41%
Projected 2040	2,680,111	2,329,399
Projected average annual growth 2035–2040	0.63%	0.32%
Projected 2045	2,752,928	2,355,890
Projected average annual growth 2040–2045	0.54%	0.23%
Projected 2050	2,811,880	2,369,443
Projected average annual growth 2045–2050	0.43%	0.12%
Projected 2055	2,854,554	2,366,482
Projected average annual growth 2050–2055	0.30%	-0.02%
Projected 2060	2,884,131	2,350,703
Projected average annual growth 2055–2060	0.21%	-0.13%
Projected 2065	2,906,980	2,325,579
Projected average annual growth 2060–2065	0.16%	-0.21%
Projected 2070	2,925,986	2,294,670
Projected average annual growth 2065–2070	0.13%	-0.27%

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Note: Average annual growth rate calculated by $(\text{Ending Value} - \text{Starting Value}) / (\text{Starting Value}) / (\text{Number of Years}) \times 100$

Source: (DOF 2024b)

Housing

Total housing units and vacancy rates for Riverside and San Bernardino counties and for Blythe, Desert Center, and Indio are listed in Table 3.15-1. Housing vacancy rates can signal underlying housing demand, which can affect housing prices and availability. High vacancy rates may indicate low demand and decreasing prices. The rate at which prices remain steady, or *natural* vacancy rate, varies by location but is generally estimated between 7 to 8 percent (Local Housing Solutions 2024).

As shown in Table 3.15-1, housing vacancy rates within Desert Center are high, and almost half of the available housing units are unoccupied (U.S. Census Bureau 2020). Vacancy rates in Blythe and Indio are slightly higher than the general natural vacancy rate, at around 14.7 percent and 17 percent, respectively. The vacancy rates in Riverside and San Bernardino counties are close to the natural vacancy rate, at 10.1 percent and 8.7 percent, respectively.

The median income of Riverside and San Bernardino counties for a four-person household in 2024 was \$97,500 (California Department of Housing and Community Development [HCD] 2024). According to the County of Riverside General Plan Housing Element, this is a “moderate” income category (Riverside County 2024). The median annual income for Desert Center in 2023 was much lower, at \$34,583 (U.S. Census Bureau 2023b), which is a “very low” income category (Riverside County 2024). HCD data indicates the median rental cost in 2021 was \$1,698 for Riverside County. At that time, the median income was \$84,097. The median home value was \$573,200. The median rental cost in 2021 was \$1,427 for San Bernardino County. The median income was \$70,287 and the median home value was \$370,700 (HCD n.d.).

A survey of Riverside County residents conducted in 2024, summarized in the Riverside County General Plan Housing Element, indicates housing within unincorporated areas of Riverside County is primarily single-family homes. High home prices and rent costs were reported as being the primary obstacle to obtaining and keeping housing in unincorporated areas of Riverside County (Riverside County 2024).

3.15.2 Regulatory Framework.

Federal

There are no federal plans or standards for population and housing which apply to the Project.

State

Southern California Association of Governments Regional Comprehensive Plan

The Regional Comprehensive Plan is a strategic plan that defines and solves inter-related housing, traffic, water, air quality, and other regional challenges. It provides a framework for addressing challenges including land use, transportation, housing, economic development, and environmental sustainability. One key objective is addressing housing needs and ensuring there

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is affordable housing for a growing population (Southern California Association of Governments [SCAG] 2008).

Regional Housing Needs Allocation

The California Department of Housing and Community Development (HCD) determines the regional housing need for each region's council of governments or planning body, with input from the Department of Finance. Together, the council of governments and HCD issue the regional housing need based on comparison of data. HCD accounts for existing and projected housing needs for each region and assesses whether additional housing is needed for the existing population through consideration of data including overcrowding, cost burden, vacancy rates, and job-to-housing-demand imbalances (HCD 2025).

Local

Riverside County General Plan

The County of Riverside General Plan Housing Element identifies policies to meet housing needs for residents in unincorporated Riverside County. It includes goals to facilitate new housing opportunities to meet existing and future needs for residents, encourages construction of innovative housing, encourages affordable housing, works toward meeting needs of special-needs groups (i.e., seniors, large families, female-headed households, farmworkers, people with disabilities, and residents of emergency shelters), and promotes opportunities for fair housing for all persons (Riverside County 2024).

3.15.3 Methodology for Analysis

According to CEQA regulations, economic or social factors of a project may be considered in a CEQA document but are not regarded by themselves as significant environmental effects. Significant physical changes from a project may be assessed through consideration of economic or social effects, including housing concerns and technical and environmental factors. Public agencies will consider these to determine whether changes in a project area are feasible to reduce or avoid significant effects on the environment.

The local workforce and regional population were assessed to determine if the Project would potentially increase population. For purposes of the analysis, it was assumed most construction personnel would be sourced from communities in Riverside and San Bernardino counties. Due to the location of the Project, it is also assumed most construction personnel would seek housing within a 1-hour drive of the Project area during scheduled work weeks.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

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Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For population and housing, the Checklists ask, would the Project:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Impact POP-1)
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (Impact POP-2)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income. (Impact POP-3)

3.15.4 Impacts and Mitigation Measures

Impact POP-1: Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction

The on-site construction workforce would consist of approximately 200 personnel, including laborers, craftsmen, supervisory personnel, support personnel, construction management, and delivery drivers. Most construction staff and workers would commute daily to the jobsite from within Riverside and San Bernardino counties due to proximity of communities in these areas to the Project area. Construction is expected to last approximately 15 months, and the typical construction schedule would generally occur during daylight hours and may occur 7 days a week. The Project would not induce substantial unplanned population growth during construction. Project construction workers would likely be drawn from the local and regional construction workforce in the vicinity of the Project area, and given the temporary nature of the construction, project construction workers who do not live in the Project vicinity, to the extent any, would likely commute from more distant areas rather than relocate. In any event, based on current housing vacancies and existing housing policies in the communities near the Project area, including Desert Center, Blythe, and Indio as well as Riverside and San Bernardino counties, if construction workers were to relocate to areas closer to the Project site, no new homes, business, or other infrastructure would be required to accommodate these changes. The impact would be less than significant, and no mitigation would be required.

Operation and Maintenance

During operation and maintenance, the Project would directly employ approximately 10 people. This workforce would include administrative and management personnel, operators, and

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security and maintenance personnel. Most operations staff would be located off site, likely residing in nearby communities in Riverside and San Bernardino counties. The facility would operate 7 days per week, up to 24 hours per day, and operation and maintenance staff would conduct site visits occurring daily for security, maintenance, and repairs. The small number of operational staff would not substantially increase the population in surrounding communities during the 40-year operational life of the Project, and the Project would not induce substantial unplanned population growth during operation and maintenance. Due to housing vacancy rates in the area and existing housing policies, ample housing is and will be available for the 10 employees should any need to relocate to be closer to the Project site, and no new homes, businesses, or other infrastructure would be required to accommodate these changes.

The project would generate new renewable energy. The Project would not serve new users or expand service areas and would not directly or indirectly induce population growth. The Project would provide renewable energy to meet existing and planned growth in California and support meeting California's climate change goals and would not induce additional population growth beyond that which is planned for in the region. The impact would be less than significant, and no mitigation would be required.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction would be minimal and short-term and would not result in population growth. Impacts would be less than significant

Significance Determination before Mitigation

Less than significant.

Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction

It is anticipated construction personnel would be recruited from Riverside and San Bernardino counties. It is anticipated that the majority of construction personnel would be drawn from the local and regional construction workforce and would commute to the Project site daily. It is possible some small number of construction personnel may seek housing closer to the Project site. Vacancies in the surrounding communities are sufficient to accommodate these possible relocations. The nearest community to the Project site is the community of Lake Tamarisk, which is 7 miles east of the Project site. As shown in Table 3.15-1, almost half of available housing in Desert Center is vacant (U.S. Census Bureau 2021). Based on the vacancies in other communities, including Indo and Blythe, and within Riverside County and San Bernardino County near the Project site, and because the construction workforce would not induce substantial population growth, the Project is not likely to cause a shortage in available housing for existing residents. In addition, there are no existing residences or communities within the Project area and the Project would not demolish or remove existing housing units; thus, no people or housing would be

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displaced, and no replacement housing would be required because of construction of the Project. Accordingly, no impact would occur.

Operation and Maintenance

As stated above, during operation and maintenance, the Project would directly employ approximately 10 people. Most operations staff would be located off site, likely residing in nearby communities in Riverside and San Bernardino counties. Almost half of available housing in Desert Center is vacant. Based on the vacancies in other communities, including Indio and Blythe, and within Riverside County and San Bernardino County near the Project site, and because the need for operation and maintenance personnel would not induce substantial population growth, the Project is not likely to cause a shortage in available housing for existing residents. Operation and maintenance of the Project would not displace substantial numbers of people, and construction of replacement housing would not be necessary. Accordingly, no impact would occur.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction would be minimal and short-term and would not result in population growth necessitating the need for additional housing. Impacts would be less than significant

Significance Determination before Mitigation

Less than significant.

Impact POP-3: Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?

Construction and Operation and Maintenance

As discussed above, construction and operation and maintenance personnel would be recruited from Riverside and San Bernardino counties and would not substantially increase the population or create a demand for additional housing. It is expected that the vast majority of construction and operation and maintenance personnel would be drawn from the local and regional construction workforce and would commute daily to the Project site. Some construction personnel may temporarily relocate during the construction period. Operation and maintenance personnel may permanently relocate during the 40-year Project life. To the extent relocations occur, as shown in Table 3.15-1, housing vacancies in the nearby communities of Desert Center, Blythe, and Indio are sufficient to support relocation of construction and operation and maintenance personnel and would not create a demand for additional housing at any income level, including a demand for affordable housing.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction would be minimal and short-term and would not result in population growth. Impacts would be less than significant

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Significance Determination before Mitigation

Less than significant.

3.15.5 Cumulative Impacts

The Project may contribute to short-term cumulative impacts to population and housing during the construction and future decommissioning periods when construction schedules of multiple projects overlap and create a demand for workers that may not be met by the local labor force, thereby inducing in-migration of non-local labor and their households.

Construction of the present and reasonably foreseeable future development projects shown in Table 3.15-1 and Table 3.15-2 may overlap with construction of the Project. Under the conservative assumption that peak construction periods overlap for all reasonably foreseeable projects, there would be an increased demand for temporary housing units in the cumulative area. As discussed under Section 3.15.1, the vacancy rates for housing units are moderately high (e.g., 45 percent in Desert Center, 17 percent in Indio) and there are a number of temporary housing options available as well. There is an ample supply of housing units to accommodate workers drawn from outside the two-hour commute area. Therefore, cumulative impacts in the cumulative scenario on housing are projected to be less than significant. Given the availability of housing units, the incremental effects of the Project, when considered together with other past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to cumulative population or housing impacts.

The Project would also contribute to an incremental cumulative population increase during operation and maintenance, and subsequent demand for housing. However, because the operational workforce is minor (approximately ten operation and maintenance full-time/part-time personnel), the Project's contribution to cumulative population and housing growth during operation would not be cumulatively considerable or significant. Even when multiple projects overlap, they do not result in a substantial increase in population in an area that would lead to demand for housing that exceeds available capacity.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The construction would be minimal and short-term and would not result in population growth that when taken with the other projects in the area would necessitate the need for additional housing or increase population to the area. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

3.15.6 References

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3.16 Public Services and Utilities

This section presents the environmental setting and analysis of impacts to public services and utilities resulting from the Project. This section includes existing public services and utilities information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.16.1 Environmental Setting

Regional Setting

The Project site is in Riverside County in the Chuckwalla Valley. The Project site is approximately 8.5 miles east of the unincorporated community of Desert Center, California, approximately 39 miles west of Blythe, California, and approximately 57 miles east of Indio, California. The Project site is directly north of I-10 and surrounded by land administered by BLM. Land uses in the area include agriculture, residences, renewable energy development, recreation, and energy transmission.

The Desert Center area includes the communities of Desert Center, Lake Tamarisk, and Eagle Mountain Landfill and Townsite. Desert Center is bisected by I-10 and is the center of the Desert Center area. Desert Center has two mobile home parks, industrial/storage facilities, an airport, post office, and a California Department of Transportation equipment yard. Lake Tamarisk is a retirement community that is approximately 2.4 miles north of Desert Center and I-10. The community of Lake Tamarisk surrounds Lake Tamarisk and includes single family homes, duplexes, and mobile homes as well as a golf course. Eagle Mountain Landfill and Townsite is adjacent to Joshua Tree National Park and the Kaiser iron ore mining facility (Riverside County 2021).

Public Services

Fire Protection and Service

The California Department of Forestry and Fire Protection (CAL FIRE) is a full service “all-risk” department and provides response services for hazards including floods, fires, earthquakes, medical aid, hazardous material spills, search and rescue, and other disasters within California. CAL FIRE provides fire protection services throughout California and is responsible for response to over 31 million acres of California's privately-owned wildlands (CAL FIRE n.d.).

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Figure 3.16-1 Public Services within the Project area



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The Riverside County Fire Department (RCFD) provides fire and emergency services to residents of unincorporated areas of Riverside County. The nearest fire station operated by RCFD to the Project area is Station 49 in Desert Center, California (as shown in Figure 3.16-1). RCFD provides firefighting, emergency medical services and support, and hazardous materials emergency response (RCFD n.d.-a, n.d.-b). The RCFD contracts with CAL FIRE to provide fire protection and rescue services within unincorporated areas of Riverside County and participate in a Cooperative Fire Response Agreement. Under this agreement, the fire agencies agree to support each other on incidents using the closest available resources (Riverside County 2024).

The State of California has designated responsibility areas to indicate state, local, or federal governments financially responsible for fire prevention. Responsibility areas include *state responsibility areas* (SRAs), *local responsibility areas* (LRAs), and *federal responsibility areas* (FRAs), which are determined by ownership and/or management. The Project site is primarily within an LRA; however, the gen-tie is within an FRA managed by BLM (California Natural Resources Agency [CNRA] 2025). LRAs are protected by local agencies such as city and county fire departments and local protection districts. Although CAL Fire has legal responsibility to provide fire protection on SRAs, LRAs are also protected under CAL FIRE when contracted by local governments (Riverside County 2024).

The BLM Wildland Fire Management program implements fire protection and wildfire risk reduction treatments on public land in coordination with other fire management agencies (BLM 2025). The BLM is responsible for fire management on over 245 million acres of land which is often mixed with other federal, state, and local jurisdictions, requiring partnerships and collaboration crucial.

Law Enforcement

The Riverside County Sheriff's Department provides law enforcement services via twelve Sheriff's stations within Riverside County. The Colorado River Sheriff's Station in Blythe provides services to unincorporated communities from Hayfield Road approximately 22.4 miles west of the Project site to the Arizona state line approximately 43.5 miles east of the Project area, as shown in Figure 3.16-1 (Riverside County Sheriff 2025). There are no police departments that provide law enforcement services at the Project site.

The California Highway Patrol provides law enforcement services on state and unincorporated county roads. The California Highway Patrol Blythe Area office serves approximately 21,000 residents in the East Riverside County Region and patrols I-10, SR 078, US-95, and 500 miles of unincorporated county roadways in Riverside County ([https://www.chp.ca.gov/Find-an-Office/Border-Division/Offices/\(660\)-Blythe](https://www.chp.ca.gov/Find-an-Office/Border-Division/Offices/(660)-Blythe)).

BLM law enforcement officers enforce federal laws and do not have authority to enforce state laws without written authorization from a sheriff, authorized official, or state law. The Federal Land Policy and Management Act (FLPMA) of 1976 gives BLM law enforcement officers traditional police powers such as enforcing federal laws, carrying firearms, serving search warrants, making arrests, and conducting searches with or without a warrant (BLM n.d.-b). BLM

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law enforcement officers investigate crimes that occur on federal public lands including vandalism and looting of archeological, paleontological, and culturally significant sites and support emergency response efforts (BLM n.d.-a).

Schools

The Desert Center Unified School district serves the Desert Center area. The closest school to the Project site is Eagle Mountain Elementary School, which serves kindergarten through 8th grade (as shown in Figure 3.16-1). Eagle Mountain School is approximately 20 miles northwest of the Project site (California Department of Education 2024).

The Palo Verde Unified School District serves the Blythe area. There are several schools in Blythe, California, including Felix J Appleby Elementary, Margaret White Elementary, Ruth Brown Elementary, Palo Verde High School, and Twin Palms Continuation School (Palo Verde Unified School District, n.d.).

Libraries

The Riverside County Library System serves Riverside County. The Lake Tamarisk Branch in Desert Center is the nearest public library to the Project site (as shown in Figure 3.16-1) and is approximately 11 miles east (Riverside County Library System, n.d.).

Health Services

The nearest hospital to the Project site is the Palo Verde Hospital in Blythe, approximately 40 miles east of the Project site (as shown in Figure 3.16-1). The Palo Verde hospital has 51 patient beds including 4 intensive care beds and 2 surgical suites (Palo Verde Hospital, n.d.).

The Riverside County Emergency Medical Services Agency (REMSA) is the designated government entity in Riverside County that regulates and provides oversight for prehospital emergency services (Riverside County, n.d.-c). The Riverside County Operational Area (OA) provides communication and coordination between local jurisdictions (cities, school districts, special districts, tribes, and utilities) within Riverside County and the State of California for emergency management activities (Riverside County, n.d.-b).

In unincorporated portions of Riverside County, emergency preparedness and management are provided through County of Riverside's Emergency Management Department and Emergency Operations Center in cooperation with cities, special districts, and fire and law enforcement agencies (Riverside County 2024).

Utilities

Water and Wastewater

The Project site is within the California Department of Water Resources (DWR) Bulletin 118 Chuckwalla Valley Groundwater Basin (CVGB) (Basin Number 7-5). The CVGB encompasses approximately 940 square miles (601,600 acres) within eastern Riverside County (See Figure 3.11-2 Groundwater Basins and GSAs in the Project Area). Groundwater is the primary source of water. Current and historic pumping of groundwater includes agricultural uses, pumping for the Chuckwalla and Ironwood State Prisons, Lake Tamarisk development and golf course, and

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domestic uses, and minimal pumping by the Southern California Gas Company. The reported total urban groundwater uses for water year 2018 was 2,395 acre-feet. Groundwater extraction from agricultural irrigation is estimated at 6,628 acre-feet and comprises approximately 73 percent of all groundwater pumped from the CVGB (GSI 2025).

The Project site is located in a rural unincorporated area with no existing wastewater infrastructure. Wastewater is generally collected and disposed of in septic tanks and not transported or treated at a centralized treatment plant.

The primary water source for Desert Center is groundwater obtained from one water well. The water distribution system classification is D1. D1 distribution systems serve populations of 1,000 people or less. Wastewater is collected in septic tanks and not treated at a treatment plant.

Solid Waste Services

The nearest active landfill to the Project site is the Desert Center Sanitary Landfill (33-AA-0016) in Desert Center. The Desert Center Sanitary Landfill is approximately 14 miles northwest of the Project site; however, this landfill is only available to residents. The Blythe Sanitary Landfill (33-AA-00117) is approximately 46 miles east of the Project site. Both landfills accept solid waste including wood, tires, mixed municipal, metal, inert, green materials, dead animals, contaminated soils, construction/demolition materials, asbestos, and agricultural wastes (Riverside County Department of Waste Resources [DWR], n.d.). Solid waste generated by the Project would be collected by CR&R Inc and the bulk of recyclable waste and green waste would be delivered to the Perris Transfer Station in the city of Perris for processing, which is approximately 130 miles west of the Project. The waste hauler may take solid waste to other landfills including the Blythe, Oasis, El Sobrante, Lamb Canyon, or Badlands landfills. Hazardous materials are not accepted at Riverside County Landfills (see Figure 3.16-1) (Aliah Mitchell, “RE: Notice of Preparation [NOP] of the Draft Environmental Impact Report [DEIR] for the Savira Solar Project Conditional Use Permit [CUP] No. 240027/Development Agreement No. 2400008”). Table 3.16-1 Landfills which may be used by the Project lists the landfills that may be used by the Project and the capacity of each.

Table 3.16-1 Landfills which may be used by the Project

Landfill	Disposal capacity (tons)	Remaining capacity (tons)	Maximum permitted throughput (tons/day)	Approximate distance to the Project (miles)
Blythe	2.4 million	1.41 million	400	46
Oasis	0.32 million	47,567	400	118
El Sobrante	109 million	47.2 million	16,054	118
Lamb Canyon	21.1 million	6.1 million	5,000	108
Badlands	68.6 million	48.9 million	5,000	119

Source: (Mitchell, “RE: Notice of Preparation [NOP] of the Draft Environmental Impact Report [DEIR] for the Savira Solar Project Conditional Use Permit [CUP] No. 240027/Development Agreement No. 2400008”)

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Electric and Natural Gas Utilities

Some communities in unincorporated areas of Riverside County use County Service Areas (CSAs) to provide services within these communities. CSAs provide services based on community needs and provide municipal services including streetlights, parks, landscaping, street sweeping, water and sewage, and road maintenance. Desert Center is in CSA 51 (Riverside County, n.d.-a).

Electric utilities in the Project area are provided by Southern California Edison (CEC 2020a). Natural gas in the Project area is provided by Southern California Gas (CEC 2020b).

Telecommunications

Telecommunications are provided by AT&T, T-Mobile, Verizon, and Sprint.

3.16.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project.

Federal

There are no federal plans or standards for population and housing which apply to the Project.

State

Senate Bill 38,

In California, Senate Bill 38 (SB 38) requires battery energy storage facilities to have emergency response and action plans. This bill, signed into law in October 2023, mandates that facilities coordinate with local authorities, develop a plan covering the premises, and submit it to the county and city where the facility is located. The plan must be consistent with existing labor code provisions and regulations.

2022 Title 24, Part 9 of the California Code of Regulations

Title 24, part 9 of the California Code of Regulations includes regulations for fire safety and prevention in buildings, structures, and facilities in California. It includes provisions intended to protect public safety, reduce fire hazards, provide fire protection, and provide emergency response and includes requirements for fire suppression systems, fire-resistant materials, fire alarm systems, and emergency planning. It also contains requirements for fire response access and regulations for handling, storage, and transportation of hazardous materials.

Title 19 California Code of Regulations

Title 19 of the California Code of Regulation primarily focuses on public safety and includes regulations concerning fire prevention, building standards, emergency response, hazardous materials and waste management, public safety communications, and other regulations.

California Fire Code (CFC)

Chapter 12 of the CFC provides provisions related to the installation, operation and maintenance of energy systems used for generating or storing energy to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and

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emergency responders during emergency operations. Section 1207 of the 2022 CFC provides requirements for Electrical ESS. Battery Energy Storage Systems (BESS) greater than 600 kWh are required by the CFC to be UL (Underwriter's Laboratory) listed and have full-scale testing using the testing standard UL9540A. UL9540A tests a variety of fire and life safety features on the battery including thermal runaway, gas venting, and fire propagation.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 made all cities, counties, and approved regional solid waste management agencies in California responsible for enacting plans and implementing programs to reduce solid waste. Assembly Bill 939 mandates a 50 percent reduction requirement to be achieved each year through waste reduction, recycling, or by other means. Assembly Bill 939 establishes a framework for program integration, solid waste planning, and solid waste facility management.

California Code of Regulations (Title 27)

California Code of Regulations Title 27 sets forth regulations pertaining to waste disposal and defines minimum standards for treatment, storage, processing, and disposal of solid waste at disposal sites. The State Water Resources Control Board is the primary agency responsible for implementing and enforcing Title 27 by establishing waste and site classifications, solid waste management requirements for treatment, storage, or disposal in landfills, surface impoundments, waste piles and land treatment units. The Project area is regulated by the Colorado River Basin Regional Water Quality Control Board Region 7 and California Department of Resources Recycling and Recovery (CalRecycle).

California Green Building Standards Code (Section 5.408)

The California Green Building Standards Code section 5.408 covers management of construction waste and requires reuse of non-hazardous construction waste to be recycled or reused.

Local

County Service Area Law Government Code §25210.1 et seq.

The County Service Area Law (Government Code § 25210.1 et seq.) provides extended service levels in areas where residents are willing to pay for extra services by creating a direct assessment used to fund operations and maintenance costs of certain services. The Riverside County Office of Economic Development administers 60 CSAs within Riverside County (Riverside County, n.d.-a).

Riverside County General Plan

The County of Riverside General Plan Safety Element provides goals, policies, and actions to minimize safety hazards in unincorporated Riverside County and identified natural and human-caused hazards which affect existing and future development. It provides guidelines to protect residents, employees, visitors, and other members of the community and sets policies and standards for improved public safety. It also seeks to minimize physical harm to buildings and infrastructure and reduce damage to economic systems, community services, and ecosystems.

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The Safety Element contains several goals and policies relevant to the analysis of public services and utilities for the Project, including the following:

Policy S 4.2:

Require continued long-term operation and maintenance of fuel breaks, brush management, controlled burning, revegetation, and fire roads by Riverside County and private landowners.

Policy S 4.8:

Site all new public facilities in areas outside of identified fire hazard severity zones and wildland urban interface or fire threat areas, as feasible.

Policy S 4.9:

Site all new public facilities in areas outside of identified fire hazard severity zones and wildland urban interface or fire threat areas, as feasible.

Policy S 5.9:

Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to install automatic fire and hazardous materials detection, reporting, and shut-off devices, and install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.

Policy S 4.15:

Seek to conduct and implement long-range fire safety planning, including stringent building, fire, subdivision, and municipal code standards, improved infrastructure, and improved mutual aid agreements with the private and public sector.

The County of Riverside General Plan Land Use Element designates the general distribution and location and extent of land uses, such as housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses. It governs how land will be used and discusses standards of residential density and non-residential intensity for land use designations.

Policy LU 5.1:

Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.

Policy LU 5.2:

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Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.

Policy LU 17.1:

Permit and encourage solar energy systems as an accessory use to any residential, commercial, industrial, mining, agricultural or public use.

Policy LU 10.1.

Require that new developments contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.

Riverside County Fire Department (RCFD) Technical Policy 15-002

RCFD Technical Policy 15-002 for Solar Energy Generating System (SEGS) Fire Apparatus Access Roads was developed to assist large SEGS development applicants design fire apparatus access roads from a public way to the SEGS facility. This maintains compliance with the RCFD requirements and fire code best practices for public safety.

Riverside County Fire Department Fire Protection Strategic Plan

The RCFD Fire Protection Strategic Plan sets goals and priorities for the future and outlines strategies to accomplish them. It also defines current and future needs for coordinating fire facilities and service and equipment needs for 2009-2029 and recommends goals and strategies to meet those needs (CAL FIRE 2018).

2023 Unit Strategic Fire Plan for Riverside County

The 2023 Unit Strategic Fire Plan for Riverside County describes the Riverside Unit's preparedness and firefighting capabilities, identifies collaboration with stakeholders and values at risk, and discusses pre-fire management strategies and tactics. The primary goal is to reduce government costs and citizen losses from wildland fires.

Riverside County Department of Environmental Health

The Riverside Department of Environmental Health oversees the on-site wastewater treatment system permits and projects and reviews and approves plans for septic systems. To obtain a construction permit to install a new septic system, a building permit from Building and Safety is required. Additionally, a percolation report, floor plan for the buildings/facilities the septic system will service, and documentation of established water service such as an approved plan is required.

Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan was prepared in accordance with the Integrated Waste Management Act of 1989, Chapter 1095 (AB 939). It includes the Countywide Summary Plan, Countywide Siting, Element Source Reduction and Recycling Elements, Household Hazardous Waste Element, and Non-disposal Facility Elements for cities within and unincorporated areas of Riverside County. Specifically, the Countywide Summary Plan provides

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goals and policies and provides steps to implement programs to maintain the 50 percent reduction mandates.

3.16.3 Methodology for Analysis

This section considers the potential impact to public services and utilities during construction, operation and decommissioning of the Project. Potential impacts were evaluated according to County of Riverside EIR guidelines, which incorporate CEQA thresholds for significance (Section XIX of Appendix G to the State CEQA Guidelines). CEQA thresholds were considered if they were not covered by those listed under the County of Riverside EIR guidelines. Methodology used to determine potential impacts of the Project to public services include the evaluation of the capacity of public service and utility providers to respond or service the Project and if the Project might cause the need for additional resources or expanded facilities.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts to public services come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. The Checklists ask if a project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire protection/fire services
 - Police protection/sheriff services
 - Schools
 - Parks
 - Other public facilities (Impact PS-1)

Additional public services impact criteria set forth in the County's Environmental Assessment Checklist ask whether a project or any project-related component would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant

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environmental impacts, maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Libraries
- Health services (Impact PS-1)

The criteria for assessing impacts to utilities and service systems come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. The Checklists ask if a 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 issues (Impact UTILITIES-1)
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years (Impact UTILITIES-2)
- Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects (Impact UTILITIES-3)
- Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (Impact UTILITIES-4)
- 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 (Impact UTILITIES-5)
- Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan) (Impact UTILITIES-6)

Additional utilities and service systems impact criteria set forth in the County's Environmental Assessment Checklist ask whether a project or any project-related component would:

- Impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects:
 - i. Electricity
 - ii. Natural gas
 - iii. Communication systems
 - iv. Street lighting
 - v. Maintenance of public facilities, including roads
 - vi. Other government services (Impact UTILITIES-7)

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3.16.4 Impacts and Mitigation Measures

The scoping effort conducted for the Project revealed public concern regarding the impacts of solid waste. The Riverside County Planning Department (RCPD) offered comments for consideration which included considerations of landfill capacities and incorporation of measures to reduce the Project's solid waste impacts and enhance efforts to comply with California's mandate of 50 percent solid waste diversion from landfilling. This comment is reflected in Impact UTILITIES-5 and Impact UTILITIES-6 below.

Impact PS-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection/fire services

Construction and Decommissioning

The Project area is not within a designated area of very high or high fire hazard, according to the CAL FIRE Fire Hazard Severity Zones Map (Riverside County 2021). In addition, no structures would be retained as residences or would be constructed as residences as part of the Project.

During construction there is potential for small fires from electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, or insulating fluid at substations or flammable liquids, explosions, and over-heated equipment. The Project could increase demand for fire protection services during the 24-month construction period. Local fire protection services are expected to be adequate to handle the potential increase in demand. A Fire Protection and Prevention Plan would be developed and reviewed by the Riverside County Fire Department (RCFD), in addition to an Emergency Response/Action Plan as required by SB 38. The Fire Protection and Prevention Plan would identify potential hazards and accident scenarios that may occur during construction to decrease the risk of fires. It would include fire prevention and response measures to be taken by employees prior to the arrival of emergency services.

The construction workforce would likely be recruited from Riverside County and San Bernardino counties. Most construction staff and workers would commute daily to the jobsite from communities within Riverside and San Bernardino counties. Construction of the Project would not cause population growth to generate a need for new or expanded fire protection facilities. Impacts would be less than significant, and no mitigation would be required.

Operation and Maintenance

Increases in long-term demand for fire protection services typically are associated with substantial permanent increases in population. During the 40-year Project life, it is anticipated to directly employ 10 people, which would not contribute to a significant population increase. Most operations staff would be located off site, with daily site visits to perform security, maintenance, and security-related activities. The Project would include emergency access, on-site water storage tanks that could potentially provide water for fire protection, and implementation of a Fire

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Protection and Prevention Plan and compliance with SB 38 (Emergency Response/Action Plan). Operation and maintenance of the Project would not significantly increase demand for fire protection services, and no new public facilities would be needed to maintain acceptable service ratios, response times, or other performance objectives for fire protection. Overall, the Project's impact on the RCFD's ability to maintain acceptable service ratios, response times, or other performance objectives relating to technical rescue services would be less than significant.

Police Services/Sheriff Services

Construction

The construction workforce would consist of approximately 200 people, likely recruited from Riverside and San Bernardino counties. Most construction staff would commute daily and would access the site from I-10. This could temporarily increase demand for police services but, because construction is not expected to permanently increase the local population, no new or expanded law enforcement facilities or personnel in the region would be necessary.

Construction would temporarily increase traffic from delivery trucks and commuting workforce traffic. This could increase potential for accidents or affect response times during the 15-month construction period. It is anticipated that the Riverside County Sheriff's Department/CHP would have capacity to respond to incidents. In addition, Project construction is not expected to adversely affect the CHP's ability to patrol the highways. Impacts would be less than significant.

Operations and Maintenance

During the 40-year Project life, it is anticipated to directly employ 10 people. Most operation staff would be located off site with daily site visits to perform security, maintenance, and security-related activities. Although operation and maintenance personnel would commute to the Project site daily, it is not anticipated to significantly increase traffic. It is not anticipated that the 10 operation personnel would contribute to a significant population increase or increase in traffic that would increase demand for additional police protection services or require new or altered facilities.

A permanent security fence would be installed around the solar site, and support facilities and would remain in place throughout construction, operation, and decommissioning of the Project. The solar field would be accessed via controlled access at the site entrance. Furthermore, the Project is sited in a relatively unpopulated area and is unlikely to attract attention that would make Project facilities susceptible to crime. Impacts on police protection would be less than significant.

Schools

Construction

The construction workforce would consist of approximately 200 people likely recruited from Riverside and San Bernardino counties. The construction period is anticipated to be approximately 15 months. The Project is not anticipated to significantly increase enrollment in schools or require new schools to be constructed or require existing schools to be physically altered. Because the construction workforce would be recruited from the local region, and due to

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the temporary nature of construction, it is unlikely a substantial number of workers or their families would relocate to the area, thus potential impacts to schools would be negligible.

Operation and Maintenance

During the 40-year Project life, it is anticipated to directly employ 10 people, which would not substantially increase the local population. Operation and maintenance staff are likely to come from the local workforce and are not anticipated to significantly increase enrollment in schools or require construction of new schools or existing schools to be physically altered. Impacts would be less than significant.

Libraries

Construction

The Project would not substantially increase the local population during construction. The construction workforce would likely be recruited from Riverside and San Bernardino counties. If some of the construction workforce and their families were to relocate to communities near the Project area, it would not cause a substantial increase of population such as to increase demand for libraries and other public facilities; thus, there would be no impact.

Operation and Maintenance

The 10 operation and maintenance personnel would not cause a substantial increase in population that would increase demand for libraries or other public facilities; thus, there would be no impact.

Health Services

Construction

An average of 200 construction personnel would be present at the Project site during construction. Construction-related hazards would be present, including heavy equipment. Palo Verde Hospital in Blythe is a Level IV trauma center and can treat minor injuries and stabilize patients for transport to a higher level of care. Construction would be conducted in accordance with the Worker Education and Awareness Plan, per MM Hazards-2, which would address Project-specific safety, health, and environmental concerns. Local emergency medical facilities are expected to be able to handle incidents related to the construction of the Project. Therefore, impacts would be less than significant.

Operation and Maintenance

Up to 10 operations and maintenance personnel could be present at the Project site during operation and maintenance. These 10 personnel would not contribute to a significant demand for health services or require new or altered facilities. The Project's Education and Awareness Plan would be implemented throughout operation and maintenance to minimize potential incidents requiring emergency services. The impact would be less than significant.

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Parks

Construction

The Project would not substantially increase the local population during construction. The construction workforce would likely be recruited from Riverside and San Bernardino counties. If some of the construction workforce and their families were to relocate to communities near the Project area, it would not cause a substantial increase of population such as to increase demand for parks; thus, there would be no impact.

Operation and Maintenance

The 10 operation and maintenance personnel would not cause a substantial increase in population that would increase demand for parks; thus, there would be no impact. Park and other recreational facilities are discussed in detail in Section 3.17, Recreation.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed for the upgrades would not increase local population at a scale that would require additional public services. The construction period would be short-term and minimal number of workers would be required to complete the upgrades. Therefore, impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES-1: Would the project require or result in the relocation of construction of new or expanded water, wastewater treatment or storm drainage system, whereas the construction or relocation would cause significant environmental effects?

Construction

During construction, the Project would use portable toilets. Sanitary waste would be disposed of at an authorized facility and would not connect to a public or sewer system. Stormwater would be directed off site in accordance with the Project's Stormwater Pollution Prevention Plan, which would include erosion and sediment controls and *best management practices* (BMPs) to be used during construction. Expanded water, wastewater treatment, or stormwater systems would not be required, and there would be no impact on existing wastewater treatment systems or capacity or stormwater drainage systems.

Operation and Maintenance

During operation and maintenance, the Project would not connect to a public water system or sewer system. The O&M building will rely on potable water supplied via on-site water storage tanks. A septic system or leech field may be installed at the O&M building. The septic system would be designed and constructed in accordance with local, state and federal design guidelines and would consider site-specific considerations including soil percolation and contours. Stormwater would be managed on site and drainage components would be incorporated in the final design of permanent Project components including roads, buildings, and BESS. Areas

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disturbed during construction would be seeded and vegetated to stabilize soil and prevent erosion. Stormwater would be managed on site in accordance with the Project's Stormwater Pollution Prevention Plan. Operation and maintenance of the Project would not require new municipal storm water drainage facilities or the expansion of existing facilities. Expanded water, wastewater treatment, or stormwater systems would not be required, and there would be less than significant impact on existing wastewater treatment systems or capacity or stormwater drainage systems.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. Expanded water, wastewater treatment, or stormwater systems would not be required, and there would be less than significant impact on existing wastewater treatment systems or capacity or stormwater drainage systems.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Construction

During the approximately 15-month construction phase of the Project, it is anticipated that up to 100 acre-feet of water would be used for dust suppression, truck wheel washing, and other uses. Water would either be pumped from a new, on-site well(s) or trucked in from an off-site source. Based on the analysis provided in the Water Supply Assessment, water required for construction would not exceed the normal-year groundwater budget. The calculated normal-year groundwater budget surplus for the CVGB is greater than the estimated water use for Project construction. Although there would be a temporary groundwater deficit during single dry and multiple dry years, the deficit would be recovered when periods of normal precipitation returned. Further, the likelihood that a dry or critical dry year would occur during Project construction is low. If a dry year or critical dry year were to occur during Project construction or decommissioning, it would not result in groundwater overdraft of the CVGB, which is defined as the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of many years during which water supply conditions approximate average conditions. The deficit associated with a dry or critical dry year during construction or decommissioning does not approximate average conditions and, further, would be limited to those years, after which average conditions (resulting in an annual groundwater surplus, as discussed above) would be expected to return. Impacts would be less than significant (GSI 2025).

Operation and Maintenance

During the estimated 40-year operation period, up to 10 acre-feet of water per year would be used for panel washing and other uses (800-acre feet total). During the estimated two-year decommissioning period, up to 25 acre-feet per year (50-acre feet total) of water is anticipated for

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dust control and restoration activities. Total water use for the 44-year Project life, which includes construction, operations, and decommissioning, is estimated to be 550 acre-feet. Water for the Project would be obtained from an existing well or a proposed groundwater well near the O&M building (GSI 2025).

Based on the analysis provided in the Water Supply Assessment, water supplies during normal, single dry, and multiple dry years from the CVGB would meet project water demands. The calculated normal-year groundwater budget surplus for the CVGB is greater than the estimated water use for the estimated annual water requirements for the operational and decommissioning phases of the Project. Impacts would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not result in a need for a significant amount of water use as the upgrades would be minimal and within the existing footprint. Therefore, impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 3: Would the project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

Construction

During construction, the Project would use portable toilets; sanitary waste from portable toilets would be disposed of at an authorized facility. New or expanded wastewater treatment facilities would not be required, and impacts would be less than significant.

Operations and Maintenance

During operation and maintenance, the Project would not connect to a public water system or sewer system. A septic system or leech field may be installed at the O&M building. The septic system or leech field would be designed and constructed in accordance with state and federal design guidelines and would consider site-specific considerations including soil percolation and contours. Operation and maintenance of the Project the septic system would not connect to an existing wastewater treatment facility. New or expanded wastewater treatment facilities would not be required. Due to proper design and siting of the Project's septic system, impacts would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. New or expanded wastewater treatment facilities would not be required, and impacts would be less than significant.

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Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 4: Would the project result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

During construction, the Project would use portable toilets; sanitary waste from portable toilets would be disposed of at an authorized facility. Sanitary waste from portable toilets would not require treatment at a wastewater facility. Other than sanitary waste, generation of wastewater is not anticipated during construction, and there would be no impact related to the capacity of the wastewater treatment providers to treat wastewater.

Operation and Maintenance

During operation and maintenance, wastewater generated by the Project would not require wastewater treatment services and would be handled on site via a septic system or leech field for facilities at the O&M building. The septic system or leech field would be designed and constructed in accordance with state and federal design guidelines and would consider site-specific considerations including soil percolation and contours. During operation and maintenance of the Project, the septic system would not connect to an existing wastewater treatment facility; thus, there would be no impact to the capacity of wastewater treatment providers to treat wastewater.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. New or expanded wastewater treatment facilities would not be required, thus, there would be no impact to the capacity of wastewater treatment providers to treat wastewater.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 5: Would the project generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction

The primary waste generated at the Project during construction would be nonhazardous solid and liquid wastes. Limited quantities of hazardous materials would be used and stored on site for construction activities. The Project would generate solid waste during construction, which would include normal refuse, scrap metal, oil and oil filters, and sanitary waste. Hazardous wastes include gas and diesel fuel, lubricants, and mineral insulating oil. Construction waste would be recycled and/or disposed of in an industrial or municipal land fill. Solid waste generated by the Project would be collected by CR&R Inc (CR&R), and the bulk of recyclable

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waste and green waste would be delivered to the Perris Transfer Station in the city of Perris for processing or to other landfills, including Blythe, Oasis, El Sobrante, Lamb Canyon, or Badlands landfills. These landfills would be capable of accommodating the anticipated waste disposal needs for the Project, and the impact would be less than significant.

Operation and Maintenance

The primary waste generated at the Project during operation and maintenance would be nonhazardous solid and liquid waste. Limited quantities of hazardous materials would be used and stored on site for operation and maintenance activities. Hazardous wastes include gas and diesel fuel, lubricants, mineral insulating oil, batteries, paint, and herbicides. Containers would include containers of less than 5-gallon capacity as well as 55-gallon drums or totes. Containers of 5 gallon or less capacity would be disposed of as normal refuse. Containers of greater than 5-gallon capacity would be returned to vendors for recycling or reconditioning. Hazardous materials are not accepted at Riverside County Landfills. Hazardous materials would be disposed of in coordination with the Riverside County Department of Health, Environmental Protection and Oversight Division for the determination, transport, and disposal of hazardous waste (Mitchell, "RE: Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Savira Solar Project Conditional Use Permit (CUP) No. 240027/Development Agreement No. 2400008"). These materials would be stored, handled, and transported in accordance with the Project's Hazardous Materials and Waste Management Plan, and a Spill Prevention, Control, and Countermeasure Plan, which would address waste and hazardous materials management, including *best management practices* (BMPs) related to storage, spill response, transportation, and handling of materials and wastes. The Project would be served by landfills with sufficient permitted capacity to accommodate the solid waste disposal needs.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. There would be minimal waste generated from the upgrades and therefore, there would be no impact to the capacity of landfills and impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 6: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?

Construction and Operation and Maintenance

The Project would comply with all federal, state, and local statutes and regulations related to solid waste during all Project phases. The Project would comply with California's mandate AB 75 for 50 percent solid waste diversion from landfilling. To address solid waste impacts and help Riverside County comply with the Integrated Waste Management Act (AB 939) and the California Green Building Standards, a Waste Recycling Plan would be submitted to the Riverside County

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Department of Waste Resources for review and approval prior to construction. The Waste Recycling Plan would identify materials generated by construction for the Project, projected quantities, measures to recycle, reuse, or reduce materials to be disposed of, facilities/haulers that would be used, targeted recycling or reduction rate, and reporting protocols. At a minimum, two bins would be placed at the Project site: one for waste disposal and one for recycling of construction and demolition materials. Impacts would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. There would be minimal waste generated from the upgrades and therefore, there would be no impact related to the compliance with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

Impact UTILITIES - 7: Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

(i) Electricity

Construction and Operations and Maintenance

The Project would involve the construction a new electric solar facility that includes a PV solar power and energy storage facility and connection to existing electrical transmission. The Project would increase the generation of renewable energy consistent with California's goals mandated by Senate Bills 1078, 350, and 100 that require 50 percent of electricity be sourced from renewable energy by 2030 and 100 percent by 2045. New or expanded electrical facilities would not be required; thus, there would be no impact.

(ii) Natural gas

Construction and Operations and Maintenance

The Project would not require a natural gas system and would not be connected to existing natural gas facilities. New or expanded natural gas facilities would not be required; thus, there would be no impact.

(iii) Communication systems

The Project would require communication systems for operational purposes. New communication lines, such as fiber optic or similar, may be necessary. Communication lines would be installed either underground or overhead based on the location of the closest connection point, available distribution lines, and other site specifics. The SCADA system would use propriety software, a fiber optic transmission system, a telephone, radio and/or microwave communications network, and/or other means of communication such as radio-links or phase

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loop communication systems. The potential impacts associated with the proposed communication facilities are discussed throughout this EIR. However, demand associated with the Project would be minimal and is expected to be within the planning forecasts of the affected telecommunications provider. Therefore, impacts related to the communication facilities are considered less than significant.

(iv) Street lighting

Permanent lighting would be provided within the substation(s), around O&M building, around the BESS (if centralized), and at the Project site entry gate. Substation yard lighting and lighting within the O&M building and BESS would be controlled by a switch and/or timer and would be off unless needed. Lighting would be shielded and downward facing to avoid light spillage beyond the Project site. The O&M facility, monitoring systems, and lighting would likely be powered by solar power. The impacts from street lighting would be less than significant.

(v) Maintenance of public facilities, including roads

Access to the Project would be via I-10 and gravel access roads on BLM-administered land. Added vehicle trips during construction would include mobilization of construction equipment, daily construction workers and haul trucks, and occasional material deliveries. Once delivered to the site, construction equipment would be used on site for the construction phase and transported off site when no longer needed for construction. Haul truck trips would involve a maximum of 20 per day with an average of 15 per day. Carpooling, when possible, would reduce vehicle traffic. Vehicle traffic to the Project site during operation and maintenance would be less than 10 round-trips per day under normal operational conditions. Improvements on access roads may be required and could require vegetation removal, grading, stabilization of low water crossings, and dust abatement. ROW approvals would be obtained from the BLM prior to the use of existing BLM roads. Maintenance would be conducted in coordination with BLM and Riverside County. Section 3.18 Transportation discusses potential impacts of the Project on roads.

(vi) Other government services?

As discussed in impact “a” above, the Project would not result in a significant increase in population necessitating the need for new or expanded government facilities; thus, the impact would be less than significant.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. The construction of the upgrades would be minimal and short-term and would not impact public service facilities that would require or result in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects. Impacts would be less than significant.

Significance Determination before Mitigation

Less than significant.

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3.16.5 Cumulative Impacts

The Project and other development projects in the cumulative scenario, together, could increase demand for public services and utilities in eastern Riverside County due to increases in workers within the area during construction; this has the potential to result in a significant cumulative impact to public services and utilities.

Fire Services, Sheriff Services, and Health Services

Construction of present and reasonably foreseeable future projects may overlap with construction of the Project. The other present and reasonably foreseeable cumulative projects that fall within the geographic scope for fire and law enforcement services are primarily made up of energy projects, including utility-scale solar and electric transmission projects. The greatest potential for fires and fire hazards would exist at these sites during construction because the on-site workforce would be at its peak, which would create human presence-related hazards, including with the variety of equipment used that could create sparks or other potential fire hazards. The combined effects of the increased cumulative demand for fire, law enforcement, and emergency medical services from the cumulative projects within the geographic scope of analysis could result in a significant cumulative impact. However, cumulative projects would be expected to implement fire prevention plans and comply with applicable state and local laws regarding fire prevention. The implementation of Project-specific Fire Prevention Plan also would reduce the Project-related demand for fire, law enforcement, and emergency medical services from construction, such that the residual demand would not exceed established service ratios or require new or physically altered facilities, the construction of which could cause environmental impacts. Impacts during decommissioning would be similar or less than those during construction. Cumulative impacts would therefore be less than significant, and the incremental effects of the Project would not be cumulatively considerable.

The incremental effects of the Project from up to 10 permanent staff during operations would also not be cumulatively considerable because the very low number of workers would also not lead to the exceedance of established service ratios or require new or physically altered facilities. Therefore, Project construction, operation and maintenance would not make a considerable contribution to cumulative impacts on fire, law enforcement, and emergency medical services.

Schools and Libraries

Due to the temporary nature of construction, it is not likely that any of the workers and their families for any of the cumulative projects would relocate to the area. Any potential impact to schools and libraries from the minimal number of operations personnel for each solar project would be negligible especially as the workers would be sourced from local communities and would likely commute. There would be no significant cumulative impact to schools or public libraries.

Utilities

Cumulative impacts to utilities would not be significant. The Project would utilize an on-site groundwater well and would not generate wastewater. There is no potential for the Project to

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contribute to cumulative impacts to water or wastewater systems. In addition, due to the existing and remaining capacity at existing landfills, the Project's incremental solid waste-related impact during construction and operation, when combined with the contributions of past, other present, and reasonably foreseeable future projects would not be cumulatively considerable.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would be completed within the existing footprint. The construction of the upgrades would be minimal and short-term and would not impact public service facilities or increase the need to utility systems. Impacts would not be cumulatively considerable.

Significance Determination before Mitigation

Less than significant.

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3.17 Recreation

This section presents the environmental setting and analysis of impacts to recreational resources resulting from the Project. This section includes existing recreational resource information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.17.1 Environmental Setting

Project Setting

The Project site is located on private land in eastern Riverside County while the proposed gen-tie line alignment is located on land administered by the BLM. The Project site is located near several existing solar projects as well as some that are under construction. There are areas administered by BLM within the vicinity of the Project site that are used for a variety of recreational activities such as hiking, horseback riding, rockhounding, and non-competitive vehicle touring. Additionally, the Project is located near Joshua Tree National Park and Chuckwalla National Monument, as shown in Figure 3.17-1.

Regional Recreation Areas and Opportunities

The Project is located within the Chuckwalla Valley of incorporated Riverside County. Desert Center has no community parks, and there are no regional or state parks in the Chuckwalla Valley. Lake Tamarisk is located approximately 7 miles northwest of the Project site and is a member-owned community for seniors with approximately 150 mobile home spaces, mobile home rentals, a campground, a nine-hole golf course, and a recreational pool area (Lake Tamarisk Resort, n.d.).

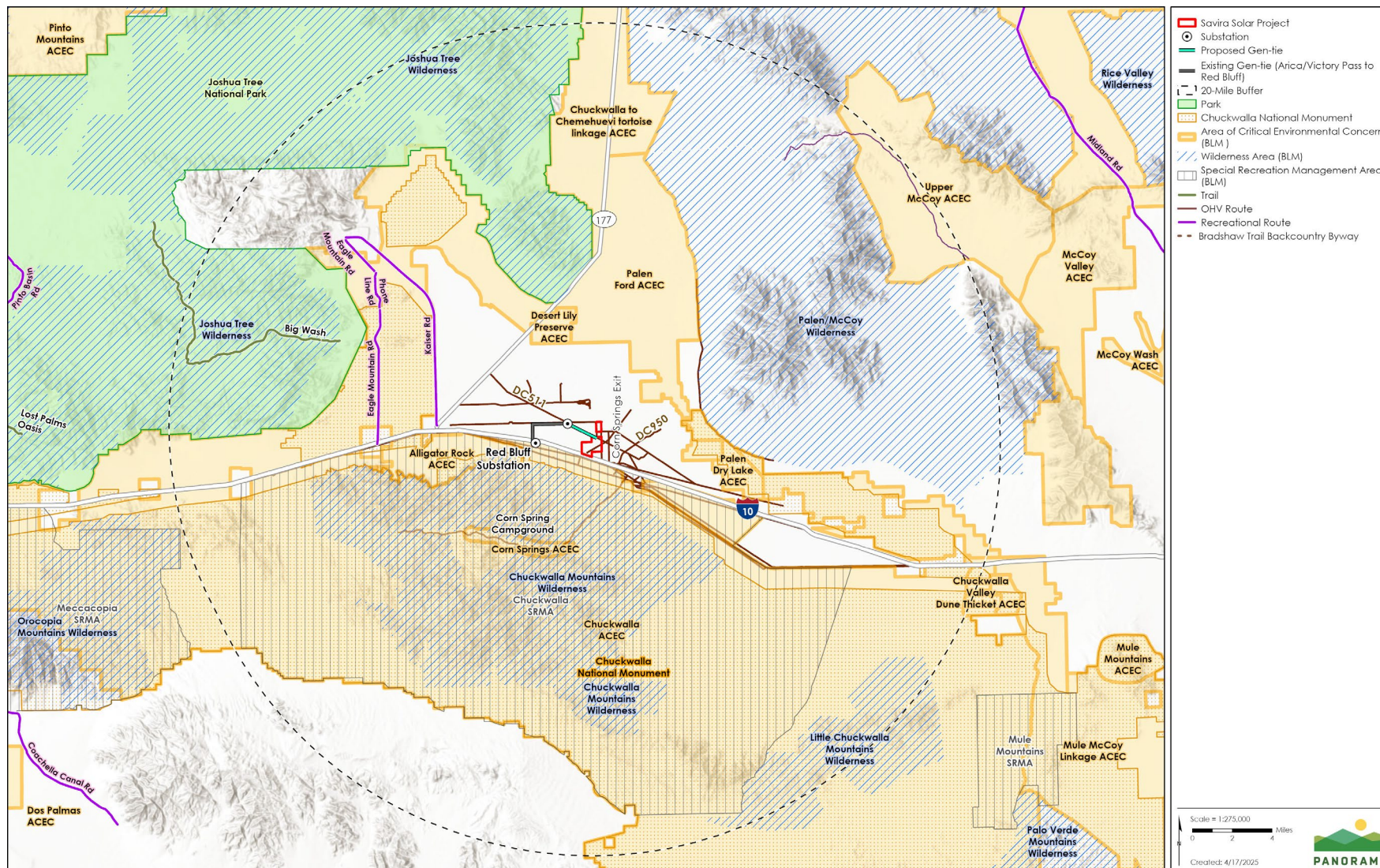
The Chuckwalla Valley Raceway is located approximately 6.5 miles northwest of the Project site and encompasses over 1,100 acres of land. The raceway is approximately 2.68 miles long, for beginners to experienced racers, and includes on-site amenities such as a paddock for recreational vehicle dry camping, 40 cabins for rent, recreational vehicle storage, and an airstrip (Chuckwalla Valley Raceway, n.d.)

BLM oversees an array of recreational resources near the Project site, including wilderness areas, campgrounds, long-term visitor areas, trails, interpretive sites, and a network of extensive backcountry approved travel and OHV routes. *Areas of critical environmental concern* (ACECs), wilderness areas, and *special recreation management areas* (SRMAs) provide dispersed recreational opportunities in the region. In general, summer in the California desert is considered too hot for recreation, so the use of BLM lands for recreation is typically concentrated in the cooler months from September to May with limited use in the summer (BLM 2018).

Recreation areas within the Project area are identified below in Figure 3.17-1 and Table 3.17-1.

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Figure 3.17-1: Recreational Areas within the Project Region



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Table 3.17-1 Recreation Areas and Special Designations with Recreational Opportunities within 20 miles of the Project

Recreation area	Direction from Project site	Approximate distance from Project site (miles)	Approximate size (acres)	Status
Joshua Tree National Park	Northwest	6.16	1,017,750	Designated
Chuckwalla National Monument	Northeast and South	1.08	620,000	Designated
Palen Dry Lake ACEC	East	5.65	3,630	Designated
Corn Springs ACEC	Southwest	4.43	2,470	Designated
Alligator Rock ACEC	West	3.00	7,750	Designated
Desert Lily Preserve ACEC	Northwest	4.05	2,059	Designated
Chuckwalla ACEC	South	.05	514,400	Expanded under the DRECP
Chuckwalla to Chemehuevi tortoise linkage ACEC	North	8.18	318,663	Designated
Upper McCoy ACEC	Northeast	15.89	37,362	Designated
Chuckwalla Valley Dune Thicket ACEC	East	19.41	2,198	Designated
Palen Ford ACEC	North	2.32	54,928	Designated
Bradshaw Trail Backcountry Byway	South	14.27	65 miles	Designated
Chuckwalla Mountains Wilderness	South	1.11	113,326	Designated
Palen-McCoy Wilderness	Northeast	5.27	41,370	Designated
Joshua Tree Wilderness	West and Northwest	6.16	549,500	Designated
Little Chuckwalla Mountains Wilderness	Southeast	17.06	28,034	Designated
Corn Springs Campground	South	5.45	9 camping units	Designated
Chuckwalla Special Recreation Management Area	South	.05	228,480	Designated in the DRECP

Joshua Tree National Park

The National Park Service (NPS) administers Joshua Tree National Park. The park is located approximately 6.16 miles northwest of the Project site and covers more than 1 million acres. The primary activities that occur at the park are hiking, mountain biking, and rock climbing, with some wildflower viewing and bird watching. Camping is available within the park at nine campgrounds. The eastern part of the park contains dark skies and has applied to be designated as a “dark sky park” by the International Dark Sky Association. This resource attracts stargazers

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and amateur astronomers. The park is open year-round, with peak visitation occurring in April. More than 3 million people visited the park in 2022 (NPS 2023).

Chuckwalla National Monument

The NPS administers Chuckwalla National Monument. The park surrounds the Project site to the northwest, northeast, and south. The park covers more than 620,000 acres and contains recreational opportunities for hiking, mountain biking, and rock climbing (BLM n.d.-c)

Wilderness Areas

As shown in Figure 3.17-1, four wilderness areas are located within 20 miles of the Project site. The four areas are the Chuckwalla Mountains Wilderness, the Palen-McCoy Wilderness, the Little Chuckwalla Mountains Wilderness, and the Joshua Tree Wilderness. They are all managed by BLM, except for the Joshua Tree Wilderness, which is managed by the NPS (BLM n.d.-b)) The wilderness areas near the Project site are undeveloped, with no formal trails, parking, or visitor facilities. The terrain is steep and rugged, lacking permanent natural water sources, which limits hiking and backpacking opportunities. As a result, visitor use is very light, with BLM estimating 100 to 200 hikers annually. However, vehicle-based recreation is more common. Approximately 2,000 visitors per year camp in RVs along roads adjacent to the wilderness areas, engaging in hiking, off-highway vehicle (OHV) use, photography, sightseeing, and similar activities.

Areas of Critical Environmental Concern

The nine ACECs located near the Project site are Corn Springs, Palen-Ford, Chuckwalla, Chuckwalla Valley Dune Thicket, Upper McCoy, Chuckwalla to Chemehuevi tortoise linkage Upper Lily Preserve, Palen Dry Lake, and Alligator Rock. The individual ACEC Management Plans and the resources and values for which the ACECs were established determine the recreation activities allowed in each ACEC. Most ACECs allow low-intensity recreation that is compatible with protection of the relevant values. Corn Springs ACEC, Palen-Ford ACEC, Chuckwalla ACEC, and Alligator Rock ACEC all overlap with the Chuckwalla SRMA, which allows limited OHV use on designated routes (BLM 2015).

Special Recreation Management Areas

An SRMA is a BLM-administrated area where existing or proposed recreation opportunities and recreation setting characteristics are recognized for their unique value importance, or distinctiveness, especially compared to other areas used for recreation. SRMAs are units of public land identified for directing available recreation funding and personnel to specific, structured recreation opportunities. They are managed to protect and enhance a targeted set of activities, experiences, benefits, and desired recreation (BLM 2016a)

The Chuckwalla SRMA is located south of the Project site on the south side of I-10. This area is set aside to provide opportunities for area residents, visitors, and commercial recreation providers to engage in motorized and non-motorized recreation activities that are compatible with recovery efforts for the Desert tortoise and other resource values. The primary activities for the Chuckwalla SRMA are motorized recreation touring and other recreational activities that rely on motorized vehicles to access public lands (BLM 2016a)

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The Bradshaw Trail

The Bradshaw Trail is a 70-mile Back Country Byway in southeastern Riverside County, with a small segment in Imperial County. The first road across Riverside County to the Colorado River was blazed by William Bradshaw in 1862 as an overland stage route beginning in San Bernardino. The trail was used extensively between 1862 and 1877 to haul miners and other passengers to the gold fields at La Paz, Arizona (now Ehrenberg). The Bradshaw Trail is a 70-mile dirt road, periodically graded by the Riverside County Transportation Department. Four-wheel-drive vehicles are recommended due to stretches of soft sand. The trail traverses mostly public land and offers spectacular views of the Chuckwalla Bench and the Orocopia, Chuckwalla, and Mule mountains (BLM n.d.-a). As shown in Figure 3.17-1, this east-west trail is located approximately 15 miles south of the Project site.

Off-highway Vehicle Routes

OHV access is among the most important recreation issues in the desert according to both the California Desert Conservation Area (CDCA) Plan and the Northern and Eastern Colorado (NECO) Desert Plan. The recreation program ensures that access routes necessary for recreation enjoyment are provided. Within Riverside County, there are no designated open OHV areas, so OHV use on BLM land must occur on designated limited routes, as discussed below

In limited areas, motorized vehicle access is allowed only on certain routes, including roads, ways, trails, and washes. BLM defines OHV routes as follows (BLM 2018).

- **Open Route:** Access by all types of motorized vehicles is allowed generally without restriction.
- **Limited Route:** Access by motorized vehicle is allowed, subject to limitations on the number and types of vehicles allowed and restrictions on time or season and speed limits.
- **Closed Route:** Access by motorized vehicles is prohibited except for certain official, emergency, or otherwise authorized vehicles.

If a route provides access to other routes, historical sites, or recreational areas, it is considered to have high significance. These routes may connect to areas that provide backcountry driving, photography, camping, rock hounding, and hiking opportunities in eastern Riverside County.

The Desert Center region has several OHV open routes. The BLM has no traffic counters or other means to determine the accurate number of users in the vicinity of the Project. BLM staff reports that use is relatively low on routes within the vicinity of the Project site and not likely to exceed 300 visits per year (BLM 2018). As shown in Figure 3.17-1, regional access to the Project site is provided from the Corn Springs exit off I-10. This exit leads to BLM open route DC 950 and then to open route DC 511. To reach the northern portion of the site, usage of BLM open route DC 505 is also proposed.

BLM Open Wash Zones

Unless an area is specifically designated as Limited or Closed, BLM considers Open zones “open.” When used in this context, a *wash* is defined by BLM as having physical features that make

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passage of motorized vehicles possible, which establishes the navigability, in addition to having running or standing water or being dry. Use of washes within these “open wash zones” is restricted to areas considered navigable. In these open zones, navigable washes are designated open as a class, and they are not individually designated unless they are a specific route (BLM 2018). The BLM has not inventoried or analyzed specific washes in the Project area as to their navigability, but by the above definition, all or portions of washes in the Desert Center area may be considered navigable. As is the case with designated routes, the BLM has no means to determine accurate use of “open wash zones” in the vicinity of the Project site.

3.17.2 Regulatory Framework

Federal, State, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

The Wilderness Act of 1964

The Wilderness Act created the National Wilderness Preservation System, which was signed in 1964. This act defined *wilderness* as “an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions” (USFWS n.d.).

Designated wilderness is the highest level of conservation protection for federal lands, and the only way to designate or change the status of wilderness areas is through Congress. These areas are designated on existing federal public lands. Congress has directed four federal land management agencies to manage wilderness areas to preserve and, if possible, restore their wilderness characteristics. The agency relevant to this Project is the BLM.

Permanent roads and commercial enterprises are prohibited by the Wilderness Act, except commercial services that may provide for recreational or other purposes of the Wilderness Act. Wilderness areas generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, or any permanent structures or installations (with exceptions in Alaska). The Wilderness Act acknowledges the need to provide for human health and safety, protect private property, control insect infestations, and fight fires within the area; however, wilderness areas are to be primarily affected by the forces of nature. Wilderness areas are managed under the direction of the Wilderness Act, subsequent legislation (such as the Alaska National Interest Lands Conservation Act), and agency policy.

The Federal Land Policy and Management Act (FLPMA)

The Federal Land Policy and Management act recognizes the value of public lands and includes the multiple use/sustained yield framework for management to provide for outdoor recreation for future generations (BLM 2016b). Title VI of the FLPMA, Designated Management Areas, California Desert Conservation Area, acknowledges the recreational resources contained within the California desert environment and directs the BLM to develop a multiple use and sustained yield management plan to conserve the desert’s resources, particularly recreational use.

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California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) Plan establishes goals for management of recreation in the California desert. Recreational opportunities in the study area are framed by the CDCA Plan. To provide for the use of public lands and the resources of the CDCA, the goals include recreational uses in a manner that enhances wherever possible and does not diminish the environmental, cultural, and aesthetic values of the desert (BLM 1980).

The goals of the Recreation Element of the CDCA Plan are as follows:

- Provide for a wide range of quality recreation opportunities and experiences emphasizing dispersed undeveloped use
- Provide a minimum of recreation facilities. Those facilities should emphasize resource protection and visitor safety
- Manage recreation use to minimize user conflicts, provide a safe recreation environment, and protect desert resources
- Emphasize the use of public information and education techniques to increase public awareness, enjoyment, and sensitivity to desert resources
- Adjust management approach to accommodate changing visitor use patterns and preferences
- Encourage the use and enjoyment of desert recreation opportunities by special populations and provide facilities to meet the needs of those groups
- Provide for off-road vehicle recreation use where appropriate in conformance with FLPMA, Section 601, and Executive Orders 11644 and 11989

ACECs are also identified as special management areas in the CDCA Plan. These include areas where special management attention is required to protect important historic, cultural, scenic, biological, or other natural resources. The CDCA Plan also contains a motorized-vehicle access element, which provides a system and a set of rules that governs access to the CDCA by motor vehicles. The rules include providing for constrained motor-vehicle access while protecting desert resources. When the CDCA Plan was first adopted, the BLM designated a network of motorized vehicle routes on public lands within the northern and eastern Mojave Desert. The BLM designated routes for north-central and southern portions of the CDCA. The BLM manages OHV use so that the conditions of special status species and other natural and cultural resources are maintained.

The amendments to the CDCA Plan described below are incorporated into the plan through their Records of Decision.

Northern and Eastern Colorado Desert Coordinated Management Plan

The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan provides for management of California desert recreation in El Centro, Blythe, and Needles as well as cities in the Coachella Valley. The NECO Plan specifies the types of recreational activities allowed in Multiple-Use Classes on BLM-administered land. Under this plan all, routes outside closed and OHV open areas are designated as open, closed, or limited. The NECO plan includes an OHV route inventory and designated routes of travel (approximately 95 percent of existing routes

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remained available for vehicle access under the plan). *Special recreation permits* (SRPs) are authorizations that allow for recreation uses of the public lands and related waters. They are issued as a means to control visitor use, protect recreational and natural resources, and provide for the health and safety of visitors (BLM 2017).

Desert Renewable Energy Conservation Plan

In September 2016, the Record of Decision was signed for the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment. The DRECP Land Use Plan Amendment designated SRMAs and *extensive recreation management areas* within the California desert. The DRECP included additional conservation management actions for recreation that dictate the types of activities allowed near certain recreational features (BLM n.d.-d).

Off-road Vehicles (43 Code of Federal Regulations Section 8340 et seq.).

This regulation establishes criteria for designating public lands as open, limited, or closed to the use of OHVs and for establishing controls governing the use and operation of OHVs in such areas while protecting resources, promoting safety, and minimizing user conflicts. Recreation use under Title VI “includes the use, where appropriate, of off-road recreational vehicles.”

State

There are no State regulations, plans, or standards for recreation that apply to the Project.

Local

Riverside County General Plan

The Infrastructure, Public Facilities, and Service Provision section of the Land Use Element of the Riverside County General Plan aims to align the development of infrastructure, public amenities, and services with population growth. The Land Use Element contains the following policy relevant to the analysis of recreational resources for the Project, including the following: (Riverside County 2021):

Policy N3.3

Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.

Riverside County Zoning Ordinance

Ordinance Number 348

Providing for Land Use Planning and Zoning Regulations and Related Functions for the County of Riverside: This ordinance protects the people and property of Riverside County from development of unsuitable land uses and aims to ensure that built areas are developed safely and with minimal conflict with surrounding lands (Riverside County 2023).

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3.17.3 Methodology for Analysis

This section analyzes potential effects of the Project related to recreation and assesses the impacts to known recreational uses. For the Project, this includes the use of open routes on or near the Project site. The CDCA Plan and NECO Plan Amendment, which include detailed inventories and designations of open routes for motorized-vehicle use, were reviewed to determine impacts to open routes.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For recreation, the Checklists ask if a 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. (Impact Recreation-1); or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Criteria Requiring No Further Evaluation)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- The proposed project would be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees). (Criteria Requiring No Further Evaluation)
- Include the construction or expansion of a trail system? (Criteria Requiring No Further Evaluation)

Criteria Requiring No Further Evaluation

Due to the nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and therefore, no impact discussion is provided.

- **Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.** The Project does not include recreational facilities nor require the construction or expansion of recreational facilities. Therefore, no impacts would occur.

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- **Located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees).** The Project site is not located in a Community Service Area. The closest Community Service Area to the Project site is Community Service Area No. 51, which maintains the Lake Tamarisk Golf Course as well as a tot lot. In addition, the Project site is not located in a recreation and park district with a Community Parks and Recreation Plan. Therefore, no impact would occur.
- **Include the construction or expansion of a trail system.** The Project does not include the construction or expansion of a trail system. Therefore, no impacts would occur.

3.17.4 Impacts and Mitigation Measures

Impact Recreation – 1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Construction and Decommissioning

As shown in Figure 3.17-1 and listed in Table 3.17-1, there are no neighborhood parks within the vicinity of the Project site. The closest recreational area is the Chuckwalla National Monument, which is located 1.08 miles south of the Project site, across from I-10. However, the Project is a solar facility and would therefore not induce substantial population growth that would increase the use of the Chuckwalla National Monument or any of the other recreational facilities within the Project area. Construction is anticipated to last approximately 15 months, with a workforce of about 200 construction workers. These workers are expected to commute from population centers primarily within Riverside and San Bernardino counties, making it unlikely that they would extensively use local recreational facilities. Any recreational use by construction workers (including those during decommissioning) would be minimal and temporary. Therefore, impacts related to the increased use of recreational facilities would be less than significant.

The Project does not include any recreational components. The Project solar site is located on private land while the gen-tie line would be constructed and operated on BLM-administered land designated as a Development Focus Area in an existing transmission corridor not designated for recreation. Construction and operation of the gen-tie line would not result in direct loss of recreation, nor would it result in permanent impacts to designated OHV routes. While the Project would introduce a new 230 kV transmission line and may temporarily close BLM Open Route DC511 in the corridor, the associated construction would be of short duration. In addition, there would be an alternate route from Hwy177 should the Project result in a temporary closure.

One existing BLM route, DC 902, continues onto private land on the Project site for approximately 0.85 mile. While OHV routes cannot be officially designated on private land, some routes cross private land and may be used by recreationists via unauthorized travel. This route does not lead to any authorized recreational use. Effects on BLM open routes would be considered by the BLM in its NEPA document for open routes on public land and would be considered an implementation decision, consistent with BLM regulations but would not include the portion of

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the route on private land. Therefore, impacts to recreation from construction and operation the gen-tie line would be less than significant.

Find Indirect effects to recreational users of specially designated lands (including the SRMAs, wilderness areas, ACECs, and Joshua Tree National Park) could occur due to the distant views of the construction work and dust. The wilderness areas and ACECs do not have maintained trails or trailheads and have a low number of public visitors. In addition, the closest location of Joshua Tree National Park to the Project site is less heavily visited because of the difficulties in reaching that area.

The associated indirect impacts are addressed in Sections 3.2: Aesthetics, Section 3.4: Air Quality, Section 3.13: Noise, and Section 3.18: Traffic. Construction impacts would be temporary in nature and due to the distances from the Project site to the surrounding recreational opportunities, would be minimal. This being the case, impacts to recreation would be less than significant.

Operation and Maintenance

During Project operation, the 10 full-time employees would be primarily working remotely, only visiting the site when necessary to conduct routine maintenance. Any recreational usage by these workers or any of their families would be minimal and would not have a significant impact on existing recreational resources.

During operation, the visual change at the site could affect visitors seeking experiences in a natural setting. Night lighting for the solar PV Project is expected to be minimal, so little detrimental effect to night skies and star gazing would be anticipated. Project decommissioning impacts would be the same as those described for Project construction. Upon the completion of decommissioning, the site would be returned to its pre-Project conditions or to such conditions as agreed upon with the landowner. Therefore, impacts to recreation would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed for the upgrades would be minimal and within the existing footprint and would not result in significant recreational usage by these workers or any of their families. Therefore, there would not be a significant impact on existing recreational resources.

Significance Determination before Mitigation

Less than significant

3.17.5 Cumulative Impacts

The Project does not include construction of recreational facilities, induce population growth that would substantially increase the use of existing neighborhood or regional parks or other recreational facilities, and is not located within a CSA or recreation and park district with a Community Parks and Recreation Plan.

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Although construction of the gen-tie may result in a temporary delays for travelers on DC-511, it would not result in closure that would require a new road to be developed. Therefore, the Project would not make a cumulatively considerable contribution to a significant cumulative impact or require the construction of expansion of recreational facilities, which might have an adverse physical effect on the environment.

In addition, the workforce that would be brought in for the construction and decommissioning would be mostly drawn from communities within Riverside and San Bernardino Counties. Even when multiple projects overlap, they would not result in a substantial increase in recreation usage in an area that would lead to demand for construction or expansion of recreational facilities. Although some workers from these projects may use recreational areas during construction, O&M, and decommissioning, increased use would be minimal and/or temporary as workers would be either from the surrounding area or temporarily residing within the area and would therefore not contribute substantially to the physical deterioration of existing facilities. As such, the Project's impacts combined with those of nearby projects would not result in a cumulatively significant impact with respect to the deterioration to neighborhood or regional parks or other recreational facilities, and the project's incremental contribution to any such impact would not be cumulatively considerable.

Lastly, the Project is not located within a CSA or recreation and park district with a Community Parks and Recreation Plan and therefore, the Project would not contribute to a cumulatively significant impact with respect to impacts to a CSA or recreation and park district with a Community Parks and Recreation Plan.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work to be completed for the upgrades would be minimal and within the existing footprint and would not result in significant recreational usage by these workers or any of their families. As such, the upgrades would not result in a cumulatively significant impact with respect to the deterioration to neighborhood or regional parks or other recreational facilities.

Significance Determination before Mitigation

Less than Significant

3.17.6 References

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3.18 Traffic and Transportation

This section presents the environmental setting and analysis of impacts to traffic and transportation resulting from the Project. This section includes existing traffic and transportation information for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.18.1 Environmental Setting

Regional Setting

The Project site is located in Riverside County, California, approximately 8.5 miles east of the unincorporated community of Desert Center. The Project site is north of Interstate 10 (I-10) and northwest of the Corn Springs Road interchange near Desert Center, California. Site access is anticipated to be via the I-10 exit at Corn Springs Road and using the BLM route 950 to BLM route 511. There would also be an additional access from the west along State Route 177, if needed during emergencies or temporary road closures. Regional roadways within the vicinity of the Project site are as follows (Fehr and Peers 2024):

- **I-10** is a major east–west interstate freeway spanning the United States from Santa Monica, California, to Jacksonville, Florida. It connects Southern California to Phoenix, Arizona, and destinations further east. I-10 is a four-lane freeway with an interchange near the Project at Corn Springs Road. The posted speed limit on I-10 is 70 mph. In the study area, I-10 in the Project vicinity carries 30,000 *average daily trips* (ADT).
- **Corn Spring Road** is a two-lane north–south local roadway located in Desert Center, California. Corn Spring Road consists of on/off ramps for I-10 that lead to BLM OHV roads from which the Project site may be accessed.
- **SR-177** is a north–south highway running between State Route 62 (approximately 25 miles northeast of Desert Center) and I-10 near the unincorporated community of Desert Center. SR-177 is a two-lane road, with a posted speed limit is 65 mph, and carries approximately 2,800 ADT.
- **BLM OHV Routes DC950 and DC511** are unpaved dirt and/or gravel roads north of I-10.¹ BLM OHV route DC950 runs north from the I-10 and Corn Springs Road interchange. Route DC950 intersects with BLM OHV route DC511 approximately 0.7 mile north of the interchange. The Project site may be accessed approximately 1.3 miles northwest of the intersection of route DC950 and Route DC511.

Public Transportation

The Project site is located in rural Riverside County, and public transit services are limited. The Palo Verde Valley Transit Agency (PVVTA) is the sole public transit operator in eastern Riverside

¹ The existing Arica/Victory Pass Solar Projects are in the process of putting gravel down on DC950 and DC511 to support operations of the projects.

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County and serves the City of Blythe and unincorporated communities in Riverside County (RidePV, n.d.). The PVVTA provides transit options to serve senior citizens, persons with disabilities, and the public. PVVTA's Route 6 Wellness Express operates eastbound along I-10 and westbound on State Route 111 from Palm Springs to the City of Blythe (RidePV, n.d.). The Route 6 Wellness Express operates once a day on Mondays, Wednesdays, and the first and third Fridays of each month. The nearest bus stop is located at the Desert Center Post Office, approximately 7.4 miles west of the Project site.

Pedestrian and Bicycle

Due to the rural nature of the Project, there are no known bicycle or pedestrian facilities within the vicinity of the Project site. The nearest bicycle and pedestrian facilities are located in the Lake Tamarisk community, approximately 7.5 miles northwest of the Project site.

Airport Facilities

Blythe Airport is the nearest public airport to the Project site, located approximately 32 miles east of the Project site. Blythe Airport has two runways and is a general aviation facility that services travelers primarily from Los Angeles and Phoenix (Riverside County, n.d.). As noted in Section 3.10 Hazards and Hazardous Materials, the Desert Center Airport is a privately-owned, single runway airport, located at the Chuckwalla Valley Raceway (Chuckwalla Valley Raceway, n.d.). The Desert Center Army Airfield was located 1 mile northeast of the community of Desert Center and approximately 4.5 miles northwest of the Project site. The Desert Center Army Airfield is now the Desert Center Airport at the Chuckwalla Raceway (Military Museum, n.d.).

Project Setting

Access to the Project site is anticipated to be via exiting I-10 at Corn Springs Road and using BLM route DC950 to BLM route DC511. To reach the northern portion of the Project site, BLM route DC505 may also be used. Improvements of these routes may be needed to access the Project site, including vegetation removal to meet the required road width, contour grading to level and compact the road, low water crossing, and some use of gravel or other stabilizing material. Direct access to the Project site would include a perimeter road and interior solar field access roads. New access roads would be constructed within the Project site interior to provide vehicle access to the solar equipment. The Project Site would also be accessed from SR 177 to the west and traveling a gravel roadway to provide access to the site.

3.18.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

Code of Federal Regulations, Title 49, Subtitle B

Title 49 of the CFR regulates the transport of hazardous materials. This regulation requires proper handling and storage of hazardous materials during transportation.

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State

Senate Bill 743

Senate Bill 743 (Stats. 2013, ch. 386) (SB 743) implements several statewide CEQA changes that are relevant to the Project; specifically, it eliminated traffic congestion and automobile delay as a significant impact under CEQA (Pub. Res. Code § 21099(b)(1); CEQA Guidelines § 15064.3(a)).

CEQA Guidelines section 15064.3(b) implements SB 743 and sets forth guidelines for determining the significance of automobile transportation impacts. The section identifies VMT as the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and nonmotorized travel. Except as provided in subdivision (b)(2) regarding roadway capacity projects, a project's effect on automobile delay shall not constitute a significant environmental impact.

To aid in SB 743 implementation, the following non-binding state guidance has been produced.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA*, California Governor's Office of Planning and Research, December 2018 (OPR 2018)
- *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, California Air Resources Board, January 2019 (CARB 2019)
- *VMT-Focused Transportation Impact Study Guide*, Caltrans, May 20, 2020 (California Department of Transportation (Caltrans) 2020b)
- *Final 2022 Scoping Plan Update*, California Air Resources Board, November 16, 2023 (CARB 2022)

In the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), the OPR's Office of Land Use and Climate Innovation recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. This threshold is based on evidence that suggests a 15-percent reduction in VMT is an achievable reduction at the project level in a variety of place types and would help the state achieve its climate goals based on currently available information (CAPCOA 2010). The Office of Land Use and Climate Innovation also recommends a number of screening criteria designed to help jurisdictions determine types of projects for which a VMT impact is unlikely, such as projects adjacent to high quality transit services, in existing low VMT areas, or providing local-serving retail or public facilities (e.g., grocery store, neighborhood school, library, drug store, dry cleaners, gym). Caltrans' *VMT-Focused Transportation Impact Study Guide* supports the use of the Office of Land Use and Climate Innovation recommendations for land use projects and plans.

California Vehicle Code

The California Vehicle Code regulates the safe transport of hazardous materials and weight and load limitations for vehicles operating on highways.

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California Department of Transportation (Caltrans) Local Development-Intergovernmental Review

In December 2020, Caltrans issued Traffic Safety Bulletin 20-02-R1 announcing the release of the “Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance (Caltrans 2020a).” This guidance material provides instructions to Caltrans personnel, lead agencies, developers, and consultants for conducting safety impact analysis for proposed land use projects and plans. The guidance sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis with a focus on safety impacts affecting the California State Highway System (SHS). Integrating safety in the Caltrans land development and intergovernmental review process helps to solidify a culture of safety in California through the Safe System approach.

Local

Southern California Association of Governments

Connect SoCal – Regional Transportation Plan and Sustainable Communities Strategies (RTP/SCS)

The Southern California Association of Governments (SCAG) is a metropolitan planning organization that develops the RTP for Los Angeles, Orange, Riverside, San Bernardino, Imperial and Ventura counties. SB 375 introduced a requirement to reduce greenhouse gas emissions from cars and light trucks through integrated transportation and land use planning. SB 375 required SCAG to include a SCS in the RTP that demonstrates how emission targets would be achieved. The first RTP/SCS was adopted in 2012 and envisioned the development of more than 20 miles of light rail, the accommodation of 51 percent of all future housing near major transit stations and corridors, and replacing gas taxes with mileage-based user fees. The 2020-2045 RTP/SCS, also known as Connect SoCal, builds upon strategies established over several planning cycles to achieve greenhouse gas emissions reduction goals, improve public health, increase roadway safety, and achieve a more sustainable growth pattern (SCAG 2020). The SCAG Regional Council adopted Connect SoCal on September 3, 2020. (SCAG 2020)

Riverside County Long Range Transportation Study

The Riverside County Transportation Commission (RCTV) developed the Riverside County Long Range Transportation Study (LRTS) in 2019 to improve transportation in the region. The LRTS bridges local plans and SCAG’s RTP/SCS. The LRTS includes all forms of transportation including highways, local roads, transit, rail, pedestrian, and bicycle facilities. The LRTS includes Riverside County’s Congestion Management Plan (CMP). The intent of the CMP is to link land use, transportation, and air quality to reduce traffic congestion and improve air quality. The CMP includes all highways and principal arterials in Riverside County. Roadways under the CMP are considered to have a minimum traffic *level of service* (LOS) standard of E. LOS is no longer used to identify potential transportation impacts under CEQA.

Desert Center Area Plan

The Desert Center Area Plan is part of the Riverside County General Plan and contains policies addressing critical issues facing Desert Center (Riverside County 2021). The area plan contains

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the unincorporated community of Desert Center as well as a majority of the Chuckwalla Valley. Four unique features are located in the area plan, including the former Eagle Mountain iron ore mining facility. Commercial and industrial uses are the Desert Center-Rice Road interchange, the Lake Tamarisk community, and the Metropolitan Water District of Southern California's Colorado River Aqueduct. The Desert Center Area Plan contains the following policies relevant to traffic and transportation for the Project:

Policy DCAP 5.1:

Design and develop the vehicular roadway system per Figure 5, Circulation, and in accordance with the functional classifications and standards specified in the General Plan Circulation Element.

Policy DCAP 7.1:

Implement the Trails and Bikeway System as discussed in the Non-motorized Transportation section of the General Plan Circulation Element.

Policy DCAP 7.2:

Continue to explore opportunities for developing additional trails to serve the Desert Center area.

Riverside County General Plan

The County of Riverside General Plan Circulation Element identifies the transportation needs and issues within the county, describes the proposed circulation system, establishes policies, develop implementation strategies, and provide a plan to achieve a balanced, multimodal transportation network. The Circulation Element contains a number of goals and policies relevant to the analysis of traffic and transportation for the Project, including the following:

Policy C1.8:

Ensure that all development applications comply with the California Complete Streets Act of 2008 as set forth in California Government Code Sections 65040.2 and 65302.

Policy C2.1:

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan (Figure C-1) which are currently County maintained, or are intended to be accepted into the County maintained roadway system:

LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde

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Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.

Policy C2.2:

Require that new development prepare a traffic impact analysis as warranted by the Riverside County Traffic Impact Analysis Preparation Guidelines or as approved by the Director of Transportation. Apply level of service targets to new development per the Riverside County Traffic Impact Analysis Preparation Guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development.

Policy C2.3:

Traffic studies prepared for development entitlements (tracts, public use permits, conditional use permits, etc.) shall identify project related traffic impacts and determine the significance of such impacts in compliance with CEQA and the Riverside County Congestion Management Program Requirements.

Policy C2.4:

The direct project related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service targets.

Policy C2.4:

The direct project related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service targets.

Policy C2.8:

Riverside County shall coordinate with Caltrans, RCTC and adjacent local jurisdictions in conformance with the Riverside County Congestion Management Program to determine the appropriate LOS threshold for determining significance when reviewing development proposals that directly impact nearby State Highway facilities or city streets.

Policy C2.8:

Riverside County shall coordinate with Caltrans, RCTC and adjacent local jurisdictions in conformance with the Riverside County Congestion Management Program to determine the appropriate LOS threshold for determining significance when reviewing development proposals that directly impact nearby State Highway facilities or city streets.

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Policy C3.6:

Require private developers to be primarily responsible for the improvement of streets and highways that serve as access to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.

Policy C3.8:

Restrict heavy duty truck through-traffic in residential and community center areas and plan land uses so that trucks do not need to traverse these areas.

Policy C3.9:

Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the Transportation Department.

Policy C3.10:

Require private and public land developments to provide all onsite auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development project shall be undertaken to identify project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.

Policy C6.1:

Provide dedicated and recorded public access to all parcels of land, except as provided for under the statutes of the State of California.

Policy C6.2:

Require all-weather access to all new development.

Policy C7.1:

Work with incorporated cities to mitigate the cumulative impacts of incorporated and unincorporated development on the transportation system.

Riverside County Ordinance No. 460

Riverside County Ordinance No. 460 requires all access roads to conform with the County Transportation Department Subdivision Regulations.

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Riverside County Ordinance No. 461

Riverside County Ordinance No. 461 requires all access roads to conform with the County Transportation Department Road Improvement Standards and Specifications.

3.18.3 Methodology for Analysis

This analysis focuses on potential impacts related to the construction, operation and maintenance, and decommissioning of the Project on the surrounding transportation systems and roadways. Additionally, Riverside County had additional criterion regarding traffic, circulation, and emergency access. The Transportation Analysis for the Project is the basis for evaluating impacts to local transportation systems based on level of service determinations (Appendix J, Transportation Analysis).

Trip Generation

Construction of the Project is expected to occur during daylight hours, 7 days per week. Construction hours are subject to change based on schedule deficiencies or to complete critical construction activities. Nighttime work may be required for installation, service or electrical connection, inspection, and testing activities.

At the peak of construction, the Project is expected to have 277 workers on site and four truck deliveries per day. This analysis conservatively assumes that no workers would carpool to and from the site, that they would all arrive during the morning peak period and depart during the evening peak period, and that half the truck deliveries would occur during the morning peak period and half would occur during the evening peak period. Peak-hour trips estimated for the construction of the Project are listed in Table 3.18-1. Note that delivery trucks for the Project represent just under 1 percent of the total trips generated by the Project. All trips were assumed to use the Corn Springs Road exit off I-10 onto BLM DC950 and then onto BLM DC511 to access the Project site. Approximately 70 percent of trips were assumed to travel to and from the west, and 30 percent of trips were assumed to travel to and from the east. Trip distribution was estimated based on community populations to the west and east and the likelihood of workers commuting to and from those locations as well as existing travel patterns in the area.

Table 3.18-1 Construction Trip Generation

Trip type	Daily trips	Morning peak period			Evening peak period		
		In	Out	Total	In	Out	Total
Auto	554	277	0	277	0	277	277
Trucks	8	2	2	4	2	2	4

Source: (Fehr and Peers 2024)

Vehicle Miles Traveled

SB 742, signed by the Governor of California in 2013, changed the way transportation impacts are identified in CEQA. Specifically, the legislation has directed the Office of Land Use and Climate Innovation to look at different metrics for identifying transportation as a CEQA resource area.

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The updated CEQA Guidelines (December 2018) and the Final Office of Land Use and Climate Innovation technical advisory for evaluating transportation impacts (December 2018) identifies VMT as the preferred metric for traffic impact analysis moving forward. Also, the Office of Land Use and Climate Innovation technical advisory indicates that any construction effects on transportation would be temporary, and evaluation of VMT during the construction phase of a project can be a qualitative assessment. The Project would require up to 10 workers for operation and maintenance activities. Workers would generate less than 20 daily vehicle trips during Project operation. The Office of Land Use and Climate Innovation technical advisory does not require a VMT analysis for any “small project” that results in 110 daily trips or fewer. Since the Project would generate approximately 20 daily vehicle trips, VMT analysis of Project operation and maintenance is not required.

Level of Service

Level of Service (LOS) is a qualitative method to assess congestion (delay) at intersections and ranges across six levels, from LOS A to LOS F. The level of delay is measured in seconds. In California, LOS is no longer a criterion for assessing project traffic impacts under CEQA. The focus has shifted from congestion, as measured by LOS, to broader traffic impacts on air quality, energy use, climate change, and other factors, as measured by Vehicle Miles Traveled (VMT). However, in addition to VMT, Riverside County planners are concerned about the effects of a project on local roads and the level of congestion that may occur.

LOS was calculated at the Project intersections using the Transportation Research Board’s Highway Capacity Manual 7th Edition methodologies (Transportation Research Board and National Academies of Sciences, Engineering, and Medicine 2022). Table 3.18-2 shows the Highway Capacity Manual LOS criteria. A peak hour factor of 0.95 was used for all scenarios, including the Project’s and concurrent projects’ construction traffic, as the volume of construction traffic is many times greater than the existing traffic on the roadway. Peak hour factors calculated from the existing conditions data were lower than 0.95, indicating that traffic is not distributed well throughout the peak hour. However, this may be attributed to workers arriving and leaving the site outside of the peak hour due to the extreme desert temperature conditions from approximately April through October.

Table 3.18-2 Intersection LOS Criteria

LOS	Description	Signalized delay (Seconds)	Unsignalized delay (seconds)
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤10.0	≤10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	>10.0 to 20.0	>10.0 to 15.0

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LOS	Description	Signalized delay (Seconds)	Unsignalized delay (seconds)
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	>20.0 to 35.0	>15.0 to 25.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	>35.0 to 55.0	>25.0 to 35.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	>55.0 to 80.0	>35.0 to 50.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	>80.0	>50.0

Source: (Fehr and Peers 2024; Transportation Research Board and National Academies of Sciences, Engineering, and Medicine 2022)

The LOS results for existing conditions are shown in Table 3.18-3. Under existing conditions, minimal existing traffic is present using the Corn Springs Road interchange and operate at LOS A. Table 3.18-3 also shows LOS results for existing plus Project conditions. Delays on the Corn Springs Road off-ramps are not expected to change by more than a couple of seconds during the peak hours.

Table 3.18-3 Existing No Project and Plus Project Conditions LOS

Intersection	Control	Peak period	Existing		Existing plus Project	
			Delay	LOS	Delay	LOS
I-10 Westbound Ramps and Corn Springs Road	SSSC	AM	8.8	A	10.2	B
I-10 Westbound Ramps and Corn Springs Road	SSSC	PM	8.8	A	8.9	A

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Intersection	Control	Peak period	Existing	Existing plus Project		
I-10 Eastbound Ramps and Corn Spring Road	SSSC	AM	8.8	A	10.0	B
I-10 Eastbound Ramps and Corn Spring Road	SSSC	PM	8.8	A	9.4	A

Source: (Fehr and Peers 2024)

There are two adjacent and potentially concurrent projects on BLM land: Redonda Solar and Bajada Solar. While they will not be constructed together, one or the other may have a construction schedule that overlaps with the late 2026 to 2027 construction schedule for the Project, per direction from the BLM. Publicly available data shows there are no other projects with an overlapping construction period in the vicinity. While it is unlikely that the peak trip generation for the Redonda and Bajada Solar Projects would align exactly with the Project's, it was conservatively assumed in the Transportation Analysis that the maximum trips generated by the construction of the Redonda and Bajada Solar Projects and the Project would occur concurrently. Ambient No Project Conditions is calculated by adding the Redonda and Bajada Solar Projects traffic volumes to the existing traffic volumes, as shown in Table 3.18-4. Ambient Plus Project Conditions is the existing traffic volumes plus construction activities for the Redonda and Bajada Solar Projects plus construction activities for the Project. Under this scenario, certain intersections in the area were identified as potentially having LOS F, as shown below.

Table 3.18-4 Ambient No Project and Ambient Plus Project Conditions LOS

Intersection	Control	Peak period	Ambient No Project		Ambient Plus Project	
			Delay	LOS	Delay	LOS
I-10 Westbound Ramps & Corn Springs Road	SSSC	Morning	49.3	E	>100	F
I-10 Westbound Ramps & Corn Springs Road	SSSC	Evening	10.7	B	12.4	B
I-10 Eastbound Ramps & Corn Spring Road	SSSC	Morning	22.9	C	58.9	F
I-10 Eastbound Ramps & Corn Spring Road	SSSC	Evening	14.2	B	18.0	C

Source: (Fehr and Peers 2024)

This table shows the potential temporary effect of construction traffic on LOS at various local intersections and assumes that the Project and Redonda/Bajada Projects have simultaneous construction periods, that the traffic on a particular day is the maximum for each of the three projects, and that workers arrive/depart during the peak AM/PM hours in single occupant vehicles. However, with the end of construction, the only traffic associated with solar projects

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would be that required for O&M operations, which would have negligible long-term impacts on these intersections.

Project Structures on BLM-Administered Lands

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and Riverside County's Environmental Assessment Checklist. For traffic and transportation, the Checklists ask if the Project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. (Impact TRANS-1)
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (Impact TRANS-2)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Impact TRANS-3)
- Result in inadequate emergency access. (Impact TRANS-4)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which were also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Cause an effect upon, or a need for new or altered maintenance of roads (see Impact TRANS-2).
- Cause an effect upon circulation during the project's construction (see Impact TRANS-3).
- Result in inadequate emergency access or access to nearby uses (Impact TRANS-4).
- Include the construction or expansion of a bike system or bike lanes? (Criteria Requiring No Further Evaluation)

Criteria Requiring No Further Evaluation

Due to nature of the Project, for the reasons stated below, there would be no impacts related to the following criteria and, therefore, no impact discussion is provided.

- **Include the construction or expansion of a bike system or bike lanes.** The project does not include the construction or expansion of a bike system or bike lanes and therefore, no impacts would occur.

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3.18.4 Impacts and Mitigation Measures

Impact TRANS-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Construction

Road Network

Construction of the Project would require approximately 277 workers on site and four truck deliveries per day, which would generate 554 daily automobile and 8 daily truck vehicle trips. As shown in Table 3.18-3, under the Existing Plus Project conditions, the I-10 westbound ramps and Corn Springs Road and the I-10 eastbound ramps and Corn Spring Road would operate at LOS B during the morning peak period and LOS A during the evening peak period. While the Existing Plus Project conditions would result in minor traffic delays and an acceptable LOS level, the Redonda and Bajada Solar Projects could be constructed concurrently with the Project. As shown in Table 3.18-4, the Project plus the existing traffic volumes plus construction activities for the Redonda and Bajada Solar Projects could result in the I-10 westbound ramps and Corn Springs Road and the I-10 eastbound ramps and Corn Spring Road operating at LOS F during the morning peak period, which is an unacceptable level.

However, in accordance with Mitigation Measure Traffic-1, a Construction Traffic Control Plan (CTCP) would be implemented to reduce construction-related vehicle trips. The CTCP would be reviewed by Riverside County. The CTCP would require the installation of temporary signal or use of manual intersection control during the construction period at the I-10 westbound ramp at SR-177 and the I-10 eastbound ramp at SR-177 if multiple construction projects occur at the same time. Furthermore, Mitigation Measure Traffic-1 requires the Applicant to reduce construction-related trips during morning and afternoon peak hours on I-10, SR-177, and Corn Springs Road. Table 3.18-5 shows the delay and LOS results from implementation of signal or manual traffic control. With implementation of signal or manual traffic control, the Project would operate at an acceptable LOS with limited delays. With implementation of Mitigation Measure Traffic-1, the impacts would be less than significant.

Table 3.18-5 Ambient No Project and Ambient Plus Project Conditions LOS

Intersection	Control	Peak period	Ambient Plus Project		Ambient Plus Project Signals	
			Delay	LOS	Delay	LOS
I-10 Westbound Ramps and SR-177	Manual/signal	morning	>100	F	17.7	B
I-10 Westbound Ramps and SR-177	Manual/signal	PM	12.4	B	15.0	B
I-10 Eastbound Ramps and SR-177	Manual/signal	AM	58.9	F	7.3	A
I-10 Eastbound Ramps and SR-177	Manual/signal	PM	18.0	C	4.4	A

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Source: (Fehr and Peers 2024)

Transit, Bicycle, and Pedestrian Use

There are no known bicycle or pedestrian facilities within the vicinity of the Project site. PVVTA's Route 6 Wellness Express operates along I-10 daily on Mondays and Wednesdays and on the first and third Fridays of each month. The nearest bust stop is located at the Desert Center Post Office, approximately 7.4 miles west of the Project site, and would not be impacted by Project construction. No lane or road closures would occur that would interfere with transit circulation on I-10.

Operation and Maintenance

The Project would require up to 10 permanent staff to be on site for facility maintenance and repairs. Vehicle traffic during operation and maintenance to the Project site would be minimal, at less than 20 round-trips per day. The addition of 20 daily vehicle trips would have a negligible effect on traffic circulation. Therefore, the impact of Project operation related to conflicts with adopted policies, plans, or programs addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project substation and would result in minimal construction traffic to complete the activities associated with the Substation upgrades. Therefore, the impact of the SCE activities during construction and operation related to conflicts with adopted policies, plans, or programs addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities would be less than significant

Significance Determination before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Traffic-1: Construction Traffic Control Plan

Prior to the start of construction, the Project owner shall submit a Construction Traffic Control Plan for review by Riverside County for affected roads and intersections that would be directly affected by the construction activities and/or would require permits and approvals. The Construction Traffic Control Plan shall include, but not be limited to, the following:

- If multiple construction projects occur at the same time and conditions at the intersection warrant, plans for installation of a temporary signal or use of manual intersection control during the construction period at the I-10 westbound ramp at SR-177 and the I-10 eastbound ramp at SR-177
- The locations and use of flaggers, warning signs, barricades, delineators, cones, arrow boards, etc., according to standard guidelines outlined in the Manual on

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Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Joint Utility Traffic Control Manual

- The locations of all road or traffic lane segments that would need to be temporarily closed or disrupted due to construction activities
- The locations where guard poles, netting, or similar means to protect transportation facilities for any construction or conductor installation work requiring the crossing of a local street highway is proposed
- The use of continuous traffic breaks operated by the California Highway Patrol on state highways (if necessary)
- Additional methods to reduce temporary traffic delays to the maximum extent feasible during morning (7:00 a.m. to 9:00 a.m.) and afternoon (4:00 p.m. to 6:00 p.m.) peak traffic periods, or as directed in writing by the affected public agency in encroachment or other permits. This should also include feasible ways to reduce construction-related trips on I-10, SR-177, and Corn Springs Road during peak traffic periods.
- Plans to encourage or provide ridesharing/carpooling opportunities for construction and operational workers
- Plans to provide written notification to property owners and tenants at properties affected by access restrictions to inform them about the timing and duration of obstructions and to arrange for alternative access if necessary. The coordination shall occur at least one week prior to any blockages
- Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by the Project owner of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage, providing short detours, and developing alternate routes in conjunction with the public agencies
- Coordination with adjacent development projects to spread work shifts into multiple hours (instead of peak period) or the installation of additional temporary traffic signals or manual traffic control officers during peak periods to mitigate the temporary impacts.

Significance Determination after Mitigation

Less than significant.

Impact TRANS-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction and Decommissioning

The Project would result in temporary traffic associated with worker trips and material and equipment deliveries. Construction workers and staff are anticipated to commute to the jobsite

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from within Riverside and San Bernardino counties. The Project is roughly 60 miles from cities in Coachella Valley to the west and Blythe, California, and Quartzsite, Arizona, to the east. Some construction workers would come from outside a reasonable commute area and seek temporary housing in proximity to the work area.

Construction of the Project would generate approximately 554 daily worker trips and 8 daily truck trips. Per CEQA Guidelines section 15064.3(b.3), a qualitative VMT analysis of construction trips is appropriate given that the construction-related trips are not ongoing once construction is completed. The Project is expected to produce approximately 120 average daily VMT per worker during construction. The Project is located in a remote area of Riverside County, and the daily VMT generated during construction would be consistent with the average VMT for the Desert Center community as few services are available to residents and most visitors or temporary workers must travel from the Coachella Valley, Blythe, or further to reach Desert Center. All construction-related truck trips would be temporary and only in volumes necessary to deliver equipment and materials to the site. No unnecessary travel would be allowed. Upon completion of construction, all construction-related truck trips and worker commute trips would cease.

VMT primarily is a metric for assessing project-related GHG emissions impacts. The analysis related to GHG emissions associated with project-related construction traffic is analyzed elsewhere in this EIR; see Section 3.9, Greenhouse Gas Emissions. Overall, as the Project would provide renewable energy to the grid and would offset GHG emissions that would have otherwise resulted from producing energy from a non-renewable source, the Project will have a net beneficial impact in offsetting GHG emissions. Accordingly, because the increase in VMT related to construction is short-term, temporary and localized, project construction is not anticipated to result in long-term, permanent changes to the surrounding vehicle transportation system. Impacts from Project construction would be less than significant. The same would be true for Project decommissioning, which would require a similar number of trips as construction, if not fewer.

Operation and Maintenance

Operation and maintenance of the Project would require up to 10 workers, which would generate less than 20 vehicle trips daily. Similar to Project construction, workers would commute from nearby communities, which may include the communities of Indio to the east and Blythe to the west. Daily VMT and commute times for operational workers would be consistent with average VMT for nearby desert communities in proximity to the Project site. As discussed in Section 3.18.3, the Project would generate less than 110 daily trips during operations and maintenance and would not result in high VMTs that could adversely affect traffic or transportation. The impact would be less than significant. No mitigation is required.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation and would result in minimal construction traffic to complete the activities associated with the substation upgrades. Therefore, the impact of the SCE activities during construction and

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operation related to conflicts with or inconsistencies with CEQA Guidelines section 15064.3, subdivision (b) would be less than significant.

Significance Determination before Mitigation

Less than significant.

Mitigation Measures

None required.

Impact TRANS-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction and Decommissioning

Construction traffic would access the Project site via Corn Springs Road off the I-10 onto BLM DC950 and BLM DC511. Improvements would potentially be made to the BLM OHV routes to provide access to the Project site. All improvements would comply with BLM and County requirements to ensure safe site ingress and egress. No sharp curves or dangerous intersections would result from road improvements. A new perimeter road would be installed inside the Project site, and new interior roads would be constructed to provide vehicle access to solar equipment. All interior roads would be private and be constructed to meet Riverside County Fire Department requirements. Vehicles and equipment operating on public roadways would adhere to California Vehicle Code regulations weight and load restrictions. The same would be true for Project decommissioning, which would require a similar number of trips as construction, if not fewer. Although construction of the Project would require the use of oversized vehicles and heavy equipment that could damage road surfaces and create a hazard for other motorists on nearby roadways by restricting motorist views and changing traffic conditions for road users, BLM would routinely improve the roadway. In addition, Mitigation Measure Traffic-1 requires the implementation of a CTMP that may include measures such as warning signage for motorist awareness of construction activities and using flaggers to alert motorists to slow-moving vehicles. Therefore, with implementation of Mitigation Measure Traffic-1, the impact would be less than significant.

Operation and Maintenance

Traffic generated during operation and maintenance activities would be approximately 20 daily vehicle trips and would not result in an increase in transportation hazards. The minimal number of operational vehicle trips would have a negligible effect on public roadway safety. The impact would be less than significant. No mitigation is required.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation and would result in minimal construction traffic to complete the activities associated with the substation upgrades. Therefore, the impact of the SCE activities during construction and operation related to substantially increasing hazards due to a geometric design feature or incompatible uses would be less than significant.

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Significance Determination before Mitigation

Significant.

Mitigation Measures

Mitigation Measure Traffic-1.

Significance Determination after Mitigation

Less than significant.

Impact TRANS-4: Would the project result in inadequate emergency access or access to nearby uses?

Construction and Decommissioning

Access to the Project site would be via the I-10 access at Corn Springs Road and using the BLM route 950 to BLM route 511 to reach the site. Construction and decommissioning activities may result in temporary lane or road closures that would restrict the movement of emergency vehicles. However, lane or road closures would be temporary and minimal and there would be an emergency access route from SR-177 available. Access gates would be located at the Project site's entrance to control site ingress and egress. All access roads associated with the Project would be designed in accordance with Riverside County standards that would allow for adequate emergency access. Decommissioning activities would be similar to construction activities, and emergency access would be maintained. MM Traffic-1 requires the implementation of a CTMP that may include measures to reduce potential impacts to emergency access, such as informing emergency service providers of construction traffic. Therefore, construction of the Project would not interfere with emergency response or result in a significant impact related to emergency access during construction. The impact would be less than significant.

Operation and Maintenance

Temporary lane or road closures would not be required during operation and maintenance activities. The Project would not modify the roadway network in a manner that would interfere with the emergency vehicle access on the surrounding roadway network. Access roads within the Project site would be able to accommodate emergency vehicles and would meet the County Fire Department policy #TP 15-002. Therefore, the Project would not interfere with emergency vehicles or result in a significant impact related to emergency access during operation of the Project. The impact would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation and would result in minimal construction traffic to complete the activities associated with the substation upgrades and would not result in interference with emergency response or result in a significant impact related to emergency access during construction. Therefore, the impact of the SCE activities during construction and operation would be less than significant.

Significance Determination before Mitigation

Significant.

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Mitigation Measures

Mitigation Measure Traffic-1

Significance Determination after Mitigation

Less than significant.

3.18.5 Cumulative Impacts

The geographic scope of the cumulative analysis for traffic and transportation is the same as the intersections and roadways impacted by the Project, including I-10, Corn Spring Road, and SR-177. Cumulative projects that are considered in the traffic and transportation analysis include those listed in Section 3.1 could potentially affect the roadway network surrounding the Project site (e.g., the Redonda and Bajada Solar Projects).

Impact a) analyzes the cumulative impacts of the Project by evaluating the Ambient Plus Project Conditions, which includes the Redonda and Bajada Solar Projects. As discussed above, the cumulative impact on traffic circulation would be less than significant with implementation of Mitigation Measure Traffic-1. Other projects similarly would be expected to require construction traffic control plans during construction or would have negligible impacts resulting from O&M traffic, such that cumulative impacts would be less than significant.

Construction of the Project would not impact any bicycle or pedestrian facilities as the nearest facilities are within the Lake Tamarisk community. Project construction trips would not impede transit services and would cease following the completion of construction activities. Furthermore, construction of the solar facility would not require any temporary lane or road closures that would restrict transit along I-10. Therefore, the Project would not combine with cumulative projects that would conflict with adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities under cumulative conditions. Additionally, the Project would result in a negligible number of vehicle trips during operation and maintenance. Therefore, the cumulative impact of Project operations related to conflicts with adopted policies, plans, or programs addressing the circulation system would be less than significant.

Construction of the cumulative projects would generate an increase in VMT. The Project would generate daily VMT that would be consistent with the average VMT of rural desert communities, and construction vehicle trips would cease following construction of the solar facility. Transportation impacts involving a project's VMT are long term and cumulative in nature. Project construction activities, and the construction activities of other cumulative projects, would be temporary and would not result in long-term or permanent changes in VMT. Project operations are estimated to generate minimal vehicle trips. Cumulative impacts from the project during operation, when considered with nearby, reasonably foreseeable planned projects, would be minimal. Since the project would result in a negligible increase of vehicle traffic, the project in conjunction with the existing, approved, proposed, and reasonably foreseeable projects in the vicinity of the site, would result in a less than significant cumulative impacts.

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Cumulative impacts due to increased transportation hazards or emergency access could be significant if simultaneous construction activities resulted in significant volumes of heavy truck trips that affected safe use of a roadway or damaged transportation facility surfaces. The Project's potential impacts regarding hazards would be less than significant with implementation of Mitigation Measure Traffic-1, and impacts regarding emergency access would be less than significant with implementation of Mitigation Measure Traffic-1. Mitigation Measure Traffic-1 requires the preparation of a Construction Traffic Control Plan that would reduce circulation impacts and traffic hazards. Other projects would be expected to require similar plans and measures, such that cumulative impacts would be less than significant. The Project would have a less than significant cumulative contribution to cumulative hazard and emergency access impacts with implementation of Mitigation Measures Traffic-1.

Southern California Edison Activities

Construction and operation of the SCE Activities would combine with the overall cumulative projects discussed above. However, the SCE Activities contribution to the significant cumulative impact is less than considerable because all of improvements to the infrastructure would be minimal and located within the existing Red Bluff Substation, Devers Substation, Arica/Victory Pass Substation, and within the Project Substation. There would be minimal construction traffic for the improvements that are proposed.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measure Traffic-1 would be implemented to address potential transportation impacts for the Project. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to impacts to transportation would not be cumulatively considerable.

3.18.6 References

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3.19 Tribal Cultural Resources

This section presents the environmental setting and analysis of impacts to tribal cultural resources resulting from the Project. This section describes tribal cultural resources (TCR) information for the Project, applicable regulations, environmental impacts, the Assembly Bill 52 (AB 52) process, and mitigation measures to reduce or avoid significant effects.

3.19.1 Environmental Setting

Literature Review

The information included in this analysis is from the Phase I Cultural Resources Assessment: Savira Solar Project, Riverside County, California (Chronicle Heritage 2025).

Prehistoric Context

The Project site is near the boundary between the Colorado and Mojave deserts, which are environmentally distinct. This, together with its position along a known prehistoric and historical travel corridor, suggests that the Project area was used in the past by groups whose home ranges included portions of the Mojave Desert, the interior Colorado Desert, and the Colorado River as well as by travelers from more distant locations such as the Peninsular Ranges or the Southwest. It is possible, therefore, that the area's archeological record may also reflect affinities with any of these regions. In view of these various influences and connections, the prehistoric context presented here draws on current knowledge from both the Mojave and Colorado Desert regions. Please refer to Section 3.6 for a detailed description of the prehistory of the Project site.

Ethnographic Context

The area along the Colorado River has been home to a number of Native American groups for thousands of years. Six main groups, belonging to two different language families, were present in or near the Project Area at the time of European contact: the Chemehuevi, Cahuilla, and Serrano of the Northern Uto-Aztecan (NUA) language family and the Mojave, Halchidhoma, and Quechan of the Yuman language family. The three Yuman-speaking groups—the Mojave, Halchidhoma, and Quechan—are sometimes collectively referred to as the River Yumans as they share a number of cultural elements. The following section discusses each of the six groups, presenting information on settlement and subsistence practices, sociopolitical organization, material culture, trade, conflict, and worldview and ritual practice. While this section describes the use of the Project area in the past, it is important to note that Native American groups are still present and still use the Chuckwalla Valley for traditional and modern practices.

Native American groups with historical tribal territories falling within the vicinity of the Project area include the Quechan, Halchidhoma, Mohave, Chemehuevi, Desert Cahuilla, and Serrano. Please refer to Section 3.6 for a description of the tribal territories associated with the Chuckwalla Valley and surrounding areas.

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Identified Tribal Cultural Resources

In compliance with Assembly Bill 52 (AB52), notices regarding this project were mailed to all requesting tribes on December 30, 2024. Consultations were requested by the Soboba Band of Luiseno Indians (Soboba), Agua Caliente Band of Cahuilla Indians (Agua Caliente) and the Quechan Historic Preservation Officer.

No response was received from the Pechanga Band of Indians, Rincon Band of Luiseno Indians, Morongo Band of Indians, Cabazon Band of Mission Indians, Augustine Band of Cahuilla Indians, Ramona Band of Cahuilla Indians, Cahuilla Band of Indians, Pala Band of Mission Indians, Colorado River Tribes, Santa Rosa Band of Cahuilla Indians, Torres Martinez Desert Cahuilla Indians, Twenty-Nine Palms Band of Mission Indians, or the San Manuel Band.

The Soboba Band responded in an emailed letter dated January 30, 2025, requesting to consult on this project. Project documents were provided to Soboba on February 27, 2025, and June 27, 2025. On July 15, 2025, and July 24, 2025, meetings were held in which this Project was discussed. Soboba provided substantial information regarding an identified TCR, including specific information regarding the area and has concerns for direct impacts to previously unidentified resources as well as indirect and cumulative impacts to TCRs identified during the consultation process. Consultation was concluded on August 19, 2025.

The Agua Caliente Band of Cahuilla Indians responded in an emailed letter dated December 30, 2024, requesting to consult on this project. Project documents were provided to Agua Caliente on February 27, 2025, and June 27, 2025. On July 24, 2025, a meeting was held in which this Project was discussed. Agua Caliente has concerns for previously unidentified resources to be uncovered during the grading process. Consultation was concluded by the tribe on September 24, 2025.

Quechan responded in an email dated December 30, 2024, requesting to consult on this project. Project documents were provided to Quechan on February 27, 2025. On July 29, 2025, the Quechan Historic Preservation Office voiced concerns regarding the potential impacts to TCRs and the surrounding landscape. Consultation was concluded on August 07, 2025.

The tribes expressed concerns that the project has the potential for as yet unidentified subsurface tribal cultural resources. The tribes request that a Native American monitor be present during ground disturbing activities so any unanticipated finds will be handled in a timely and culturally appropriate manner (Mitigation Measure Tribal Cultural Resources-1).

The Project will be required to adhere to State Health and Safety Code Section 7050.5 in the event that human remains are encountered and by ensuring that no further disturbance occur in the immediate vicinity, until the County Coroner has made the necessary findings as to origin of the remains. Furthermore, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made (Mitigation Measure Cultural-9).

Mitigation Measure Cultural-5 sets out the procedures to be followed should any unanticipated cultural resources be identified during ground disturbing activities.

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Cultural Resources Inventory

As a result of the cultural resources survey effort, 84 cultural resources were identified within the Project area. These include four previously identified cultural resources (two historic isolates and two built environment resources) and 80 newly identified cultural resources (16 historic archaeological sites and 64 historic isolates). None of these resources identified are eligible for listing in the CRHR or in a local register of historic resources under any criteria (see Section 3.6.1) nor are considered, due to lack of support by substantial evidence provided during consultation, to be significant and categorized as TCRs, exhibiting significant cultural value to a California Native American tribe.

Historic Districts

The Prehistoric Trails Network Cultural Landscape/Historic District

(PTNCL) is a historic district that encompasses the entirety of the Project area. The District consists of prehistoric resources and landforms associated with the Halchidoma (or Coco-Maricopa) Trail (P-33-000053). The boundary of the PTNCL extends along the length of the historically known route of the trail, from where it begins near Blythe at the Colorado River, continuing to the west through the Chuckwalla Valley towards modern Los Angeles. The PTNCL has been designated as a noncontiguous cultural landscape that incorporates prehistoric archaeological sites associated with P-33-000053/CA-RIV-53T. It can be broadly defined as having a width of approximately 10 miles that is centered along the I-10 corridor and within the viewshed of that vantage point. The Project sits entirely within the defined boundaries of the PTNCL.

PTNCL site types are divided into three categories: destinations, trails, and trail-associated sites or features. Destinations are defined primarily as water sources, but also include residential, religious, and resource-collection sites. Trails are linear alignments that were either created by the repeated passage of feet or by formal construction. Trail-associated sites or features may include concentrations of ceramics/pot drops, cleared circles, rock rings, rock clusters, rock cairns, rock alignments, petroglyphs, and geoglyphs. In places where the trail itself is not preserved, its route may be approximately traced by distinctive patterns of the same trail-associated sites and features listed above. The period of significance is the entire prehistoric and early historic periods. The thematic associations include travel, trade, ritual, and resource exploitation, particularly the collection of stone tool and ground stone raw materials.

The PTNCL was previously determined eligible for listing on the CRHR under Criteria 1 and 4 for the Palen Solar Project. No trail segments have been documented or known to exist within the Project area of direct impacts. No trail associated sites or features have been documented within the Project area of direct impacts. No destination sites, such as water sources, residential, religious, and resource-collection sites, have been documented or known to exist within the Project area of direct impacts. No cultural sites identified in the Project's Cultural Resources Study Area were associated with the PTNCL because they were all historic.

The Desert Training Center Cultural Landscape/Historic District

(DTCCCL) is a contiguous historic district that encompasses the entirety of the Project area. No resources located within the Project's direct impact area are eligible as contributors to this district.

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The district resource consists of a collection of historical archaeological sites associated with the DTC/C-AMA in the Chuckwalla Valley and on the Palo Verde Mesa. The significance period is preliminarily defined as 1942–1944. The DTC/C-AMA was the largest and the only such military training facility in American military history. The BLM has prepared a NRHP Multiple Property Documentation Form (NPS 10-900-b) for DTC/C-AMA historic properties. In this document, the themes, trends, and patterns of history shared by the DTC/C-AMA properties are organized into historic contexts and the property types that represent those historic contexts are defined. The relevant themes include U.S. Preparation for WWII, U.S. Military Training, Gen. George S. Patton, Jr., and Gen. Walton Walker. Depots, airfields, ranges, bivouacs, maneuver areas, camps, and hospitals are among some of the property types included in the district. Most property types associated with the DTC/C-AMA, exist today as archaeological resources, such as refuse deposits, tank tracks, foxholes, and bivouacs.

The DTCCCL was previously determined eligible for listing on the CRHR under Criterion 4 for the Palen Solar Project.

3.19.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

State

Assembly Bill 52

On July 1, 2015, Assembly Bill (AB) 52 became effective, requiring lead agencies to consider the effects of projects on Tribal Cultural Resources (TCR)s and conduct notification and consultation with federally and non-federally recognized Native American tribes early in the environmental review process (PRC § 21080.3.1).

AB 52 specifies that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.”

California Environmental Quality Act

The Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess a project’s impact on cultural resources (Pub. Res. Code §§ 21083.2 and 21084).

Changes in CEQA, effective July 2015, require that the County address a new category of cultural resources – tribal cultural resources – not previously included within the law’s purview. Tribal Cultural Resources are those resources with inherent tribal values that are difficult to identify through the same means as archaeological resources. These resources can be identified and understood through direct consultation with the tribes who attach tribal value to the resource. Tribal cultural resources may include Native American archaeological sites, but they may also include other types of resources such as cultural landscapes or sacred places. Also relevant is the category termed “traditional cultural property” (TCP) which is typically associated with cultural

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resource management performed under federal auspices. According to Guidelines for Evaluating and Documenting Traditional Cultural Properties (Parker and King 1998), “traditional” in this context refers to those be

The appropriate treatment of tribal cultural resources is determined through consultation with tribes.

Human Remains.

California Public Resources Code, Sections 5097.98(b) and (e), require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until the landowner confers with the Native American Heritage Commission-identified Most Likely Descendants to consider treatment options. In the absence of Most Likely Descendants or of a treatment acceptable to all parties, the landowner is required to re-inter the remains elsewhere on the property in a location not subject to further disturbance. Section 5097.99 establishes as a felony the acquisition, possession, sale, or dissection with malice or wantonness Native American remains or funerary artifacts. Finally, Section 5097.991 establishes as state policy the repatriation of Native American remains and funerary artifacts.

California Health and Safety Code section 7050 makes it a misdemeanor to mutilate, disinter, wantonly disturb, or willfully remove human remains found outside a cemetery and further requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

Local

Riverside County General Plan

The Multipurpose Open Space Element of the Riverside County General Plan guides the preservation policies that ensure that cultural resources are appropriately considered. The Multipurpose Open Space Element contains the following goals and policies relevant to the analysis of cultural resources that apply to the Project (Riverside County 2015):

OS 19.1

Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside

OS 19.2

The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that at a minimum would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques

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and methods; curation and the descendant community consultation requirements of local, state and federal law.

OS 19.3

Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

OS 19.4

To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.

OS 19.5

Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

3.19.3 Methodology for Analysis

The study area for direct impacts to cultural resources is defined as all areas that would be subject to ground-disturbing activity associated with the development of the Project, which includes the 535 acres of private land in the Project area under County jurisdiction.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access roads, and medium-voltage line.

Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For impacts to tribal cultural resources, the Checklists ask if the Project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or

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- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC section 5024.1. In applying the criteria set forth in subdivision (c) of PRC section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (Impact TCR-1)

3.19.4 Impacts and Mitigation Measures

Impact TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- (i) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**
- (ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

Construction

There were no specific physical archaeological resources qualifying as TCRs identified within the Project's Cultural Resources study area, no resources were identified within the Project site during tribal consultation under AB 52, and none of the resources identified are eligible for the CRHR or considered significant pursuant to criteria set forth in Public Resources Code section 5024.1(c). However, the Project site has the potential to contain unidentified subsurface TCRs. Should such resources be uncovered during Project implementation, they could be subject to significant impacts in the absence of mitigation. To ensure that impacts remain less than significant in the event of an unanticipated discovery of a tribal cultural resource eligible for listing in the CRHR or determined to be significant pursuant to the criteria set forth in PRC section 5024.1(c), Mitigation Measures Tribal Cultural Resources-1, Tribal Cultural Resources-2 and Mitigation Measures Cultural-1 through Cultural-9 would be implemented.

Operation and Maintenance

The Project operation and maintenance would not require excavation or other ground disturbance outside of areas already impacted by construction. Operation and maintenance activities would have no potential to impact TCRs and no impact would occur.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would not cause a substantial adverse change in the significance of a tribal cultural resource because it would be located in areas that have been disturbed and any new infrastructure or

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activities required would be the same as the existing infrastructure on the substation. The impacts would not result in indirect impacts to landscapes because the work would not change the existing views of the substations. The impact would be less than significant.

Significance Determination before Mitigation

Potentially significant.

Mitigation Measures

Mitigation Measures Cultural-1 through Cultural-9

Mitigation Measure Tribal Cultural-1: Native American Monitor

Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s).

In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. Activities will be documented in Tribal Monitoring Notes which will be required to be submitted to the County Archaeologist prior to grading final inspection.

The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition.

This agreement shall not modify any condition of approval or mitigation measure.

Mitigation Measure Tribal Cultural-2: Tribal Monitor Notes

Tribal Monitoring Notes Prior to Grading Final, a complete set of Tribal Monitoring Notes shall be submitted to the County Archaeologist. Upon receipt and approval of the notes, the condition will be cleared.

Significance Determination after Mitigation

Less than significant.

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3.19.5 Cumulative Impacts

As discussed above, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource. There are no known CRHR-eligible historical resources in the Project's direct impact area. Therefore, the Project would not make a considerable contribution to cumulative impacts on any known CRHR-eligible historical, archaeological resource, tribal cultural resource or human remains.

As discussed under Impact Tribal Cultural Resources-1, the Project would not cause adverse change in the significance of a tribal cultural resource determined by a lead agency or eligible for or listed on the CRHR or local register of historic resources. The Project would implement Mitigation Measure Tribal Cultural Resources-1 and Mitigation Measure Tribal Cultural Resources-2, which would avoid and minimize impacts to unknown tribal resources, reducing project-level impacts to less than significant. Therefore, the Project will not contribute to the cumulative impacts to any TCR.

Southern California Edison Activities

The SCE Activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The work would contribute to the significant indirect visual impact to the PTNCL, which would result in a cumulatively significant impact. However, because it would be located in areas that have been disturbed and any new infrastructure or activities required would appear the same as the existing infrastructure on the substation, the Project's contribution to the cumulative impact would be less than cumulatively considerable.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measures Tribal Cultural Resources-1, Tribal Cultural Resources-2, and Mitigation Measures Cultural-1 through Cultural-9 would be implemented to address potential tribal cultural resources impacts for the Project. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to indirect visual impacts to the PTNCL would be cumulatively considerable. The Southern California Edison Activities contribution to indirect visual impacts to the PTNCL would not be cumulatively considerable.

3.19.6 References

- Chronicle Heritage. 2025. Phase I Cultural Resources Assessment: Savira Solar Project, Riverside County, California.
- Riverside County. 2015. "Multipurpose Open Space Element." In County of Riverside General Plan. <https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf>.

3.20 Wildfire

This section presents the environmental setting and analysis of impacts to wildfire resulting from the Project. This section provides existing wildfire conditions for the Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.20.1 Environmental Setting

The Project is located in Riverside County in the Chuckwalla Valley, southeast of Joshua Tree National Park in Southern California. There are no heavily urbanized areas located within 30 miles of the Project. However, the Project site is located approximately 8.5 miles east of the unincorporated community of Desert Center and 7 miles southeast of the Lake Tamarisk community. The Project site is located directly north of I-10 and surrounded by land managed by the BLM.

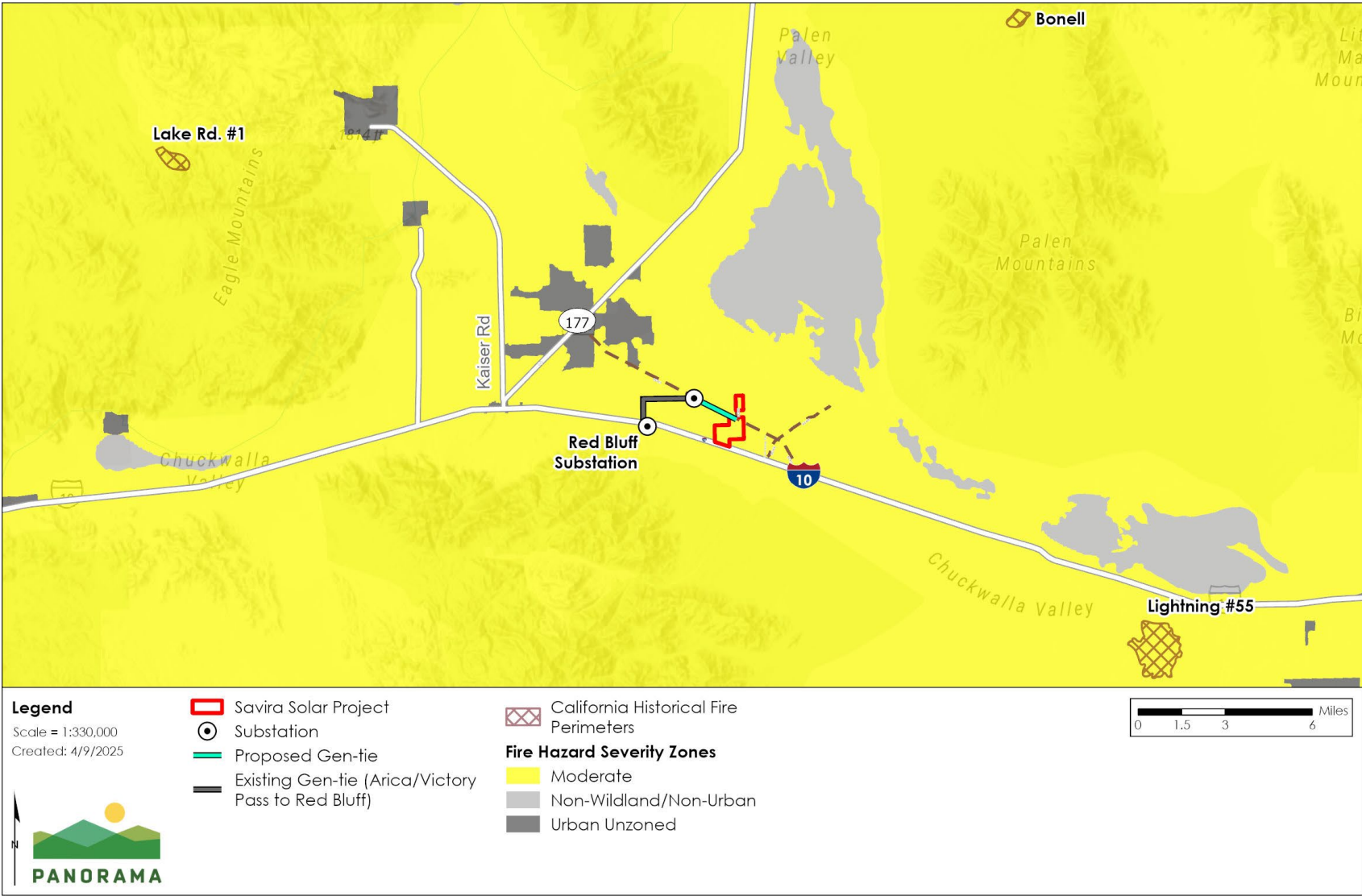
Fire Hazard Mapping and Fire History

The County of Riverside County General Plan Safety Element identifies wildfire as the highest-priority hazard in the county with the highest potential for catastrophic loss (Riverside County 2024). The general plan notes the majority of the county is undeveloped, with rugged topography and flammable vegetation (Riverside County 2024). Fire potential in unincorporated Riverside County is highest between the months of August and October due to dry vegetation and hot, dry Santa Ana winds. The general plan anticipates that wildfire risk will increase in the future in unincorporated Riverside County from warmer temperatures brought on by climate change (Riverside County 2024).

CAL FIRE is responsible for mapping fire hazard zones within the state in accordance with PRC section 4202. CAL FIRE classifies areas as *local responsibility areas* (LRAs), *state responsibility areas* (SRAs), and *federal responsibility areas* (FRAs), which designations indicate whether the financial responsibility for fire prevention in that area fall the local, state, or federal government. The designation of each *fire hazard severity zone* (FHSZ) is based on fuel loading, slope, fire weather, and other relevant factors (CAL FIRE 2024). Areas are identified as moderate, high, and very high FHSZs. Most high and very high FHSZs are concentrated in western Riverside County. The Project is within the LRA in a moderate FHSZ (CAL FIRE 2007), as shown in Figure 3.20-1 .

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Figure 3.20-1 Fire Hazard Severity Zones and Fire History



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CAL FIRE's Fire and Resource Assessment Program (FRAP) maintains historical fire perimeter datasets for public and private lands across California. While the FRAP historical fire perimeter dataset is the most comprehensive fire dataset in California, the record is still incomplete due to inadequate documentation, lost or damaged historical records, or that the fires were too small to be included in the database (CAL FIRE n.d.). As shown in Figure 3.20-1, two historic fires have been identified by FRAP within 20 miles of the Project site: the Bonell Fire and the Lightning #55 Fire. The Bonell Fire and the Lightning #55 Fire burned in 1976 and 1973, respectively. The Bonell Fire is located approximately 15.7 miles northeast of the Project site and burned 186 acres. The Lightning #55 Fire is located approximately 15.4 miles southeast of the Project site and burned 1,452 acres (CAL FIRE n.d.).

Slope/Terrain

The area surrounding the Project site is relatively flat and flanked by mountain ranges to the north and south.

Vegetation/Land Cover and Surrounding Land Uses

Vegetation communities within the Project site are described in Section 3.5 Biological Resources and generally consist of Sonoran creosote bush scrub, desert dry wash woodland, non-native grassland, orchards and vineyards, urban, and lacustrine communities (Ironwood Consulting 2024). Land uses in the vicinity of the Project site include agricultural, residences, renewable energy development, recreation, and energy transmission. Nearby operating solar projects include the Arica Solar Project, Victory Solar Project, Athos Solar Project, and the Palen Solar Project.

Climate/Weather

As discussed in Section 3.4 Air Quality, the Project site is within the MDAB, which receives between three and seven inches of precipitation per year (RCH Group 2024). However, the Chuckwalla Valley portion of the MDAB, where the Project is located, receives an average of 1.9 inches of rainfall per year (RCH Group 2024). The Project site is within a dry-hot desert climate, with portions classified as dry-very hot desert. The region is characterized by extreme fluctuations of daily temperatures, strong seasonal winds, and clear skies. January is the coldest month, with a mean low temperature of 37 degrees Fahrenheit. July is the hottest month, with a mean high temperature of 108 degrees Fahrenheit (RCH Group 2024).

Emergency Response

The Project site is located within an LRA; therefore, fire protection services would be provided by the Riverside County Fire Department (RCFD). The RCFD operates 101 fire stations and 15 battalions throughout unincorporated Riverside County (Riverside County 2024). The nearest fire station is RCFD Station 49, located at 43880 Lake Tamarisk, approximately 8 miles west of the Project site, as shown in Section 3.16 Public Services and Utilities Figure 3.16-1.

3.20.2 Regulatory Framework

Federal, state, and local regulations were reviewed for applicability to the Project and alternatives.

Federal

National Fire Plan

The Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000 (National Fire Plan) was developed by the Secretaries of the Departments of Agriculture and the Interior to develop a response to severe wildland fires, reduce fire impacts on rural communities, and assure sufficient firefighting capacity in the future. The National Fire Plan is organized into major topic areas: firefighting preparedness and capacity, rehabilitation, and restoration, to restore landscapes and protect communities from post-fire damage, hazardous fuels reduction, forest health management, rural and community assistance, accountability, and research and development (DOI and USDA Forest Service 2000).

National Electric Safety Code (NESC) and American National Standards Institute (ANSI) Guidelines

A variety of line and tower clearance standards are used throughout the electric transmission industry. Nationally, most transmission line owners follow the NESC rules or ANSI guidelines, or both, when managing vegetation around transmission system equipment. The NESC rules address with electrical infrastructure safety, including transmission wire clearance standards, whereas the applicable ANSI code addresses the practice of pruning and removal of vegetation.

(NFPA 2023)(ICC 2024)North American Electric Reliability Corporation (NERC) Reliability Standards

In compliance with Section 215 of the Federal Power Act, NERC developed mandatory and enforceable reliability standards such as emergency preparedness and operations; facilities design, connections, and maintenance; personnel performance, training, and qualifications; and protection and control. These standards would ensure reliable energy production as well as safe operation and maintenance practices (NERC n.d.).

State

California Fire Code

The California Fire Code is contained within California Code of Regulations Title 24, chapter 9 and is also referred to as the California Building Standards Code. The purpose of the California Fire Code is to establish the minimum requirements consistent with nationally recognized good practices, to safeguard the public health, safety, and general welfare from the hazards of fire, explosions, or dangerous conditions in new and existing buildings structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. This code establishes regulations affecting or relating to buildings, structures, processes, premises, and a reasonable degree of life and property safeguards regarding fire hazards, fire suppression, or alarm systems, and conditions affecting the safety of emergency responders.

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Strategic Fire Plan for California

The 2018 Strategic Fire Plan for California (California Fire Plan) is the State's roadmap for reducing the risk of wildfire and is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE. The California Fire Plan focuses on fire prevention and suppression activities to protect lives, property, and ecosystem services, and natural resource management. The California Fire Plan's vision is for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, State, federal, tribal, and private partnerships (State Board of Forestry and Fire Protection and CAL FIRE 2018).

Senate Bill 38,

In California, Senate Bill 38 (SB 38) requires battery energy storage facilities to have emergency response and action plans. This bill, signed into law in October 2023, mandates that facilities coordinate with local authorities, develop a plan covering the premises, and submit it to the county and city where the facility is located. The plan must be consistent with existing labor code provisions and regulations.

CPUC General Order No. 95

CPUC General Order No. 95 formulates for the State of California requirements for overhead line design, construction, and maintenance, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead lines and to the public in general.

California Public Resource Code Section 4294 and 4293

These sections specify requirements related to fire protection and prevention in transmission line corridors. Public Resources Code section 4292 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas and shall maintain around and adjacent to any pole or tower that supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole a firebreak that consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower. Public Resources Code section 4293 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land or within forest-covered land or grass-covered land and that has primary responsibility for the fire protection of such area shall maintain a clearance of the respective distances.

CPUC General Orders (GO) 128 and 165

GO 128 establishes rules governing the construction of underground electric and communication lines to promote and safeguard public health and safety. GO 165 establishes requirements for electric distribution and transmission facilities (excluding those facilities contained in a substation) regarding inspections in order to ensure safe and high-quality electrical service.

Power Line Fire Prevention Field Guide 2008 Edition

CAL FIRE, the state's three investor-owned utilities (Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric), and other California electric utilities have mutually developed a comprehensive field guide for their personnel. Its purpose is "to provide information and guidance to the personnel of the fire service agencies and electrical operators for minimum uniform application within the areas of their respective jurisdiction and franchise responsibilities." In addition to safety of the public, the guide details fire hazard reduction maintenance procedures for the safety of conductors and certain hardware.

Local

Riverside County General Plan

The County of Riverside County General Plan Safety Element provides goals, policies, and actions to reduce safety hazard in unincorporated Riverside County. The goals and policies listed in the Safety Element relevant to the analysis of wildfire for the Project are as follows:

Policy S4.1:

All development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire Department and Building and Safety Department for consistency with the following requirements before the issuance of any building permits: (AI 25, 81.1, 81.2, 104.1)

- a. All proposed development and construction shall meet minimum state, county, and local standards and other legal requirements for fire safety, as defined in the Riverside County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency, based on building type, design, occupancy, and use.
- b. In addition to the standards and guidelines of the California Building Code, California Fire Code, the Riverside County Code of Ordinances, Title 14 of the California Code of Regulations, and other appropriate fire safety provisions, developments shall incorporate additional standards for high-risk, high-occupancy, and dependent facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- c. Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County ordinances, where required. There shall be multiple points of ingress and egress that allow for emergency response vehicle access. Points of access shall also include visible street addresses and signs and sufficient water supplies, infrastructure for structural fire suppression, and other applicable local and state requirements.

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- d. Proposed development and construction in Fire Hazard Severity Zones shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the Riverside County Fire Chief.
- e. Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, constructed, and maintained to provide adequate defensibility from wildfires.
- f. Prior to the approval of all parcel maps and tentative maps, the County shall require, as a condition of approval and as feasible and appropriate, the developer meet or exceed the State Responsibility Area Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access (see Gov. Code, Section 66474.02.)

Policy S4.4:

Discourage development and activities in areas with limited water and access roads, unless adequate measures are implemented. (AI 60)

Policy S4.6:

Request that conceptual landscaping plans for development in Fire Hazard Severity Zones be reviewed by TLMA and Fire Department prior to the issuance of development permits. The conceptual landscaping plan of the proposed development should, at a minimum, include: (AI 25)

- a. Plant palette suitable for high fire hazard areas to reduce the risk of fire hazards.
- b. Retention of existing natural vegetation to the maximum extent feasible.
- c. Remove of on-site combustible plants.

Policy S4.7:

Site design for development in Fire Hazard Severity Zones should be required to account for topographical conditions and reduce the increased risk for sites located near ridgelines, plateau escarpments, saddles, hillsides, peaks, or other areas where the terrain or topography affect its susceptibility to wildfires by: (AI 60, 81.2, 91)

- a. Providing fuel modification zones with removal of combustible vegetation while minimizing visual impacts and limiting soil erosion.
- b. Replacing combustible vegetation with fire resistant vegetation to stabilize slopes.
- c. Submitting topographic map with site-specific slope analysis.
- d. Submitting erosion and sedimentation control plans.
- e. Providing a setback from the edge of the fuel modification zones as deemed appropriate by the Fire Department.

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- f. Minimizing disturbance of 25 percent or greater natural slopes.
- g. Or enacting other efforts as appropriate to provide comparable protection.

Riverside County Fire Department Technical Policy (TP) 15 002

The RCFD TP 15 002, titled Solar Energy Generating System (SEGS) Fire Apparatus Access Roads, is a standard developed to assist with the design of fire apparatus access roads from public roadways to a SEGS (i.e., solar facility). It addresses secondary access road requirements, which shall be determined by the County Fire Marshal given the specific conditions of any given solar project (Riverside County Fire Department 2015). Each SEGS project will be reviewed on a case-by-case basis to determine secondary fire apparatus access requirements to facilitate emergency operations and to minimize the possibility of an access point being subject to congestion or obstruction during an emergency incident. This standard states that the secondary access road shall not be less than 20 feet in width and shall have an unobstructed vertical clearance of no less than 13 feet, 6 inches. The grade of the access road shall not exceed 15 percent. The access road shall be designed, constructed, and maintained to support the imposed load of fire apparatus weighing at least 75,000 pounds and constructed to Riverside County Transportation Standards. A registered engineer shall certify the design and construction of the access road based on the fire apparatus-imposed load of 75,000 pounds.

The Project would be consistent with County policies and regulations related to wildfire through the design and construction of the Project and its subsequent operation, which would comply with the applicable requirements for design review/approval by the agencies having oversight.

3.20.3 Methodology for Analysis

Wildfire hazards associated with the Project are evaluated based on landscape characteristics and the Project's ability to start or exacerbate wildfires. Potential existing hazards are based on review of the Project's location on CAL FIRE maps to determine their location within FHSZs. Although the Project would not be in a very high or high FHSZ, the potential for wildfires is still present due to the electrical components of the Project. Therefore, this analysis describes design features and compliance with existing safety procedures, standards, and regulations that would be part of the Projects.

The gen-tie, access road, and medium voltage line would be located on BLM-administered lands and subject to review under NEPA. As part of the NEPA review, the BLM would review the DRECP Conservation and Management Actions (CMA) to ensure the Project features are consistent with the measures which are designed to reduce effects of the Project. The BLM would also determine, under NEPA, if additional mitigation is required to reduce the effects of construction, operations, and decommissioning of the gen-tie, access road, and medium-voltage line.

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Significance Criteria

The criteria for assessing impacts come from the CEQA Guidelines Appendix G Checklist and County of Riverside's Environmental Assessment Checklist. For wildfire, the Checklists ask if a project would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan. (Impact Wildfire-1)
- 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. (Impact Wildfire-2)
- 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. (Impact Wildfire-3)
- 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. (Impact Wildfire-4)

The County of Riverside's Environmental Assessment Checklist includes additional significance criteria, which was also used in the analysis. The additional criteria indicate that a project could have potentially significant impacts if it would:

- Expose people or structures either directly or indirectly, to a significance risk of loss, injury, or death involving wildland fires. (Impact Wildfire-5)

3.20.4 Impacts and Mitigation Measures

Impact Wildfire-1 Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction

The Project site is located in rural Riverside County, surrounded by existing solar facilities. Construction traffic would access the Project site via Corn Springs Road off I-10 onto BLM OHV 950 and BLM OHV 511. Internal access roads would be constructed within the Project site, including a perimeter road and solar field access ways. Lane or road closures are not anticipated during construction of the Project. As discussed in Section 3.18 (Traffic and Transportation), temporary traffic delays could occur along the I-10 eastbound and westbound ramps at Corn Springs Road. In accordance with Mitigation Measure Traffic-1, a Construction Traffic Management Plan would be prepared to reduce potential traffic impacts as a result of Project construction. The Construction Traffic Management Plan would include measures to address emergency vehicle access, such as informing emergency service providers of the construction traffic schedule. While construction vehicles and equipment may utilize nearby roadways, the Project is not expected to restrict emergency vehicle movement along I-10, SR-177, or Corn Springs Road with implementation of Mitigation Measure Traffic-1. With the incorporation of this mitigation measure, impacts would be less than significant.

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Operation and Maintenance

Operation and maintenance of the Project would require up to 10 permanent employees, such as administrative and management personnel, operators, and security and maintenance personnel. Lane or road closures that would impact emergency vehicle access are not anticipated during operation of the Project. While most operations staff would be located off site, the solar facility would operate using automated facility controls and monitoring systems that would alert operational staff of potential fires. Controlled access gates would be located at the site's entrance that would restrict unauthorized persons from entering the Project site and provide ingress and egress for emergency vehicles. All internal access roads and gates would comply with Riverside County Fire Department, California Building Code, and County requirements. In addition, compliance with SB 38 requires battery energy storage facilities to have emergency response and action plans. Therefore, operation and maintenance of the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal, and construction would be short-term and would not result in impacts to emergency response plans or evacuation plans. Impacts would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Traffic-1

Significance Determination after Mitigation

Less than significant

Impact Wildfire-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Construction

The Project is located within a moderate FHSZ as designated by CAL FIRE's fire hazard zone mapping. The site is located in a remote area of Riverside County surrounded by agriculture, energy transmission, and solar facilities. There are no historical fire perimeters within the immediate vicinity of the Project site. The nearest historical fire perimeter is located approximately 15.4 miles southeast of the site. Vegetation on the Project site is fairly sparse, and the site has relatively flat topography. The nearest community to the Project site is Lake Tamarisk, located approximately 8.3 miles to the northwest. Due to the remote nature of the Project and distance to the nearest community, the potential for the Project to exacerbate wildfire risks and expose nearby residences to wildfire is low.

Project construction would include a construction crew that would use typical construction equipment (e.g., scraper/blade, backhoes, rollers) powered by gasoline or diesel fuel. Use of

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construction equipment has the potential to cause sparks. Sparks from equipment and increased presence of people (i.e., workers) could increase potential for igniting a wildland fire. Site grading, including clearing and grubbing activities, has the highest potential to generate sparks that may ignite a fire. Site preparation would involve vegetation clearing, grubbing, and grading that would remove vegetation on site that would limit the availability of flammable fuels.

Construction of the proposed solar facility, BESS, gen-tie line, and other components would involve preparation, installation, and testing of electrical components such as cables, inverters, wiring, modules, and a transformer. The cables from the medium-voltage transformers to the PVCs would be installed either underground or overhead. If installed underground, the cables would be buried to a depth in accordance with the National Electrical Code, which would minimize wildfire risk.

Per Mitigation Measure Fire-1, the Applicant would prepare and implement a Fire Protection and Prevention Plan, which would include practices, measures, and other stipulations to prevent and respond to fires during construction and operation activities. The Fire Protection and Prevention Plan would outline fire prevention practices and establish requirements for fire protection and control of combustible materials and flammable liquids, and establish communication protocols for agency responses in the event of a fire. Additionally, the plan would be developed in coordination with the RCFD. Mitigation Measure Fire-1 would require the preparation of the Fire Protection and Prevention Plan that includes measures that would ensure the safety of workers during construction of the Project, such as work restrictions during Red Flag Warning and High to Extreme Fire Danger days, equipping the site with fire extinguishers and fire-fighting equipment, and requiring all internal combustion engines to be equipped with spark arrestors. Accordingly, the Project would not exacerbate wildfire risks or expose workers and residents to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Construction of the Project would result in less-than-significant impacts with mitigation.

Operation and Maintenance

Operation and maintenance of the Project would include PV array cleaning, maintenance repairs, and vegetation management. Up to 10 permanent workers would be employed during operations. Vehicles and equipment would be used for equipment maintenance during Project operations. However, no heavy equipment beyond rubber tire water trucks would be used during plant operation. The relatively low number of workers and equipment and vehicle trips would limit potential human ignitions on site. Vegetation on site would be maintained regularly through manual and mechanical treatments and herbicide application. Access roads would be kept clear of vegetation to reduce fire hazard. Fire hazards associated with operation of the solar facility would be further reduced by the implementation of Mitigation Measure Fire-1.

The Project would include the operation of a 250 MW BESS. All batteries would be fully enclosed in the manufacturer's battery container. The BESS foundations would consist of either steel foundation piles or graveled pads. Utility-scale battery storage has an inherent risk of thermal runaway events due to the chemical composition of the batteries. A thermal runaway is an incident where one exothermal process triggers other processes, finally resulting in an

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uncontrollable increase in temperature. These events can generate combustible gases that may rapidly combust (deflagrate) if not managed properly and therefore can pose a risk to human safety if appropriate fire mitigation techniques are not implemented. The BESS facility design, construction, and operation would follow applicable fire and building codes. The enclosures would include fire detection systems specific to the type and design of the selected battery systems. In case of thermal runaway event, certain detection sensors would be able to shut off each battery enclosure, thus preventing fire propagation.

The California Fire Code, Chapter 12, has specific, detailed design requirements for stationary electrical energy storage systems such as the Project to ensure fire safe construction, operation, and decommissioning. The Project will be designed to comply with Chapter 12 of the California Fire Code and applicable National Fire Protection Association (NFPA) standards, which contain strict fire safety requirements for stationary electrical energy storage facilities. The Project will also comply with the requirements of California Public Utilities Code Section 761.3, which requires BESS facilities to have an emergency response and emergency action plan covering the premises of the facility that is prepared in coordination with local emergency management agencies, unified program agencies, and local first responders. The Applicant will work with first responders to develop these plans and to coordinate site-specific training for first responders.

The BESS would be designed and installed according to the latest NFPA 855 standards and the California Fire Code. NFPA 855 is the industry standard fire code for installation of stationary energy storage systems such as the BESS. NFPA 855 standards also limit fire suppression to methods including the use of dry agents, water mist, high pressure water and a passive fire containment method.

Mitigation Measure Fire-1 requires implementation of a Fire Management and Prevention Plan that provides first responders with information about the type of BESS technology on site, potential hazards, and procedures for disconnecting or shutting down the BESS in case of an accidental fire. Compliance with design and safety regulations and implementation of Mitigation Measure Fire-1 would reduce the likelihood of battery fires starting and spreading.

The BESS's impact to wildfire risk from exposure of people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant with mitigation.

Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal and within the existing footprint of the substation. Impacts related to exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Fire-1: Fire Safety

The Fire Management and Prevention Plan prepared by the Applicant to ensure the safety of workers and the public during construction, operation and maintenance, and decommissioning for the Project shall include, but not be limited to, the following elements:

- Procedures shall be established for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions
- Work restrictions shall be implemented during Red Flag Warnings and High to Extreme Fire Danger days
- All internal combustion engines used at the Project site shall be equipped with spark arrestors. Spark arrestors shall be in good working order.
- Once new access 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.
- Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees.
- Equipment parking areas and small stationary engine sites shall be cleared of all flammable materials.
- Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation.
- Each construction site (if construction occurs simultaneously at various locations) shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires.
- The Project owner shall coordinate with RCFD to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site.
- The plan shall include information about the type of BESS technology on site, potential hazards, and procedures for disconnecting or shutting down the BESS in case of fire or to reduce the chance of fire.
- All construction workers, plant personnel, and maintenance workers visiting the plant and/or transmission lines to perform maintenance activities shall receive training on fire prevention procedures, the proper use of firefighting equipment, and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by RCFD. Fire prevention procedures shall be included in the Project's Worker Environmental Awareness Program.

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- Vegetation near all solar panel arrays, ancillary equipment, and access roads shall be controlled through periodic cutting, spraying of weeds, and/or other appropriate management methods.
- RCFD shall be consulted during plan preparation and fire safety measures recommended by these agencies included in the plan.
- The plan shall list fire prevention procedures and specific emergency response and evacuation measures that shall be required to be followed during emergency situations.
- All on-site employees shall participate in annual fire prevention and response training exercises with the RCFD.
- The plan shall list all applicable wildland fire management plans and policies established by state and local agencies and demonstrate how the Project will comply with these requirements.
- The Project owner shall designate an emergency services coordinator from among the full-time on-site employees who shall perform routine patrols of the site during the fire season equipped with a portable fire extinguisher and communications equipment. The Project owner shall notify RCFD of the name and contact information of the current emergency services coordinator in the event of any change.
- Remote monitoring of all major electrical equipment (transformers and inverters) shall screen for unusual operating conditions. Higher than nominal temperatures, for example, can be compared with other operational factors to indicate the potential for overheating which under certain conditions could precipitate a fire. Units could then be shut down or generation curtailed remotely until corrective actions are taken.
- Fires ignited on site shall be immediately reported to RCFD.
- The engineering, procurement, and construction contract(s) for the Project shall provide reference to or clearly state the requirements of this mitigation measure.
- The Project owner must provide the Fire Management and Prevention Plan to RCFD for review and comment before construction.

Significance Determination after Mitigation

Less than significant

Impact Wildfire-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction

The Project would construct a utility-scale solar PV electrical-power-generating and storage facility and associated infrastructure to generate and deliver renewable electricity to the statewide electricity transmission grid. The Project is located in rural Riverside County away from densely population communities and with sparse vegetation. Prior to construction, site preparation

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would include vegetation clearing, grubbing, and grading. The reduced amount of already-sparse vegetation would minimize the potential to ignite any ignitions.

While the Project would not occur within a high or very high FHSZ, the solar facility would include electrical components that could pose a fire risk if damaged or tampered with, including cables, inverters, wiring, modules, and a transformer. Because these components are in a sparsely vegetated and remote location away from densely populated areas, the potential for faulty electrical equipment to substantially exacerbate fire risks for populated areas is minimal. All electrical equipment would be installed in accordance with applicable electrical and safety standards. As described in Chapter 2, the on-site substation would be separately fenced and grounded to provide increased protection around the electrical equipment. As described in Impact Wildfire-2, the BESS would be constructed in compliance with the current Fire Code requirements and NFPA standards and all batteries would be fully enclosed in the manufacturer's battery container. The BESS foundations would consist of either steel foundation piles or graveled pads. The enclosures would contain any accidental fires and prevent them from spreading and causing further damage. Most of the solar facilities' equipment would consist of solar PV panels and their mounting systems, which would be assembled from materials that are not combustible or flammable. Impacts from construction of the Project related to the installation of utilities that may exacerbate fire risk would be less than significant with mitigation.

Operation and Maintenance

Site visits would occur daily for security, maintenance, and repairs. Operation and maintenance activities would include equipment inspections. Regular inspections and maintenance would ensure that all equipment is in working condition for the Project, which would minimize the risk for potential fires that could occur from faulty equipment. Fire safety measures, including a fire detection system, would be implemented during operation. A water storage tank would be constructed if required per County or Fire Department coordination for fire safety purposes. Implementation of the fire safety measures and the Fire Management and Prevention Plan (Mitigation Measure Fire-1) would ensure safe operating conditions and fire response protocols to reduce wildfire risk.

As described in Impact Wildfire-2, the BESS would be constructed in compliance with the current Fire Code requirements and NFPA standards. The enclosures would contain potential accidental fires and prevent them from spreading and causing further damage. The BESS area would also be cleared of vegetation to further minimize the risk of fire spreading. Furthermore, to minimize the risk of batteries overheating within the enclosures, air conditioners or heat exchangers and inverters would be installed for temperature control. The enclosures would also have remote communication systems that monitor for internal conditions such as temperature and smoke and have automatic fire detection systems.

Therefore, impacts from operation and maintenance of the Project related to the installation of utilities that may exacerbate fire risk would be less than significant with mitigation.

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Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal and within the existing footprint of the substation. Impacts related to the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Fire-1

Significance Determination after Mitigation

Less than significant

Impact Wildfire-4 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?

The Project would be in a moderate FHSZ in a remote desert setting. There are no major densely populated cities or communities in the vicinity of the Project. The solar facility would be constructed and operated on a nearly-level surface. As discussed in Section 3.8: Geology and Soils, the site has low potential for slope instability and landslides. Removal of vegetation during site preparation could result in destabilization after a fire from erosion or soil loss. Water-repellent, or *hydrophobic*, soils can be created within areas that burn at a moderate to high intensity and severity. A hydrophobic soil layer that can increase stormwater runoff rates and associated erosion.

As discussed above, there have been no historic fires within the vicinity of the Project site, and the site is located in a moderate FHSZ. Grading, grubbing, and clearing would be required for construction of the solar facility. The civil design site plan would contain details for the grading and drainage design of the overall site. Because the ground surface at the Project site is nearly flat, and nonflammable solar PV panels would be installed on most of the site, the Project would not result in a significant risk of landslides, post-fire slope instability, or drainage changes. In the event of a wildfire, the Project would also not expose a substantial population to risks associated with post-fire slope instability because the Project is in a remote area. This being the case, impacts from the Project related to downslope or downstream flooding or landslides as a result of post-fire slope instability would be less than significant.

Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal and within the existing footprint of the substation. Impacts related to exposing people or structures to significant risks, including downslope or downstream

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flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be less than significant.

Significance Determination before Mitigation

Less than significant

Impact Wildfire-5 Expose people or structures either directly or indirectly, to a significance risk of loss, injury, or death involving wildland fires?

Construction

As discussed under Impact Wildfire-2, the Project is located in a remote desert setting in a moderate FHSZ. The Project site is surrounded by agricultural, energy transmission, and renewable energy uses. Lake Tamarisk, the nearest community to the Project site, is located approximately 8 miles to the northwest. The potential to expose people or structures either directly or indirectly to wildfire risks is low due to the remote nature of the Project, the sparse topography, and flat topography of the Project site.

During construction of the Project, vehicles and equipment would be operated that could produce sparks that could ignite a wildfire. Site preparation, including clearing, grubbing, and grading, would remove vegetation across the Project site, thereby reducing fuels.

The Project is located within an LRA, and the RCFD would be responsible for fire response at the Project site. The BESS facility design, construction, and operation would follow applicable fire and building codes. The enclosures would include fire detection systems specific to the type and design of the selected battery systems. In case of thermal runaway event, certain detection sensors would be able to shut-off each battery enclosure thus preventing fire propagation. In addition, a Fire Protection and Prevention Plan would be prepared and implemented to prevent wildfires during construction, operation and maintenance, and decommissioning of the Project, as described under Impact Wildfire-2. Mitigation Measure Fire-1 includes fire prevention and emergency response measures that would be incorporated in the Fire Protection and Prevention Plan. In accordance with Mitigation Measure Fire-1, all construction workers would receive training on fire prevention procedures, and equipment used at the Project site would be required to be equipped with spark arrestors. Mitigation Measure Fire-1 also requires the RCFD to be consulted during preparation of the Fire Prevention and Protection Plan and requires the plan to be reviewed by RCFD. With implementation of Mitigation Measure Fire-1, impacts would be less than significant.

Operation and Maintenance

Operation and maintenance activities would include frequent inspections and site visits for security, maintenance, and repairs. Operation and maintenance of the Project would require the limited use of vehicles and equipment. Aside from rubber tire water trucks, no heavy equipment would be used during solar facility operations. Therefore, the limited use of vehicle and equipment on site during operation would reduce potential fire risk. Inspections, repairs, and remote monitoring of the solar facility would reduce the likelihood of electrical failures or malfunctions of faulty equipment that could ignite a fire. Furthermore, solar PV panels and their

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mounting systems would be assembled from materials that are not combustible or flammable. A fire detection system would be used during Project operations. A water storage tank would be constructed if required per County or Fire Department coordination for fire safety purposes. Fire hazards during operation of the solar facility would be further reduced with implementation of MM Fire-1 which requires development of a Fire Management and Prevention Plan.

As described under Impact Wildfire-2, the Project would include the operation of a 250 MW BESS, which has risk of thermal runaway. All batteries would be fully enclosed in the manufacturer's battery container. The BESS facility would be operated in accordance with applicable fire and building codes. The enclosures would include fire detection systems specific to the type and design of the selected battery systems. The BESS would also be installed following all applicable design, safety, and fire standards, including NFPA standards. Detection sensors would be able to shut-off each battery enclosure, thus preventing fire propagation in the event of thermal runaway event. Mitigation Measure Fire-1 also includes requirements for reducing risks associated with BESS facility operation, such as coordinating with RCFD to create a training component for emergency first response to prepare for specialized emergency incidents, including fire or explosion at or with the BESS. The Fire Prevention and Protection Plan would also include information about the type of BESS technology on site, potential hazards, and procedures for disconnecting or shutting down the BESS in case of a fire (see Mitigation Measure Fire-1).

Therefore, operation of the Project would not expose people or structures to a significance risk of loss, injury, or death involving wildland fires with implementation of Mitigation Measure Fire-1. The impact would be less than significant with mitigation.

Southern California Edison Activities

The SCE activities would occur entirely within the existing Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation. The improvements would be minimal and within the existing footprint of the substation. Impacts related to exposing people or structures either directly or indirectly, to a significance risk of loss, injury, or death involving wildland fires would be less than significant.

Significance Determination before Mitigation

Potentially significant

Mitigation Measures

Mitigation Measure Fire-1

Significance Determination after Mitigation

Less than significant

3.20.5 Cumulative Analysis

The geographic scope for the cumulative impact analysis of wildfire impacts is the area of Desert Center. Given the sparsely vegetated landscape and its low potential to ignite and facilitate wildfires, the greatest potential for cumulative impacts relating to wildfire hazards would primarily be from projects in their construction phase in close vicinity to the Project site. Tables

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3.1-1 and 3.1-2 list existing and reasonably foreseeable projects in the region. The Redonda Solar Project would be constructed concurrently with the Project.

The Project and cumulative projects would be required to comply with local, State, and federal fire hazard policies and include their own fire management plan and best management practices, including compliance with SB 38 requires battery energy storage facilities to have emergency response and action plans. Most of the surrounding cumulative projects are located within moderate FHSZ, with limited potential to ignite a wildfire due to the relatively flat topography and limited vegetation.

The Project in combination with the nearby solar projects impacts would not be considered to result in a cumulatively significant impact. In addition, the Project would result in cumulatively insignificant impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan because no aspect of the Project would interfere with emergency response.

Southern California Edison Activities

The SCE activities would occur entirely within the existing SCE Red Bluff Substation, the existing Devers Substation, the existing Arica/Victory Pass Substation, and the Project Substation, and would have no impacts related to wildfires, as the substations are already disturbed and routine maintenance is occurring on a regular basis. Therefore, they would not contribute to any cumulatively significant impacts on wildfires.

Significance Determination before Mitigation

Significant

Mitigation Measures for Cumulative Impacts

Mitigation Measures Traffic-1 and Fire-1 would be implemented to address potential wildfire impacts for the Project. No additional mitigation is required.

Significance Determination after Mitigation

The Project's incremental contribution to impacts to wildfire would not be cumulatively considerable.

3.20.6 References

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4 Other CEQA Considerations

Chapter 4 includes discussions of various topics required by CEQA. These topics include Section 4.1 Significant and Unavoidable Impacts, which summarizes the conclusions presented in Chapter 3; Section 4.2 Significant Irreversible and Irretrievable Changes, and Section 4.3 Growth-inducing Effects.

4.1 Significant and Unavoidable Environmental Impacts

4.1.1 Significant Direct Effects

As required by CEQA Guidelines section 15126.2(b), an environmental impact report (EIR) must describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less-than-significant level. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons the project is being proposed, notwithstanding their effect, should be described. Chapter 3 Environmental Analysis, of this EIR describes the potential environmental impacts from the Project. Impacts to the following resource would be significant and unavoidable with construction and operation of the Project, even with the incorporation of feasible Mitigation Measures (MMs) that attempt to reduce impacts. Note that these conclusions apply to the Project (described in Chapter 2 Description of the Project) even after consideration of alternatives, with exception of the No Project Alternative (described in Chapter 5 Alternatives), either because the alternative is infeasible or it worsens impacts to other sensitive resources.

Aesthetics:

Impact Aesthetics-1 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings?

Operation of the Project could substantially degrade the existing visual character or quality of the site and its surroundings, specifically from key observation points (KOP) 2 - I-10 (Eastbound) and KOP 7 - I-10 (Westbound). Components of the Project (primarily solar array and fencing) would be largely visible across the foreground, middleground, and background, with minimal visual screening provided by existing vegetation. Both KOP 2 and 7 are located on I-10. Both KOPs offers an expansive vantage viewpoint where a greater portion of the Project site can be seen within the landscape. Portions of the Project's solar arrays would be prominently visible as continuous, linear, horizontal, medium- to dark-gray to bluish-black patches on the valley floor partially screened from I-10 views by intervening vegetation.

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In the context of an existing landscape that includes not only the natural landforms, vegetative patterns, and earth-tone colors and textures of a desert valley but also the industrial characteristics of several solar projects in the immediate vicinity of the Project site, the Project would result in varying degrees of visual change. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays would contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains). The Project's form and line would be similar to the adjacent solar facilities and gentle lines already established in the landscape as well as some of the darker date palm farms adjacent to the Project. The Project's dark array panels would be noticeable against the lighter earth tones of the valley's soils and rock but would be similar in nature to the existing solar facilities. The Project would constitute a foreground, visually co-dominant feature in the landscape and would attract the attention of the casual observer. In context of the existing Chuckwalla Valley visual landscape and the size of the Project, impacts to visual character and view quality would be significant and unmitigable.

4.1.2 Significant Cumulative Effects

According to section 15355 of the CEQA Guidelines, the term cumulative impacts "refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or several separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

The cumulative scenario and analysis methodology is included within each resource section in Chapter 3 of this EIR. Project impacts are cumulative when they are combined with impacts from past, present, and reasonable future projects. Impacts would be considered cumulatively significant for the following issue area:

Aesthetics: The cumulative scenario includes multiple approved large-scale solar plants and transmission lines either presently or soon to be under construction whose scale and pervasiveness will contribute to adverse visual cumulative effects. If all the projects were implemented, they would introduce substantial visual contrast associated with discordant geometric patterns in the landscape; large-scale, built facilities with prominent industrial character; unnatural lines of demarcation in the valley floor landscape; inconsistent color contrasts; and visible night lighting within the broader Chuckwalla Valley. As a result, the Project in combination with the cumulative projects would result in significant cumulative visual impacts when viewed by sensitive viewing populations along I-10. Numerous existing modifications are visible along the I-10 corridor and in the Desert Center area of the Chuckwalla Valley (transmission lines; substations; pipelines; solar projects; 4-wheel drive tracks; widely scattered commercial buildings, dilapidated structures, and roadside signs; and a few agricultural operations). Distant views and the grand scale of the open desert panoramas still impart an

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overall general impression of a relatively unimpaired, isolated desert landscape. The cumulative scenario includes large solar projects, the closest being the adjacent Redonda Solar Project as well as the more-distant Easley, Sapphire, and Bajada solar projects. The pervasiveness of the existing and proposed/approved solar projects would have adverse cumulative impacts. If all the projects were implemented, they would further degrade the visual character of the existing landscape, resulting in the further conversion of a desert landscape into a more industrialized appearance. Due to topography and the desert climate, visual screening of cumulative solar facilities is not feasible.

In some viewing cases, the visibility and apparent scale of the projects are (for existing) or would be (for proposed) diminished somewhat by favorable topographic relationships and vegetative screening. For other viewing opportunities, some projects appear (existing) or would appear (proposed) reduced in visual prominence due to their viewing distances and low angle of view. In other cases, projects blend (existing) or would blend (proposed) in with the vegetation or horizon line of the valley floor, and the rugged mountains would remain the dominant visual features in the landscape. The existing, approved, and proposed solar projects would contribute to significant cumulative visual impacts when viewed by sensitive viewing populations along I-10 and from sensitive viewers using the surrounding mountains and wilderness. The Project's contribution to the impacts would be from the introduction of new features appearing as low, dark, linear elements. For many travelers along I-10, the scenic experience would be substantially degraded due to the regular occurrence of solar facilities and related effects in the landscape and a significant cumulative impact to aesthetics.

Cultural Resources: The visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments. Cumulative projects similarly would be in kind with the current nature and scale of existing visible developments and would be subject to similar measures designed to avoid and minimize impacts to historical resources. However, while the visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments, the addition of more industrial components to the Chuckwalla Valley, as a result of the Project in combination with past projects, other current projects, and probable future projects, would contribute to adverse visual impacts to the PTNCL, particularly from character defining features within the PTNCL. The Project would implement Mitigation Measure Cultural-1 through Mitigation Measure Cultural-9, which would avoid and minimize impacts to archaeological resources, reducing project-level impacts to less than significant. Cumulative projects would likely be required to implement similar measures. However, cumulative visual impacts to the PTNCL would remain significant, and the Project's incremental contribution would be cumulatively considerable.

Tribal Cultural Resources: The visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments. Cumulative projects similarly would be in kind with the current nature and scale of existing visible developments and would be subject to similar measures designed to avoid and minimize impacts to tribal cultural resources. However, while the visual changes resulting from the Project would be in kind with

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the current nature and scale of existing visible developments, the addition of more industrial components to the Chuckwalla Valley, as a result of the Project in combination with past projects, other current projects, and probable future projects, would contribute to adverse visual impacts to the PTNCL, particularly from character defining features within the PTNCL. The Project would implement Mitigation Measure Cultural-1 through Mitigation Measure Cultural-9, Mitigation Measure Tribal Cultural Resources-1, and Mitigation Measure Tribal Cultural Resources-2, which would avoid and minimize impacts to tribal cultural resources, reducing project-level impacts to less than significant. Cumulative projects would likely be required to implement similar measures. However, cumulative visual impacts to the PTNCL would remain significant, and the Project's incremental contribution would be cumulatively considerable.

4.2 Irreversible and Irretrievable Commitments of Resources

CEQA Guidelines section 15126.2 requires a discussion of any irreversible or irretrievable commitments of resources that implementation of a Project or alternative would cause. CEQA Guidelines section 15126.2(c) states “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely.” Both primary and secondary impacts of a project generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. Therefore, the purpose of this discussion is to identify any significant irreversible environmental changes brought about by the Project.

Resources irreversibly or irretrievably committed to a proposed project are those used on a long-term or permanent basis. This includes the use of nonrenewable resources such as petroleum fossil fuel resources, petrochemical products, metals such as raw material for steel, aggregate minerals including sand and gravel, and other natural resources. These resources are considered irretrievable in that they would be used for a proposed action when they could have been conserved or used for other purposes. Another irreversible or irretrievable commitment of resources is the unavoidable destruction of natural resources that could limit the range of potential uses of that environment.

Construction of the Project or alternatives would commit nonrenewable resources during construction and ongoing utility services during operation. The Applicant anticipates that at least 50 percent of construction waste would be recycled, reused, composted, and/or salvaged. The Project would install battery energy storage system (BESS) units and solar photovoltaic panels manufactured from metals, such as thin-film panels (including crystalline silicon panels), copper indium gallium selenide panels, bifacial panels, or cadmium telluride panels. During operation, oil, gas, and other nonrenewable resources would be consumed for maintenance purposes, although on a limited basis. See Section 3.7 Energy for more information.

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At the end of the operational life of the Project, the Applicant would decommission it and remove the systems and their components. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and County regulations. Because the photovoltaic arrays' supporting equipment would sit on the surface of the land, the land would be largely unaltered from its natural state when the arrays are removed after the Project's lifetime. Upon ultimate decommissioning, most components would be suitable for recycling or reuse.

The Project is a renewable energy project intended to generate solar energy to reduce reliance on fossil fuels. Over the minimum 40-year Conditional Use Permit term for the Project, this renewable energy project would contribute incrementally to the reduction in demand for fossil fuel used to generate electricity, thereby resulting in a positive effect counteracting the commitment of nonrenewable resources to the Project.

4.3 Growth Inducing Impacts

CEQA Guidelines section 15126.2(d) requires analysis of the growth-inducing impact of the project. The discussion should identify the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This includes projects that remove obstacles to population growth, such as by extending public services into areas not previously served. Growth inducement can also result from actions that encourage development or encroachment into surrounding areas or encourage adjacent development. According to State CEQA Guidelines section 15126.2(d), growth should not be assumed to be beneficial, detrimental, or of little significance to the environment.

This growth-inducing impact analysis considers the following four criteria, and whether the Project would result in:

- Removal of an obstacle to growth, e.g., establishment of an essential public service or the provisions of new access to an area;
- Economic expansion or growth, e.g., changes in revenue base or employment expansion, that would require construction of new facilities that could cause significant environmental effects;
- Establishment of a precedent-setting action, e.g., a change in zoning, or general plan amendment approval; or
- Encouraging development or encroachment into an isolated area or open space.

Should a project meet any one of the criteria listed above, it can be considered growth-inducing.

Removal of an obstacle to growth. The Project would result in the conversion of open space to a developed land use. The Project would be located on private and BLM-administered lands designated as a DFA to allow for development of solar energy generation and appurtenant facilities on public lands in this specific area. The Project would not result in the establishment of

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an essential public service to lands not currently served by public services nor would it provide new access to previously inaccessible areas. As a result, the Project would not cause significant growth inducement under this criterion.

Economic expansion or growth. The Project would create a short-term demand for workers that may not be met by the local labor force, thereby inducing in-migration of non-local labor and their households during construction and decommissioning periods. This would create short-term economic expansion. Neither construction of the Project alone, nor cumulatively with any of the proposed nearby projects which are also primarily solar projects, would create a significant number of long-term construction jobs that could result in significant population growth. Therefore, the construction phase of the Project is not considered to permanently result in economic expansion or growth, as it would be temporary by definition.

Following construction, up to 10 permanent staff could be on the site at any one time for ongoing solar facility maintenance and repairs. The Project's workforce could contribute to an increase in tax revenues for the State of California and Riverside County; however, the limited permanent employment expansion would not result in the need for new or physically altered community-serving facilities. As a result, the Project would not be growth-inducing for its effects on economic expansion or growth.

Establishment of a precedent-setting action. The Project would result in the development of a solar and energy storage facility and a gen-tie line in the vicinity of other existing and approved solar projects and in an area identified by planning documents as appropriate for renewable development. The Project would be similar to the other cumulative projects in eastern Riverside County, many of which are identified as past and present projects or probable future projects. The Project would not establish a precedent-setting action such as a change in zoning or general plan amendment. Therefore, the Project would not be growth inducing under this criterion.

Development or encroachment into an isolated area or open space. The Project would result in a change to undeveloped/existing farmland in an area surrounded by proposed, existing or under-construction solar projects. The Project, as with a number of adjacent solar projects, would be located on private lands and BLM-administered lands designated as a DFA to allow for development of solar energy generation and appurtenant facilities on public lands in this specific area. The Project would not encroach into lands planned for future residential development. The Project is located approximately 8.3 miles from a residential development. The Project is not considered to have the potential to encourage or push residential development into other open space areas because the Project would not induce population growth or development. The Project site is remote and existing/planned land use patterns do not indicate that residential development was planned in the area. Therefore, the Project would not result in growth inducement through development or encroachment into an isolated area or open space.

5 Alternatives

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines states that an Environmental Impact Report (EIR) “shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.” An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives governed by the rule of reason that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The CEQA Guidelines state that factors that may be considered when determining the feasibility of alternatives are “site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context) and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent)” (14 CCR § 15126.6[f][1]). Additionally, the No Project Alternative must be analyzed.

The EIR must explain the rationale for selecting the alternatives to be discussed, identify those that were not carried forward because they were infeasible, and briefly explain why these were not carried forward. The “environmentally superior” alternative to the project must be identified and discussed (see Section 4.3 Comparison of Alternatives). If the environmentally superior alternative is the No Project Alternative, the EIR must identify an additional environmentally superior choice among the other alternatives.

Several options were considered to determine potential alternatives that might produce fewer significant impacts, or reduce the severity of those significant impacts, compared to the Savira Solar Project (Project), including the No Project Alternative. Possible alternatives were assessed as to whether they would satisfy the following:

- The alternative is technically feasible.
- The alternative would avoid or substantially lessen any of the significant impacts of the Project.
- The alternative would attain most of the basic Project objectives.

As noted in Chapter 1 Introduction, Section 1.3 Project Objectives, the Applicant’s objectives for the Proposed Project are as follows:

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- Establish a renewable energy power-generation facility of a sufficient size and configuration to produce up to approximately 150 MW of electricity in a cost-competitive manner.
- Establish an energy storage system (BESS) of sufficient size and configuration to store up to approximately 250 MW of electricity for at least four-hour discharge in a cost-competitive manner.
- Assist California load-serving entities in meeting their obligations under California's Renewable Portfolio Standard (RPS) Program and energy generation goals under the Clean Energy and Pollution Reduction Act of 2015 (Senate Bill 350) and the 100 Percent Clean Energy Act of 2018 (Senate Bill 100) as well as greenhouse gas (GHG) emissions reduction goals of the California Global Warming Solutions Act of 2006 (AB 32), as amended by Senate Bill 32 in 2016.
- Assist California load-serving entities in meeting their obligations under CPUC's Energy Storage Framework and Design Program.
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing battery energy storage capacity.
- Minimize environmental impacts and land disturbance associated with solar energy development by siting the facility on relatively flat, contiguous lands with high solar insolation, in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access.
- Conform with the Desert Renewable Energy Conservation Plan, including Conservation Management Actions, on BLM-administered land.
- Bring living-wage jobs and property tax revenue to Riverside County.
- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.

Alternatives considered include the No Project Alternative, the Reduced Footprint Alternative, the Private Land-Only Alternative, an Off-site Alternative, and a Distributed General Alternative. An alternatives comparison is provided in Section 5.3. Alternatives considered but not carried forward for further analysis are presented in Section 5.4.

5.1 Significant and Unavoidable Impacts

Chapter 3 Environmental Analysis of this EIR describes the potential environmental impacts associated with the Project. The Project would result in significant impacts to visual resources by substantially degrading the existing visual character or quality of public views of the site and its surroundings from viewpoints along the Interstate 10 (I-10) as well as contributing to a cumulatively significant visual impact. Additionally, the Project's incremental contribution to indirect visual impacts to the PTNCL would be cumulatively considerable due to the scale of existing visible developments and the addition of more industrial components to the Chuckwalla Valley.

5.2 Alternatives Analyzed in Detail

5.2.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the construction of the Project and associated infrastructure would not occur. Because no project would be built and no ground disturbance would occur, none of the impacts associated with the construction, O&M, and future decommissioning of the Project to any of the resources identified and discussed in Chapter 3 would occur. The No Project Alternative would not contribute to any cumulative impacts.

The No Project Alternative would not require a Conditional Use Permit (CUP) for construction and operation of the solar project and associated facilities. The No Project Alternative would maintain the existing land uses. The No Project Alternative would fail to meet all the Applicant's objectives for the Project.

Furthermore, the No Project Alternative would not achieve any of the environmental benefits of increasing renewable energy generation consistent with the State of California's Renewable Portfolio Standard. If the energy needs that are unmet by the development of the Project are not replaced with comparable renewable sources, the development of other energy projects could result in greater emissions from, for example, the burning of fossil fuels, and the replacement projects would not contribute to meeting the state's greenhouse gas reduction goals. This impact could be greater than with the Project.

The No Project Alternative also considers what would be reasonably expected to occur in the foreseeable future if the Project was not approved and did not take place. The Project site is located on private lands and within and adjacent to a DFA, near existing transmission infrastructure and an existing substation with available capacity for additional energy generation. If the Project were not constructed, it is likely that a different solar developer would apply to construct an energy project in this location. If a different solar project were to be constructed in this location, the impacts of the other solar project are likely to be similar or the same as those identified for the Project in Chapter 3 of this EIR.

5.2.2 Alternative 2: Reduced Footprint Alternative

Under this alternative, the solar site would be reduced to eliminate the significant aesthetics impact experienced by passersby along the I-10. As shown in Figure 5-1, the Reduced Footprint Alternative would eliminate approximately 90 acres of land for the solar arrays and establish a 0.25-mile setback from I-10, which is a larger set-back than the existing surrounding solar projects set-backs from I-10. Due to the increased distance between the viewer and the project, this setback would eliminate the significant visual impact because the solar panels while visible would not draw the attention of the casual viewer and the patchy vegetation would provide more cover for the alternative. This would reduce the Project by at least 25 MW, reducing the Project's ability to meet all the Project objective associated with the production of up to approximately 150 MW of renewable energy.

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Impact Analysis

The Reduced Footprint Alternative site would generally be in the same area as the Project site. This alternative would be expected to reduce the construction timeline, involve less construction and O&M staff, and require less operational water use as the Project due to the reduction in the size of the solar site.

This alternative has a reduced solar footprint due to the removal of development adjacent to the I-10 creating a wider buffer from the project boundary to reduce visual impacts from the panels. Similar to the Project, this alternative would still require the approval of a County CUP for the construction and operation of the Project.

The impacts for the following resources are unlikely to appreciably differ from those of Project:

- Agricultural and Forestry Resources
- Hazards and Hazardous Materials
- Land Use and Planning
- Noise
- Paleontological Resources
- Population and Housing
- Public Service and Utilities
- Recreation
- Wildfire

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Figure 5-1 Alternative 2: Reduced Footprint Alternative



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The following analyzes resources where the impacts of the Reduced Footprint Alternative could appreciably differ from those of the Project. The analyses below assume incorporation of the same mitigation measures as the Project.

Aesthetics

The Reduced Footprint Alternative would be built approximately 0.25 mile from I-10, reducing the views of the Project from this corridor (KOP 2 and 7). Because of the distance between the Project and I-10, the Project would not be as prominently visible as a continuous, linear, horizontal, medium- to dark-gray to bluish-black patches because it would be further screened from I-10 views by intervening vegetation. The Project's dark array panels would remain noticeable against the lighter earth tones of the valley's soils and rock but would be less prominent due to the distance. The Project would remain a foreground, visually co-dominant feature in the landscape and but would no longer attract the attention of the casual observer due to the greater distance between viewers and the project's panel arrays. Views from KOP 1 and 9 would be the same because the distance between the KOP and the Project will not change from this viewing angle. Views from KOP 11 would be further reduced; however, at this distance, the views of the Project were already minimal and less than significant. As a whole, project-level impacts would be less than significant under the Reduced Footprint Alternative.

The potential cumulative impacts would be as described for the proposed Project in Chapter 3 and would be significant when viewed by sensitive viewing populations along I-10 and in the surrounding mountains and wilderness. Like the proposed Project, the alternative would make a considerable contribution to these visual impacts.

Air Quality

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to the I-10. The decrease in solar panel area would result in a slight decrease in the potential for emissions and pollutant concentrations when compared with the impacts of the proposed Project due to a reduced construction workforce and duration of construction. Overall, the effects of the Reduced Footprint Alternative would be slightly reduced from the proposed Project, and mitigation identified for the proposed Project would be the same under this alternative and would ensure impacts are less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

Biological Resources

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. Impacts to biological resources would be qualitatively similar to the proposed Project with approximately 90 fewer acres of native habitat disturbance in desert scrub habitat along I-10. The areas where panels would be removed are adjacent to I-10 and already experience noise and dust and potentially vibration disturbance from I-10 so they are less valuable biologically than other development areas. The Reduced Footprint Alternative would result in slightly less impact to

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desert scrub communities than the proposed Project, but the same mitigation measures would be required to reduce impacts to less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

Cultural Resources

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. No CRHR eligible resources were identified on the Project site so the direct impact area would not change and direct impacts to cultural resources for this alternative would be the same as for the proposed Project. While the Alternative would have a smaller footprint than the proposed Project, it would still result in an indirect impact to the PTNCL and a considerable incremental contribution to a cumulatively significant impact. Mitigation identified for the proposed Project would be the same under this alternative.

The potential cumulative impacts would be as described for the Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Energy

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. With this reduction in acreage, the consumption of energy resources would not be appreciably reduced compared to the proposed Project. The renewable energy generation capacity of the solar array field in the Reduced Footprint Alternative would be up to 25 MW less than the proposed Project, reducing the benefits of the Project.

The potential cumulative impacts would be as described for the Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Geology, Soils and Minerals

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. Construction and operation of the Reduced Footprint Alternative would be the same as for the Project. Impacts related to slope stability, seismic hazards, expansive soils, mineral resources, topography, subsidence, and sand migration would be the same as for the proposed Project. Impacts related to erosion would also be slightly decreased. Mitigation identified for the proposed Project would be the same under this alternative. Implementation of mitigation measures would reduce any impacts to less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Greenhouse Gas Emissions

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. The renewable energy generation capacity of the solar array field under the Reduced Footprint Alternative during lifetime operations would be up to 25 MW less than the proposed Project, resulting in a lesser quantity of electricity produced by the solar PV component. Because

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the Reduced Footprint Alternative would not change the capacity of the proposed BESS, the potential avoidance of GHG emissions would be the same as with the proposed Project. Other effects of the proposed Project on GHG emissions would not be appreciably changed compared to the proposed Project. The impacts of the Reduced Footprint Alternative would be similar to the proposed Project and would be less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Hydrology and Water Quality

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. Surface water impacts would remain the same as for the proposed Project but slightly reduced in magnitude due to the reduced footprint. The Reduced Footprint Alternative would require the same mitigation measures to be implemented as would be required for the proposed Project, with the same impact significance. Therefore, because both the proposed Project and the Reduced Footprint Alternative would result in less than significant impacts with adherence to all applicable regulations and mitigation measures, impacts related to hydrology and water quality from the Reduced Footprint Alternative would be similar to those of the proposed Project.

The Project would use up to 250 AF during the construction period and up to 20 AFY during the Project's operational periods. If the estimated water demand for the Project was used equally per acre (the Project is proposed on approximately 535 acres for the solar and BESS facility, plus 139-acre gen-tie line corridor), the Project would use approximately 0.5 AF per acre during construction and 0.03 AF per acre per year during the operational phase of the Project. Using the same AF per acre water use assumptions, the Reduced Footprint Alternative would require approximately 222 AF during the construction phase and 13 AFY during the operational phase of the Project. Therefore, due to the minimal reduction of groundwater use under the Reduced Footprint Alternative, the potential impacts on groundwater would be consistent with those discussed in Section 3.11 for the proposed Project and would be less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Transportation

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. Under the Reduced Footprint Alternative, construction- and operations-related traffic would be similar to that anticipated for the Project as proposed. Therefore, the traffic and transportation impacts for the Reduced Project Alternative would be virtually identical to those attributable to the proposed Project and require identical mitigation measures to ensure impacts to transportation and traffic would be reduced to less-than-significant levels. The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

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Tribal Cultural Resources

The Reduced Footprint Alternative would remove approximately 90 acres of solar panels closest to I-10. No CRHR eligible tribal cultural resources were identified on the Project site, so the direct impact area would not change and direct impacts to tribal cultural resources for this alternative would be the same as for the proposed Project. While the Alternative would have a smaller footprint to that of the proposed Project, it would still result in an indirect impact to the PTNCL and a considerable incremental contribution to a cumulatively significant impact. Mitigation identified for the proposed Project would be the same under this alternative.

The potential cumulative impacts would be as described for the Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

5.2.3 Alternative 3: Private Linear Facilities Alternative

Under this alternative, all components of the Project on BLM land, which includes the high-voltage gen-tie line, medium-voltage collection line segment, and access roads, would be removed and replaced with new facilities located solely on private, non-federal lands or within non-federal ROW. Except for the replacement of these BLM components, all aspects of this alternative would be the same as the Project.

Alternative 3 would interconnect into the existing 161 kV SCE line that crosses the northeast corner of the Project site via a new switching station and line-tap instead of constructing a new gen-tie line to the existing Arica/Victory Pass substation (see Figure 5-2). Alternative 3 would not require approximately 1.8 miles of new high voltage gen-tie required for the Project, resulting in 22 acres fewer temporary disturbance and 5.5 acres fewer permanent disturbance.

Because the Private Linear Facilities Alternative would tap into the existing SCE Eagle Mountain – Blythe 161 kV line rather than build a new gen-tie line parallel to the 161 kV line, it would eliminate the right-of-way request to the BLM and require the Project to coordinate with SCE to use and potentially upgrade the existing 161 kV line. The existing 161 kV line is one of SCE's older transmission lines and is on SCE's list of upgrades to increase line safety.¹ Since the 161 kV transmission line has sufficient capacity to carry 150 MWs of additional energy, use of the existing SCE 161 kV line is considered potentially feasible and addressed here.

The medium-voltage collection line segment would exit the northern parcel into the adjacent private land parcel, head due south, and enter back into the Project site to enter into the Project Substation, see Figure 5-2. This line would be roughly 0.35 mile of 50-foot ROW. It would require removal of three rows of actively farmed palm dates, or approximately 2.4 acres, and would eliminate the need to cross BLM-administered land.

Alternative 3 would use an access route exiting the Corn Springs exit and heading immediately west parallel to I-10 to remain within the I-10 ROW (see Figure 5-2). The alternative access route would require gravel to reduce dust and allow for use of the road during operations and

¹ <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M546/K472/546472531.PDF>

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maintenance. This alternative would require approximately 1.4 miles of new road 30 feet wide, resulting in 5 acres of disturbance. Additional disturbance would potentially be required where the route would cross washes.

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Figure 5-2 Alternative 3: Private Linear Facilities Alternative



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The Private Linear Facilities Alternative would meet the Project's objectives and would be technically, regulatorily, and legally feasible. However, there would be additional cost to use of the new access road because it would require construction of an entirely new route and coordination with Caltrans to accommodate the ground disturbance and use of their ROW. Time required to secure land control could also contribute to delays in Project permitting and construction, which could further increase costs associated with the Project. Project schedule delays costs could also occur with utilization of the SCE 161 kV line tap option as compared to the Project's gen-tie route. This is because, while there is capacity on the existing SCE 161 kV line, an interconnection request has not been submitted nor a system impact study completed. The process to swap the Project's point of interconnection could add years onto the development schedule. Costs could also increase with the medium-voltage line route through private land due to the need to compensate for an additional 2 acres of agriculture land as well as minor increases in line length. Furthermore, this alternative could result in increased impacts to agriculture, air quality, aesthetics, biological resources, cultural resources, geology and soils, hydrology and water quality and noise due to increased disturbance associated with construction of the linear facilities

Impact Analysis

For the following resources, impacts associated with the access road, gen-tie, and medium voltage line are primarily associated with ground disturbance due to improvements required or with workforce use. While Alternative 3 would require a slightly different amount of ground disturbance, the impacts for the following resources are unlikely to appreciably differ from those of the Project compared to the Project as proposed:

- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Paleontological Resources
- Population and Housing
- Public Services and Utilities
- Recreation
- Transportation
- Wildfire

The following analyzes resources where impacts could appreciably differ from those of the Project. The analyses below assume incorporation of the same mitigation measures as the Project.

Aesthetics

The alternative access road would remain parallel to I-10 and would therefore be more visible for the drivers along I-10. As depicted in Figure 3.2-10 KOP 2 – 1-10 Eastbound, there is an existing shoulder off I-10 that is bare of vegetation. The alternative access road would create a similar, but wider, road that would parallel this shoulder, removing vegetation along the freeway that blocks some of the view of the existing solar infrastructure. Alternative 3 would introduce new, lighter color infrastructure that would contrast with the existing vegetation but would be similar in nature to the existing I-10 infrastructure. The access road in the Caltrans corridor, taken by itself, would be noticeable, but taken in context of the existing shoulder along I-10 and similar nature to the existing viewing experience, would have a less-than-significant impacts to visual character or view quality.

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Alternative 3 would tap into the existing SCE 161 kV line rather than build a new gen-tie line parallel to the 161 kV line. This would require fewer transmission poles but would require a new switching station, which would look similar to the proposed Project Substation. A new switching station would be bulkier in nature and introduce more electric infrastructure to the Project. However, it would be located one mile from the I-10 corridor and would be minimally visible from I-10 or other KOPs at that distance given the intervening solar arrays of the Savira Project.

Eliminating the proposed Project gen-tie line poles would also not substantially change the views of the Project for viewers travelling along I-10 or from the other KOPs because the Project gen-tie line is over a mile from the I-10 corridor and further from all the other KOPs and would be minimally visible from the distance due to the intervening infrastructure (the Victory Pass Solar Project).

Taken as part of the full Project, the impacts would be similar but slightly worse than those of the Project because they would introduce an additional linear piece of infrastructure, the access route, that would not be required if existing BLM open routes were used to access the Project site.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Agriculture and Forest Resources

The alternative access route and use of the existing 161 kV transmission line would have no change in impacts to agriculture because they are not located on lands currently used or zoned for agriculture. Use of the private land for the medium-voltage line would eliminate approximately 2.4 acres of actively farmed land and removed approximately 3 rows of date palms. This would increase the loss of active agriculture slightly. However, as with the Project, the Private Linear Facilities Alternative would be located on land zoned as Controlled Development Areas, identified as Open Space Rural under the General Plan. Accordingly, the analysis for the Project would not change because the Private Linear Facilities Alternative would not conflict with existing agricultural zoning, agricultural use, or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve nor would it cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"), so impacts from the loss of the 2.4 acres of date palms would be less than significant.

Air Quality

The access route would require approximately 5 acres of new ground disturbance adjacent to I-10. The increase in ground disturbance would result in a slight increase in the potential for emissions and pollutant concentrations when compared with the impacts of the proposed Project due to a slightly increased construction workforce and duration of construction. Use of gravel on the road would reduce dust emissions during operations. Use of SCE 161 kV line would eliminate the need for ground disturbance for the gen-tie poles and any new access roads, slightly reducing the emissions associated with ground disturbance. Use of the private land for the medium voltage line would have minimal any changes to emission because the amount of disturbance and work

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required would be the same. Overall, the effects of the Private Linear Facilities Alternative would be slightly increased from the proposed Project, and mitigation identified for the proposed Project would be the same under this alternative. Project-level impacts would remain less-than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

Biological Resources

The Private Linear Facilities Alternative would require approximately 5 acres of new ground disturbance adjacent to I-10. Impacts to biological resources would be qualitatively similar to the proposed Project with approximately 5 more acres of native habitat disturbance in desert scrub habitat along I-10. A small portion of the new acreage of disturbance, about 300 feet, would cross desert dry wash woodland, a habitat considered sensitive by the CDFW, that occurs immediately adjacent to the underpass along I-10. However, the areas where the access road would be constructed are adjacent to I-10 and already experience disturbance from I-10 so are less valuable than other areas that are not adjacent to a freeway. This route would be immediately adjacent to an underpass that is used by wildlife to cross I-10 which could lead to unintended wildlife impacts due to vehicle strikes by workers or equipment. The alternative access road would result in slightly greater impact to desert scrub communities than the proposed Project and could result in additional vehicle strikes to wildlife. The same mitigation measures that require compensation for disturbance to native habitat and require vehicles to go 15 miles per hour would reduce impacts to less than significant.

The Private Linear Facilities Alternative would tap into the existing SCE 161 kV line rather than build a new gen-tie line parallel to the 161 kV line. This would require approximately 5.5 acres less of new permanent ground disturbance and 22 acres less of temporary ground disturbance adjacent to the existing access road and just north of the Victory Pass Solar Project. Impacts to biological resources would be qualitatively similar to the proposed Project with approximately 27.5 fewer acres of native habitat disturbance in desert scrub. Areas where the proposed gen-tie line would occur are adjacent to existing disturbance and therefore less valuable habitat compared to less built areas. The Private Linear Facilities Alternative would therefore result in slightly less impact to desert scrub communities than the proposed Project, but the same mitigation measures would be required to reduce impacts to less than significant.

Constructing the Private Linear Facilities Alternative would use the adjacent private parcel and eliminate approximately 2.4 acres of active farmland to accommodate the medium-voltage line required to carry energy from the northernmost parcel to the Project Substation. This would eliminate the use of approximately 1.8 acres of BLM-administered land for the medium-voltage line. This alternative would require 0.6 acre more ground disturbance, but it would be on existing agriculture rather than on undeveloped desert scrub habitat. Impacts to biological resources would be qualitatively similar to the proposed Project with 1.8 fewer acres of native habitat disturbance in desert scrub. The medium-voltage line on agriculture land would result in slightly

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less impact to desert scrub communities than the proposed Project, but the same mitigation measures would be required to reduce impacts to less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

Cultural Resources

The Private Linear Facilities Alternative would require approximately 5 acres of new ground disturbance adjacent to I-10. Cultural surveys would need to be completed along the alternative access route prior to construction to determine whether any cultural resources eligible for the CRHR occur within the proposed route. If such resources were to occur and could not be avoided, this would increase the impacts to cultural resources compared with the Project which did not identify any resources eligible for the CRHR. Additionally, new ground disturbance has the potential to identify buried sensitive cultural resources, increasing slightly the risk that the alternative access route contain previously unknown historical resources, specifically in the form of archaeological deposits that may underlie the ground surface. As with the Project, impacts to any newly identified resources would be addressed by the implementation of MM Cultural-1 through MM Cultural-9, which would likely reduce the impact to less than significant given the limited amount of ground disturbance and that the route could be moved slightly to avoid cultural resource is required.

The Private Linear Facilities Alternative would use the existing SCE 161 kV line rather than build a new gen-tie line parallel to the 161 kV line. This would require approximately 5.5 acres less of new permanent ground disturbance and 22 acres less of temporary ground disturbance adjacent to the existing access road and just north of the Victory Pass Solar Project. No CRHR eligible resources were identified on the gen-tie line route so the direct impact area would not change and direct impacts to cultural resources for this alternative would be the same as for the proposed Project.

The medium voltage line would use the adjacent private parcel and eliminate approximately 2.4 acres of active farmland to accommodate the medium voltage line required to carry energy from the northernmost parcel to the Project Substation. This would eliminate the use of approximately 1.8 acres of BLM-administered land for the medium voltage line. This alternative would require 0.6 acre more ground disturbance, but it would be on existing agriculture rather than on undeveloped desert scrub habitat so minimal impacts to cultural resources are expected. No CRHR eligible resources were identified on the proposed medium-voltage line route during surveys for the adjacent Redonda Solar Project, so the direct impact area would not change, and direct impacts to cultural resources for this alternative would be the same as for the proposed Project.

While the Private Linear Facilities Alternative would have a changed footprint than the proposed Project, it would still result in an indirect impact to the PTNCL and a considerable incremental contribution to a cumulatively significant impact.

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The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

Geology, Soils and Mineral Resources

Private Linear Facilities Alternative would require slightly different amounts of ground disturbance for the access road, gen-tie, and medium-voltage line compared with the proposed Project. Construction and operation of the Private Linear Facilities Alternative would be the same as for the Project but would require slightly more construction along certain areas. Impacts related to slope stability, seismic hazards, expansive soils, mineral resources, topography, subsidence, and sand migration would be the same as for the proposed Project. Impacts related to erosion would also be slightly increased. Implementation of the same mitigation measures identified for the Project would reduce any impacts to less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Hydrology and Water Quality

The Private Linear Facilities Alternative would require slightly different ground disturbance compared to the Project including 5 acres adjacent to I-10. Surface water impacts would remain the same as for the proposed Project but would be slightly increased in magnitude due to the increased disturbance associated with constructing the alternative access road because the Project access road is already graveled. The Private Linear Facilities Alternative would require the same mitigation measures to be implemented as would be required for the proposed Project, with the same impact significance. Therefore, because both the proposed Project and the alternative access route would result in less than significant impacts with adherence to all applicable regulations and mitigation measures, impacts related to hydrology and water quality from the alternative access route would be similar to those of the proposed Project and would remain less than significant.

Due to the minimal change in overall ground disturbance compared with the Project, the groundwater use under Private Linear Facilities Alternative, the potential impacts on groundwater would be consistent with those discussed in Section 3.11 for the proposed Project and would remain less than significant.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Land Use and Planning

Use of an alternative access route for the Private Linear Facilities Alternative would require a new route within the Eastern Riverside County area. While the route would be within the Caltrans ROW, it would remain on BLM land, and the BLM has policies encouraging use of existing routes and limiting new routes whenever feasible (DRECP CMA LUPA-BIO-13) due to potential unauthorized use in sensitive areas. While the route would not be prohibited under the DRECP, it would not meet the goals of the CMAs to limit new access where not needed.

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Tribal Cultural Resources

The alternative access route would require approximately 5 acres of new ground disturbance adjacent to I-10. Cultural surveys would need to be completed along the alternative access route prior to construction to determine whether any tribal cultural resources eligible for the CRHR occur within the proposed route. If such resources occur and cannot be avoided, this would increase the impacts to tribal cultural resources compared with the Project which did not identify any resources eligible for the CRHR. Additionally, new ground disturbance has the potential to identify buried sensitive tribal cultural resources, increasing slightly the risk that the alternative access route contain previously unknown historical resources, specifically in the form of archaeological deposits that may underlie the ground surface. As with the Project, impacts to any newly identified resources would be addressed by the implementation of MM Cultural-1 through MM Cultural-9, MM Tribal Cultural Resources-1 and MM Tribal Cultural Resources-2, which would likely reduce the impact to less than significant given the limited amount of ground disturbance and that the route could be moved slightly to avoid tribal cultural resource is required.

The Private Linear Facilities Alternative would use the existing SCE 161 kV line rather than build a new gen-tie line parallel to the 161 kV line. This would require approximately 5.5 acres less of new permanent ground disturbance and 22 acres less of temporary ground disturbance adjacent to the existing access road and just north of the Victory Pass Solar Project. No CRHR eligible tribal cultural resources were identified on the gen-tie line route so the direct impact area would not change and direct impacts to tribal cultural resources for this alternative would be the same as for the proposed Project.

The Private Linear Facilities Alternative would use the adjacent private parcel and eliminate approximately 2.4 acres of active farmland to accommodate the medium-voltage line required to carry energy from the northernmost parcel to the Project Substation. This would eliminate the use of approximately 1.8 acres of BLM-administered land for the medium-voltage line. This alternative would require 0.6 acre more ground disturbance, but it would be on existing agriculture rather than on undeveloped desert scrub habitat so minimal impacts to tribal cultural resources are expected. No CRHR eligible tribal cultural resources were identified on the proposed medium voltage line route during surveys for the adjacent Redonda Solar Project so the direct impact area would not change and direct impacts to tribal cultural resources for this alternative would be the same as for the proposed Project.

While the Private Linear Facilities Alternative would have a changed footprint than the proposed Project, it would still result in an indirect impact to the PTNCL and a considerable incremental contribution to a cumulatively significant impact.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's incremental contribution would not be cumulatively considerable.

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5.2.4 Alternative 4: Off-site Alternative

The possibility of developing an off-site alternative on lands west of SR 177 was rejected due to concerns expressed by members of the Desert Center and Lake Tamarisk communities regarding other solar energy projects proposed for development in that area. Potential off-site alternatives were considered east of State Route 177 (SR 177)/Rice Road. Very limited parcels, either on private or public lands are available in the area. In addition, because the Project is located east of SR 177, impacts of offsite development would likely be similar to the Project.

Potential development of an offsite alternative on BLM lands east of SR 177 would require approximately 535 acres. Available acres in the Desert Center area include land on BLM-administered lands north of the Arica Project and north of the Athos Project. This area is within the DFAs under the DRECP LUPA; however, it may be impossible to meet the DRECP CMAs under this alternative which would require a land use plan amendment to the California Desert Conservation Area Plan.

Impact Analysis

For the following resources, impacts associated with the Off-site Alternative are primarily associated with ground disturbance or with workforce use. While Offsite Alternative would require a slightly different amount of ground disturbance, the impacts for the following resources are unlikely to appreciably differ from those of the Project compared to the Project as proposed:

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Paleontological Resources
- Population and Housing
- Public Services and Utilities
- Recreation
- Transportation
- Wildfire

The following analyzes resources where impacts could appreciably differ from those of the Project. The analyses below assume incorporation of the same mitigation measures as the Project.

Aesthetics

The Off-site Alternative would consist of approximately 535 acres and a gen-tie line connecting to the Arica/Victory Pass Substation or the Red Bluff Substation. This alternative could be located anywhere on lands east and north of the existing Athos Project, north of the Clearway Arica and Clearway Victory Pass projects, and north of the Palen Project. Therefore, the Off-site Alternative's solar facilities and gen-tie line would be substantially obscured from view by other existing solar projects and, in the case of the gen-tie line if it connects into Red Bluff Substation, would be close to other gen-tie lines as it approaches I-10 to span the freeway and connect into Red Bluff Substation. As a result, the Off-site Alternative's visual impact on views from I-10 would be minimized. Equally important, with viewing distances ranging from approximately 4 to 10 miles, and several intervening existing solar projects and associated gen-tie lines, the Off-site Alternative would have minimal impacts on views from Lake Tamarisk Desert Resort.

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Therefore, in the context of the numerous existing solar facilities and gen-tie lines, the Offsite Alternative would cause adverse but less-than-significant visual effects.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3; however, unlike the proposed Project, the Off-site Alternative's contribution would not be cumulatively considerable. The Off-site Alternative would only contribute to cumulative impacts in northern views (Desert Lily Sanctuary). From at-grade views from the south, east, or west, it would have minimal impact due to screening by other solar projects and vegetation. The Off-site would contribute slightly to cumulative visual impacts when viewed from elevated views (Alligator Rock), but the incremental impacts would be less than significant and are not considered to be cumulatively considerable.

Agriculture and Forest Resources

The Off-site Alternative would be located southeast of the proposed Project application area and would include a gen-tie line to connect to the existing Oberon Switchyard or SCE Red Bluff Substation. None of the facilities under the Off-site Alternative would be on land zoned as Agriculture or within a parcel under a Williamson Act contract. There would be no direct, indirect, or cumulative impact to agriculture and forestry under the Off-site Alternative.

Biological Resources

The Off-site Alternative is located directly east of the Athos Solar Project and directly north of the Arica, Victory Pass, and Palen Solar Projects. This alternative is located on approximately 535 acres. The gen-tie line would interconnect into to the Arica/Victory Pass Substation or Red Bluff Substation.

Construction activities and the resulting impacts to biological resources would be qualitatively similar to the proposed Project; however, much of the Off-site Alternative area is subject to biological constraints. Biological resources in the Off-site Alternative include desert dry wash woodland, Emory's crucifixion thorn, creosote bush rings, and occurrences of Harwood's eriastrum, which may be impacted by ground disturbance (Riverside County, 2024). Other rare plants, Harwood's wooly aster (*Eriastrum harwoodii*, CRPR 1B.2) and Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*, CRPR 2B.2) have potential to occur as they were found in nearby habitat.

The Off-site Alternative would be sited on BLM-administered public lands in a DFA and on private lands. The western portion of the Off-site Alternative Area would overlap with a BLM DRECP multi-species linkage area located north of I-10. The Oberon, Athos, Arica, and Victory Pass solar projects also overlap some areas of the linkage. These projects were designed to maintain linkage connectivity function and associated habitat, as well as avoid desert dry wash woodlands, per BLM DRECP CMAs (e.g., CMAs LUPA-BIO-13, LUPA BIO IFS 2, LUPA-BIO-RIPWET-1, DFA-VPL-BIO-IFS-1), thereby helping to preserve habitat and linkage functionality for wildlife movement through these areas. Solar development in the linkage area under the Off-site Alternative area could contribute to fragmentation of habitat and restrict wildlife movement across the linkage. Similar to the proposed Project and other projects within the DFA, compliance

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with CMAs on BLM lands would restrict development in desert dry wash woodlands and a 200-foot buffer except for minor incursion, which would maintain a portion of the multi-species linkage in the area.

The eastern half and northwestern portion of Off-site Alternative area supports active aeolian deposits, which are recognized as areas of higher biological value, and numerous Mojave fringe-toed lizards, which are a California species of special concern and BLM sensitive. Much of the Offsite Alternative area overlaps with the Mojave fringe-toed lizard species distribution model and impacts to this species would be significant. Construction in active aeolian sands would result in unstable soils and increased erosion throughout the Off-site Alternative area.

Several DRECP CMAs restrict development in aeolian sands on BLM-administered lands and require siting of projects in areas with least impact to sand dunes and associated species. Rare plants require a setback, creosote rings must be avoided, and desert dry wash woodlands require avoidance and setbacks. Mitigation Measures, as listed in Section 3.5.7, would be implemented to reduce impacts; however, additional measures would be needed to address significant impacts to Mojave fringe-toed lizard and aeolian sands and it is unknown if mitigation is available to reduce impacts to a less than significant level; impacts may be significant and unavoidable.

Cultural Resources

Under the Off-site Alternative, the number of CRHR eligible resources within the direct impact area would be more than for the proposed Project, consisting of 3 archaeological resources, including P-33-023675 and the PTNCL and DTCCL historic districts. Results of the Phase I survey found no evidence of archaeological remains associated with any of these resources within the Project's direct impact area. As such, the direct impacts to cultural resources for this alternative would be the same as for the proposed Project.

Portions of the PTNCL, DTCCL, P-33-023675, and P-33-025150 are located within the Off-site Alternative's indirect impact area, similar to the proposed Project. Overall, the direct and indirect impacts of this alternative would be the same as the proposed Project and would be less than significant with mitigation implemented, as defined in Section 3.6. Therefore, the direct and indirect impacts of this alternative would be the same as the proposed Project, less than significant with mitigation implemented as defined above.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would be cumulatively considerable.

Geology, Soils, and Mineral Resources

The Off-site Alternative would be similar to the proposed Project in size and components. Construction of the Off-site Alternative would disturb an area similar to the proposed Project. Operation of the project under the Off-site Alternative would be the same as the proposed Project.

Impacts related to slope stability, seismic hazards, expansive soils, mineral resources, topography, and subsidence would be the same as for the proposed Project. Based on biological surveys conducted of the Off-site Alternative area in Fall 2021 (Riverside County, 2024), areas of

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desert pavement are located in the southwestern and eastern portions of the Off-site Alternative, with many of the areas within and adjacent to desert dry wash woodland. The Off-site Alternative would disturb more desert pavement than the proposed Project which would not disturb any.

Most of the northern and eastern portions of the Off-site Alternative are located with the sand migration corridor for the Palen Lake dune system, which includes older stable dunes, active eolian sand and sand sheets, and active washes that are eolian sand sources (BLM, 2021). Ground disturbance for the Off-site Alternative could destabilize or destroy dunes and sand sheets which serve as critical habitat. Additionally, within the sand transport corridor, most sand transport occurs close to the ground through the processes of rolling and saltation (bouncing of sand particles), and solar project components may block this action, resulting in loss of or redirection the sand source for sand dunes and sand sheets (BLM, 2021). Off-site Alternative construction and operation could result in the loss of onsite sand migration and active sand sheets and the loss of sand sources for offsite dunes which could cause the erosion of on- and offsite existing dunes without replacement from upwind sources (BLM, 2021). Design of the Off-site Alternative to minimize damage to dunes and sand sheets and interference and blocking of sand migration would reduce impacts to the sand migration corridor and sand migration zones, however based on the placement of the alternative within the sand migration corridor impacts to sand migration and critical sand dune habitat would be unavoidable. Several DRECP CMAs restrict development and require sediment transport and deposition to be continued on BLM-administered land in these areas, including LUPA-BIO-DUNE-1, LUPA-BIO-DUNE-2, and LUPA-BIO-DUNE-3.

Due to most of the Off-site Alternative site being with a sand transport corridor that contains soils with a high percentage of fine eolian sand, these soils are likely to be more erodible than the soils within the proposed Project site. However, implementation of MM AQ-1, MM BIO-1, MM BIO-3, MM BIO-5, MM HWQ-1, and MM HWQ-5, and applicable local, State, and federal regulations would reduce impacts to less than significant.

Hydrology and Water Quality

In general, the Off-site Alternative is anticipated to use similar amounts of groundwater and result in similar impacts to the groundwater basin. However, as part of the Easley Solar Project CEQA review, The Easley WSA (GSI, 2024; see EIR Appendix G) discusses the occurrence of potential groundwater dependent ecosystems within the Chuckwalla Valley Groundwater Basin. Groundwater dependent ecosystems (GDEs) are defined as ecological communities or species that depend on groundwater emerging from aquifers or on groundwater present near the ground surface. Principal plant types of the CVGB include palo verde (*Parkinsonia florida*), shrubby seepweed (*Suaeda moquinii*), honey mesquite (*Prosopis glandulosa*), desert lavender (*Condea emoryi*), creosote-bush (*Larrea tridentata*), iodine bush (*Allenrolfea occidentalis*), and ironwood (*Olneya tesota*). Screening for these potential GDEs in the Chuckwalla Valley Groundwater Basin for the Easley Project indicated their occurrence was primarily within or adjacent to Palen Dry Lake.

An analysis of depth to groundwater in the regional aquifer within the western portion of the Chuckwalla Valley Groundwater Basin was used to screen areas in which these GDEs could potentially gain access to groundwater from the regional aquifer. The groundwater model (used

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for the Easley WSA Cone of Depression and Cumulative Drawdown Analysis) was used to simulate changes in regional water levels in response to solar project development through expected project decommissioning in the year 2075. The modeling results show that only minor changes in regional groundwater levels (lowering of groundwater levels up 0.25 to 0.5 foot within the areas of the GDEs) would result from development of the planned cumulative solar projects compared to simulated 2075 baseline conditions and would not have an effect on the ability of the GDEs to access groundwater.

The Off-site Alternative would shift the Project location immediately south-southwest of Palen Dry Lake and Big Wash, coincident with the occurrence of some the potential GDEs discussed above (and identified in the Easley WSA). The drawdown of the regional aquifer in the western half of the Chuckwalla Valley Groundwater Basin from development of the planned cumulative solar projects under the Off-site Alternative is anticipated to be similar to the drawdown discussed above. However, because the Project's pumping well(s) would be located closer to the potential GDEs identified in the Chuckwalla Valley Groundwater Basin, there is an increased possibility of impact to any GDEs located in the Palen Dry Lake Area and Big Wash, adjacent to the Offsite Alternative due to the proximity of the Off-site Alternative well's cone of depression to the GDEs.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would not be cumulatively considerable.

Land Use and Planning

The Off-site Alternative would develop a solar project east of SR 177 and east and south of the Desert Center Airport on lands not currently occupied by existing solar projects. At its closest, the Off-site Alternative would be over 3.5 miles from the Lake Tamarisk community, closer than the proposed Project. This alternative would require a new gen-tie line between the project and either the Arica/Victory Pass Substation or SCE's Red Bluff Substation south of I-10.

The proposed Project site is within the Desert Center Area Plan (DCAP). Under DCAP the Project area is designated as open space/conservation, which is the designation applied to nearly all of the DCAP area. The County General Plan applies the same designation to the alternative project site outside of the DCAP. However, most of the land in the Off-site Alternative is under BLM rather than County jurisdiction. If the Offsite Alternative were constructed on the available BLM-administered land, it would need to either avoid placing panels on sensitive resource such as Desert Dry Wash Woodland and aeolian sand transport corridor or require a land use plan amendment to the DRECP. Development of a solar project at the Off-site Alternative site would abut several existing solar projects to the south.

As with the proposed Project, the Off-site Alternative would not cause a significant direct, indirect, or cumulative impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

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Tribal Cultural Resources

Under the Off-site Alternative, the number of CRHR eligible tribal cultural resources within the direct impact area would be more than for the proposed Project, consisting of the PTNCL historic district. Results of the Phase I survey found no evidence of archaeological remains associated with any of these resources within the Project's direct impact area. As such, the direct impacts to tribal cultural resources for this alternative would be the same as for the proposed Project.

Portions of the PTNCL are located within the Off-site Alternative's indirect impact area, similar to the proposed Project. Overall, the direct and indirect impacts of this alternative would be the same as the proposed Project and would be less than significant with mitigation implemented, as defined in Section 3.6 and 3.19. Therefore, the direct and indirect impacts of this alternative would be the same as the proposed Project, less than significant with mitigation implemented as defined above.

The types of potential cumulative impacts would be as described for the proposed Project in Chapter 3, and the alternative's contribution would be cumulatively considerable.

5.3 Comparison of Alternatives

This comparison is based on the assessment of environmental impacts of the Project and each alternative, as identified in Chapter 3, Environmental Analysis, and in Section 5.2, Alternatives Analyzed in Detail.

CEQA requires the following for alternatives analysis and comparison (14 CCR 15126.6[d]):

The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

If the environmentally superior alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative among the other alternatives (14 CCR § 15126.6[e][2]).

The environmental impacts of the Project were compared to those of each alternative to determine the environmentally superior alternative. The environmentally superior alternative was then compared to the No Project Alternative.

5.3.1 Comparison of Alternatives Summary

Each alternative was evaluated for its ability to meet the Applicant's Project objectives and purpose and need for the Project, which are listed in Section 5.1.

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The No Project Alternative (Alternative 1) would fail to meet any of the Project’s objectives and would not achieve any of the environmental benefits of increasing renewable energy generation and energy storage consistent with the State of California’s Renewable Portfolio Standard (RPS).

The Reduced Footprint Alternative (Alternative 2) would meet some of the Project’s objectives. This alternative would remove approximately 90 acres of land, reducing the energy output by up to 25 MW compared to the Project, and the impacts would be similar, therefore, it would meet most of the Project’s objectives, but to a lesser extent than the Project. In particular, the Reduced Footprint Alternative would not meet the objectives related to producing 150 MW, establishing 250 MW of stored electricity, assisting entities in meeting their obligations under California’s RPS and other energy goals, helping to solve the “duck curve” production problem to the same extent as the Project because it would result in the generation of less clean energy than the project.

The Private Linear Facilities Alternative (Alternative 3) would meet the Project’s objectives regarding developing 150 MW and storing up to 250 MW of energy to support meeting California’s energy goals. This alternative would allow the development of the full site but would result in slightly greater impacts due to the requirement for new ground disturbance and a new road in the desert, therefore, it would meet most of the Project’s objectives. However, due to the increased impacts associated with Alternative 3, it would not meet the Project objective to minimize environmental impacts by siting in close proximity to established roads to the same extent as the Project. Additionally, the use of the SCE 161 kV line would potentially require a longer lead time to bring the energy online, therefore, it would meet most of the Project’s objectives.

The Off-site Alternative would meet most Project objectives, but due to the substantially greater severity of impacts to biological resources and likely greater cultural resources and tribal cultural resources impacts, as well as potentially requiring a land use plan amendment, it would not meet the objective of minimizing environmental impacts.

Table 5-1 compares the potential impacts of the Project to the solar facility alternatives. The comparison focuses on the significant and unavoidable impacts of the proposed Project in the top rows of the table and then lists the Project’s less than significant impacts as compared with the impacts of the alternatives.

Table 5-1 Comparison Table

Environmental Resource	Alternative 1: No Project	Alternative 2: Reduced Footprint	Alternative 3: Private Linear Facilities	Alternative 4: Off- site Alternative
Aesthetics	No Impact Fewer	Less than Significant Fewer	S/U Similar	Less than Significant Fewer
Air Quality	No Impact Fewer	Slightly fewer	Slightly greater	Similar

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Environmental Resource	Alternative 1: No Project	Alternative 2: Reduced Footprint	Alternative 3: Private Linear Facilities	Alternative 4: Off- site Alternative
Agriculture and Forestry	Fewer	Similar	Similar	Fewer
Biological Resources	Fewer	Fewer	Slightly greater	Potentially S/U Greater
Cultural Resources	Fewer	Similar	Similar	Greater
Energy	Fewer	Fewer	Similar	Similar
Geology, Soils, and Mineral Resources	Fewer	Fewer	Similar	Greater
Greenhouse Gas Emission	Greater	Greater	Similar	Similar
Hydrology and Water Quality	Fewer	Slightly fewer	Slightly greater	Greater
Land Use and Planning	Similar	Similar	Slightly greater	Greater
Transportation	Fewer	Similar	Similar	Similar
Tribal Cultural Resources	Fewer	Similar	Similar	Greater
Meets Projects Objectives	No	Reduced	Similar	Similar

5.3.2 Comparison of the Proposed Project and No Project Alternative

The No Project Alternative would avoid impacts from the construction, O&M, and future decommissioning of the Project. This alternative would result in no impacts to aesthetics, agriculture and forestry, air quality, biological resources, cultural resources, energy, geology, hazards and hazardous materials, hydrology and water quality, land use, noise, paleontological resources, population and housing, public services and utilities, recreation, transportation, tribal cultural resource and wildfire. It would not realize the beneficial impacts of the Project relating to long-term greenhouse gas emissions with the use of renewable energy generation and storage. Additionally, it is very likely that if the No Project Alternative were selected, another solar project may be proposed in the same location. The No Project Alternative would fail to meet all the Project objectives.

5.3.3 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines requires that an EIR identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, then the EIR must identify which of the other alternatives is environmentally superior.

Table 5-1 summarizes the comparison of impacts between the alternatives to the Project to help determine the environmentally superior alternative. As described in Section 5.2 and presented in the comparative summary in Table 5-1, the environmentally superior alternative for the Project would be the No Project Alternative. No substantially adverse and long-term impacts would

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occur to the environment under the No Project Alternative. The No Project Alternative would also avoid the impacts of the Project analyzed in Chapter 3. However, it is possible that if the Project is not approved, another solar project would be constructed that would have impacts similar to the Project.

In accordance with Section 15126.6 of the State CEQA Guidelines, the Reduced Footprint Alternative would be the Environmentally Superior Alternative since it would result in fewer impacts to aesthetics and biological resources compared to the Project due to the reduced size of the alternative and the slightly reduced workforce. While the Reduce Footprint Alternative is Environmentally Superior, it would result in a reduction of 25 MW of renewable energy compared to the Proposed Project, which reduces its compliance with the most important project objectives (meeting State and federal renewable energy goals to counter climate change).

5.4 Alternatives Considered and Eliminated from Further Analysis

Several alternatives were considered but eliminated from further analysis.

5.4.1 Distributed Commercial and Industrial Rooftop Solar Alternative

A Distributed Commercial and Industrial Rooftop Solar Alternative was analyzed in detail in the Easley Solar Project Final EIR (Riverside County, 2024) and the following summarizes the analysis in the EIR. A Distributed Commercial and Industrial Rooftop Solar Alternative would involve the development of a number of geographically distributed small to medium solar PV systems (100 kilowatt hours to 1 MW) within existing developed areas, typically on the rooftops of commercial and industrial facilities situated throughout Riverside County. Under this alternative, no new land would be developed or altered. However, depending on the type of solar modules installed and the type of tracking equipment used (if any), a similar or greater amount of acreage (i.e., greater than 535 acres of total rooftop area) may be required to attain the project's capacity of 150 MW of solar PV generating capacity. Because of space or capital cost constraints, many rooftop solar PV systems would be fixed-axis systems or would not include the same type of sun-tracking equipment that would be installed in a freestanding utility-scale solar PV project. As a result, they would not attain the same level of efficiency with respect to solar PV generation. A Distributed Commercial and Industrial Rooftop Solar Alternative would generate 150 MW of electricity, but likely for onsite use only, and it would not include up to 250 MW battery storage capacity. This alternative assumes that rooftop development would occur primarily on commercial and industrial structures due to the greater availability of large, relatively flat roof areas necessary for efficient solar installations. Installation would likely be allowed without CEQA documentation, requiring compliance with city or county permit requirements but not project-specific mitigation measures. Residential rooftops are not considered because they offer small areas, there is great variation in construction types, and permitting processes would vary among local jurisdictions. Similar to the proposed Project, this alternative would be designed to operate year-round using PV panels to convert solar energy directly to electrical power. Power generated by such distributed solar PV systems would typically be consumed onsite by the commercial or industrial facility and would not require the construction of a new electrical

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substation or transmission facilities. Under this alternative no CUPs or zone changes would be required. Some challenges or concerns about this alternative are the following:

- The 250 MW of Project energy storage would not be included, and the alternative would not provide a new source of energy storage that assists the state in achieving or exceeding its energy storage mandate. This challenge is clearly explained in a Washington Post article entitled “Rooftop solar panels are flooding California’s grid. That’s a problem.”
- The additional solar generation would likely be installed over a much longer timeframe than that expected for the proposed Project.
- Given the distributed nature of such a network of facilities, construction, management, and maintenance would not be as efficient, and total capital costs would likely be higher.
- The Project proponent does not have immediate control or access to potential urban sites that could accommodate facilities to generate the solar power.
- A distributed system on the scale of the 150 MW project would be cost-prohibitive for one developer to implement due to reduced cost efficiency of distributed solar.
- This alternative theoretically has the potential to generate up to 150 MW of electricity, but the electricity would be used on the sites generating the power and would not achieve the Project objective of assisting California load-serving entities in meeting their obligations under California’s RPS Program.
- Given the size of the proposed Project, the project objectives, and the need to arrange a suitable assemblage of participating commercial and industrial properties, it is impractical and infeasible for the Project proponent to construct a distributed generation project of this scale and still proceed within a reasonably similar timeframe.

For these reasons, the Distributed Commercial and Industrial Rooftop Solar Alternative was considered but not carried forward.

6 List of Preparers and Organizations Consulted

An Environmental Impact Report (EIR) is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation at multiple levels. The County of Riverside (County) is the California Environmental Quality Act (CEQA) lead agency supported by their environmental contractor, Panorama Environmental, Inc. (Panorama), during the CEQA review process. Panorama prepared the Administrative Draft EIR for the County's review and provided technical assistance in the preparation of this document. The preparers and technical reviewers of this document are presented below, along with a list of organizations consulted.

Table 6-1 List of Preparers and Reviewers

Name	Position	Primary Responsibility
County of Riverside – CEQA Lead Agency		
Elizabeth Mora-Rodriguez	Environmental Project Manager	Project Planner
Panorama Environmental, Inc.		
Emily Capello	Director	Project Director; Land Use and Planning
Jessica Koteen	Senior Manager	Project Manager; Geology, Soils and Minerals; Hydrology and Water Quality
Aaron Lui	Senior Manager	Visual Assessment
Sara Sloan	Environmental Planner	Aesthetics; Agriculture and Forestry Resources; Biological Resources
Catherine Medlock	Environmental Planner	Air Quality; Greenhouse Gas Emissions; Energy; Hazards and Hazardous Materials; Transportation; Wildfire
Brent Rosenwald	Environmental Planner	Noise and Vibration; Recreation
Erin Root	Archaeologist	Cultural and Tribal Resources; Paleontological Resources
Nicole Higgins	Environmental Planner	Population and Housing; Public Services and Utilities
Lacar Musgrove	Editor	Technical Review and Editing
Drew Taylor	GIS Specialist	GIS; Graphics
RCH Group		
Mike Ratte	Senior Air Quality Scientist	Air Quality; Greenhouse Gas Emissions
Ironwood		

6 LIST OF PREPARERS AND ORGANIZATIONS CONSULTED

Name	Position	Primary Responsibility
Lehong Chow	Principal/Biologist	Biological Resources Technical Report; Aquatics Delineation Report
TerraCon		
Carl A. Parten	Environmental Professional	Phase I ESA
V. John Romano	Professional Geologist	Desktop Geotechnical Analysis
GSI Water Solutions, Inc.		
Tim Thompson	Principal	Hydrology and Water Quality; Groundwater
Michael McAlpin	Managing Hydrogeologist	Hydrology and Water Quality; Groundwater
Fehr and Peers		
Andrew Scher	Transportation Engineer	Transportation
Chronicle Heritage		
Ben Scherzer	Senior Paleontologist	Paleontological Assessment
Gena Severen, M.A., RPA	Senior Archaeologist	Cultural Resources Assessment

6.1 Agencies Consulted during Preparation of the EIR

The following is a list of organizations consulted during preparation of the EIR:

- Bureau of Land Management, Palm Springs Field Office
- California Department of Fish and Wildlife, Inland Deserts Region
- Native American Heritage Commission