DRAFT
Environmental Impact Report
for

IP Easley LLC's
Easley Renewable Energy Project

(SCH No. 2022-11-0240)

Conditional Use Permit No. 220021
Public Use Permit No. 230002
Variance No. 230003
Development Permit No. 2200016

Lead Agency:

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Technical Assistance by:

Aspen environmental group

January 2024

CONTENTS

LIST OF TABLES

LIST OF FIGURES (LOCATED IN EIR APPENDIX A)

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
AB	Assembly Bill
AC	Alternating current
ACEC	Area of Critical Environmental Concern
ADT	Average daily trips
AF	Acre-feet
AFY	Acre-feet per year
AGL	Above ground level
AGR	Agriculture Supply
ANSI	American National Standards Institute
APLIC	Avian Power Line Interaction Committee
APS	Arizona Public Service
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASTM	American Society of Testing and Materials
ATCM	Airborne Toxic Control Measures
ATCTs	Air Traffic Control Towers
ATV	All-terrain vehicle
BACMs	Best Available Control Measures
BAT	Best Available Technology
BBCS	Bird and Bat Conservation Strategy
BCRs	Bird Conservation Regions
BCT	Best Conventional Pollutant Control Technology
BESS	Battery energy storage system
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	Best management practices
BRTR	Biological Resources Technical Report
CAA	Clean Air Act
CAISO	California Independent Systems Operator
CalARP	California Accidental Release Prevention
Cal-EPA	California Environmental Protection Agency
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCT	Correlated Color Temperature
CDCA	California Desert Conservation Area
CDD	California Desert District
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act

CFC	California Fire Code
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CHP	California Highway Patrol
CIWMB	California Integrated Waste Management Board
CIWMP	County Integrated Waste Management Plan
CMAs	Conservation and Management Actions
CMLUCA	California Military Land Use Compatibility Analyst
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CPRC	California Public Resources Code
CPUC	California Public Utilities Commission
CRIT	Colorado River Indian Tribes
CRPR	California Rare Plant Rank
CRR	Cultural Resources Report
CRWSP	Colorado River Water Supply Plan
CSA	County Service Area
CSP	Concentrating solar power
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agencies
CVC	California Vehicle Code
CVGB	Chuckwalla Valley Groundwater Basin
CWA	Clean Water Act
DC	Direct current
DCAP	Desert Center Area Plan
DCSL	Desert Center Sanitary Landfill
DDWW	Desert dry wash woodland
DEH	Department of Environmental Health
DESCP	Drainage Erosion and Sedimentation Control Plan
DFA	Development Focus Area
DNI	Direct normal irradiance
DOC	California Department of Conservation
DPM	Diesel particulate matter
DPV	Devers–Palo Verde
DRECP	Desert Renewable Energy Conservation Plan
DSSF	Desert Sunlight Solar Farm
DTSC	Department of Toxic Substance Control
DWMA	Desert Wildlife Management Area
DWR	Department of Water Resources
EA	Environmental Assessment
EAP	Energy Action Plan
EID	Emerging Infectious Diseases
EIR	Environmental Impact Report
ELDP	Environmental Leadership Development Project
EMF	Electric and magnetic fields
EPA	Environmental Protection Agency
ESA	Endangered Species Act

ESS	Energy Storage Systems
FAA	Federal Aviation Administration
FED	Federal Land Manager Environmental Database
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zones
FLPMA	Federal Land Policy and Management Act
FMMP	Farmland Mapping and Monitoring Program
FMPP	Fire Management and Prevention Plant
FRAs	Federal Responsibility Areas
FUDS	Formerly Used Defense Sites
GCR	Ground cover ratio
GHG	Greenhouse gas
GMRMP	Groundwater Monitoring, Reporting, and Mitigation Plan
GPA	General Plan Amendment
GSAs	Groundwater Sustainability Agencies
GSI	Groundwater References
GSP	Groundwater Sustainability Plan
GWR	Groundwater Recharge
Ha	High Sensitivity
HEPA	High-efficiency particulate air
HFCs	hydrofluorocarbons
HLZ	Helicopter Landing Zone
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HMP	Hazardous Materials Plan
HR	Hydrologic Region
HVAC	Heating, Ventilation and Air Conditioning
HWCL	Hazardous Waste Control Law
I-10	Interstate 10
IBC	International Building Code
ICC	International Code Council
IDB	Infectious Diseases Branch
IEEE	Institute of Electrical and Electronics Engineers
IIPP	Injury and Illness Prevention Program
IND	Industrial Service Supply
IWMB	Integrated Waste Management Board
IWMP	Integrated Weed Management Plan
JTNP	Joshua Tree National Park
KOPs	Key Observation Points
LADWP	Los Angeles Department of Water and Power
LAMP	Local Agency Management Program
LBNL	Lawrence Berkeley National Laboratory
LD-IGR	Local Development – Intergovernmental Review
LOS	Level of Service
LR2000	BLM Land and Records System
LRAs	Local Responsibility Areas
LSAA	Lake and Streambed Alteration Agreement
LSTs	Localized Significance Thresholds

LTDR	Lake Tamarisk Desert Resort
LTVAs	Long Term Visitor Areas
LU	Land Use
LUPA	Land Use Plan Amendment
MD	Munitions debris
MEC	Munitions and explosives of concern
MET	Meteorological
MLRS	Mineral and Land Records System
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMs	Mitigation measures
MOSE	Multipurpose Open Space Element
MRZ	Mineral Resource Zone
MUC-M	Multiple-use Class – Moderate Use
MUN	Municipal and Domestic Supply
MW	Megawatts
MWD	Metropolitan Water District
NBMP	Nesting Bird Management Plan
NCCP	Natural Community Conservation Plan
NCP	National Contingency Plan
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electric and Safety Code
NFPA	National Fire Protection Association
NFWF	National Fish and Wildlife Foundation
NHMLAC	Natural History Museum of Los Angeles County
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NPS	National Park System
NRCS	Natural Resources Conservation Service
NSHM	National Seismic Hazard Model
OEHHA	Office of Environmental Health Hazard Assessment
OHV	Off-highway vehicle
OPGW	Optical ground wire
OPLMA	Omnibus Public Lands Management Act
OPR	Office of Planning and Research
OS	Open Space Element
OSHA	Occupational Safety and Health Administration
OS-RUR	Open Space, Rural
OWTS	Onsite Wastewater Treatment Systems
PCBs	Polychlorinated biphenyls
PERP	Portable Equipment Registration Program
PFCs	perfluorocarbons
PFYC	Potential Fossil Yield Classification

PM10	Particulate matter (less than 10 microns in diameter)
PM2.5	Fine particulate matter (less than 2.5 microns in diameter)
POD	BLM Plan of Development
PPA	Power Purchase Agree
PPE	Personal protective equipment
PPV	Peak particle velocity
PRIMP	Paleontological resource impact mitigation program
PRMP	Paleontological Resource Monitoring and Mitigation Plan
PRPA	Paleontological Resources Preservation Act
PUP	Public Use Permit
PV	Photovoltaic
PVMGB	Palo Verde Mesa Groundwater Basin
RCDWR	Riverside County Department of Waste Resources
RCFD	Riverside County Fire Department
RCGP	Riverside County General Plan
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
REAT	Renewable Energy Action Team
RMPs	Resource Management Plans
ROD	Record of Decision
ROG	Reactive organic gases
ROW	Right-of-Way
RPS	Renewable Portfolio Standard
RTP/SCS	Regional Transportation Plan and Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBCM	San Bernardino County Museum
SCADA	Supervisory Control and Data Acquisition System
SCAN	Soil Climate Analysis Network
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SDC	Seismic Design Category
SDNHM	San Diego Natural History Museum
SEGS	Solar Energy Generating System
SGMA	Sustainable Groundwater Management Act
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Application and Report Tracking System
SMD	Sonoran and Mojave Deserts
SMP	Soil Management Plan
SMRA	Special Recreation Management Area
SMZ	Sand migration zone
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SR-177	State Route 177
SRA	State Responsibility Area
SRPs	Special Recreation Permits
SSURGO	Soil Survey Geographic
STATSGO	State Soil Geographic

SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TCA	Tortoise Conservation Area
TDM	Transportation Demand Management
TDS	Total Dissolved Solids
TISG	Transportation Impact Study Guide
TNW	Traditional navigable waters
TP	Technical Policy
TSCA	Toxic Substances Control Act
UAS	Unmanned Aircraft System
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USDA	U.S. Department of Agriculture
USDOT	United States Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USTs	Underground storage tanks
UXO	Unexploded ordnance
VCR	Visual contrast rating
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
VPLs	Variance Process Lands
VR	Visual Route
VRM	Visual Resource Management
VRMP	Vegetation Resources Management Plan
WARM	Warm Freshwater Habitat
WDR	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Program
WILD	Wildlife Habitat
WSA	Water Supply Assessment
WSC	Western Science Center
WWEC	West-Wide Energy Corridor
WWII	World War II

EXECUTIVE SUMMARY

ES.1 Introduction

IP Easley, LLC (Applicant or Proponent), a subsidiary of Intersect Power, LLC, proposes to construct, operate and decommission the Easley Renewable Energy Project (Easley Project or Project), a utility-scale solar photovoltaic (PV) electrical generating and storage facility, and associated infrastructure to generate and deliver renewable electricity to the statewide electricity transmission grid.

The proposed Project application area is located on approximately 3,735 acres of private and BLM-administered land, in Riverside County north of Desert Center, California (see Figure 2-1 in Appendix A). The Project would generate up to 400 MW and store up to 650 megawatts (MW) of renewable electricity via arrays of solar photovoltaic (PV) panels, battery energy storage system (BESS), and appurtenant facilities. A 6.7-mile 500 kilovolt (kV) generation-tie (gen-tie) line would mainly traverse across the Oberon Renewable Energy Project site (south of the Project site) and connect into an existing substation that is on the Oberon Project site. The Oberon Project is a solar PV and energy storage facility owned by Intersect Power, which began commercial operation in fall 2023. From the Oberon onsite substation, the power generated by the Easley Project would be transmitted to the Southern California Edison (SCE) Red Bluff Substation via the existing Oberon 500 kV gen-tie line (see Figure 2-2 in Appendix A).

The Applicant would site the solar facility, BESS, onsite substation, and a short portion of a 500 kV gen-tie line within the County of Riverside's jurisdiction, requiring a Conditional Use Permit (CUP 220021), Public Use Permit (PUP 230002), Variance (VAR 230003), and Development Agreement (DA 2200016) for construction, operation, and decommissioning.

Public lands within the Project solar application area include lands designated as Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD), and thus, have been targeted for renewable energy development. Because the proposed Project is partially located on federal land under management of the U.S. Bureau of Land Management (BLM), the BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq.

Depending on the timing of the interconnection agreement, the Easley Project could be operational as early as late 2025. The Project would operate for a minimum of 35 years and up to 50 or more years. At the end of its useful life, the Project would be decommissioned, and the land returned to its pre-Project conditions. Revegetation would be conducted in accordance with the Decommissioning and Revegetation Plan.

ES.2 Project Objectives

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

- Support achievement of President Biden's goal of a zero-carbon power sector by 2035 and zero-carbon economy by 2050 through development of clean electricity (power sector);
- Assist the nation to meet its Nationally Determined Contribution commitments under Article 4 of the Paris Climate Agreement to achieve a 50 to 52 percent reduction in U.S. greenhouse gas pollution from 2005 levels by 2030, and to achieve 100 percent carbon pollution-free electricity by 2035 in the electricity sector;
- Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;

- Deliver up to 400 MW of affordable, wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
- Assist with achieving California's renewable 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;
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 650 MW of 2-hour and/or 4-hour 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;
- Bring living-wage jobs to Riverside County; and
- 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 State CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was issued on November 14, 2022 (State Clearinghouse Number 2022-11-0240). The NOP briefly described the proposed 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 EIR.

ES.3.2 CEQA Public Scoping

The public scoping period commenced on November 14, 2022, with the issuance of the NOP, which summarized the proposed Project and requested comments from interested parties. Riverside County conducted a public scoping meeting in-person at the Riverside County Planning Department on December 5, 2022, 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 scoping meeting was also made available to attend virtually. Approximately 20 people attended the scoping meeting in person and virtually. The public scoping period ended on January 6, 2023. In total, 46 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 at the scoping meeting and during the public scoping period were regarding these resource topics: project description, purpose and need, visual resources, air quality and greenhouse gas emissions, cultural and tribal cultural resources, existing and planned land uses, energy, noise and vibration, public health and safety, recreation and off-highway vehicle use, transportation and traffic, hazards and hazardous materials, hydrology and water quality, soils, biological resources, mitigation measures, indirect and cumulative impacts, alternatives, and permitting and con-

sultation, among other issues. A scoping summary report is provided in EIR Appendix B. Public scoping comments are summarized in EIR Section 1.7 (Scoping Comments) and in the individual resource topics addressed in Chapter 3 (Environmental Analysis).

ES.4 Proposed Project

ES.4.1 Project Location

The Easley Project, including the solar and energy storage facilities are located on private and BLM-administered land in Riverside County north of Interstate 10 (I-10) and approximately 2 miles north of the town of Desert Center, California (See Figure 2-1, Project Vicinity, in Appendix A). Nearby land uses include previously developed or developing solar facilities, transmission lines, fallow and active agriculture, and residences. The private parcels consist of primarily manmade features that include deciduous orchard/ fallow agriculture or developed areas. Lake Tamarisk Desert Resort is located approximately 750 feet from the southwest corner of the proposed Project.

The existing Desert Sunlight and Desert Harvest solar projects are north of the proposed Project and the Athos Renewable Energy Project is located to the east. Solar projects that are under construction nearby include the Oberon Renewable Energy Project to the southeast and the Arica and Victory Pass Solar Projects to the southeast. The Sapphire Solar Project, proposed by EDF Renewables, is adjacent to the northern area of the Easley Project. Figure 2-4 (Desert Center Solar Projects & DRECP Context) shows the proposed Easley Project in relation to other existing, approved, and proposed solar facilities in eastern Riverside County and illustrates the proposed consolidation of the gen-tie line corridors.

ES.4.2 Project Components

The major components of the proposed Project are listed below and are described in greater detail in Chapter 2, Description of the Proposed Project:

- **Solar and Energy Storage Facility** (990 acres of private land, 2,745 acres of BLM-administered land):
  - **Solar array field**, which may include thin-film PV panels, crystalline silicon panels, or any other commercially available PV technology. The proposed panel mounting system will depend on the PV panels ultimately selected but is expected to be single-axis trackers with a portrait module orientation. Either mono-facial or bi-facial modules could be used, and modules would either be mounted as single panels or stacked two high.
  - **Power conversion stations** on a concrete pad or steel skid for each 2 to 5 MW increment of generation, containing up to 6 inverters, a transformer, a battery enclosure, a switchboard 8 to 11 feet high, a shade structure (depending on meteorological conditions), and a security camera at the top of an approximately 20-foot wood or metal pole.
  - System of **34.5 kV interior collection power lines** located between inverters and substations, located either underground or installed overhead on wood poles.
  - At least one, and up to 2, **onsite substation yards**, each substation and associated equipment would require 25 acres within the Project site. Electrical transformers, switchgear, and related substation facilities would transform 34.5 kV medium-voltage power from the Project's delivery system to the 500 kV gen-tie system.
  - **Upgrades to the Oberon Substation** within its fence line to accommodate interconnection of the Easley 500 kV gen-tie line.

- One **operations and maintenance (O&M) building** for Project security, employee offices, and parts storage. The O&M building would be constructed on a concrete foundation, approximately 6 feet by 20 feet in size and approximately 15 feet at its tallest point. The O&M facility would also include four to six 40-foot CONEX containers spaced about 15 feet apart with some of the space between covered by shade structures. The location of the O&M building within the Project site has not yet been determined, but it is anticipated to be near the main substation yard.
- **12 kV electrical distribution line** would supply electricity to the O&M building and substation via a new overhead or underground 12 kV distribution line from the existing SCE distribution system adjacent to the solar facility site.
- **Supervisory Control and Data Acquisition System (SCADA) and telecommunications facilities** to allow remote monitoring of facility operation and/or remote control of critical components. The fiber-optic or other cabling typically would be installed in buried conduit within the access road, leading to a SCADA system cabinet centrally located within the Project site or a series of appropriately located SCADA system cabinets constructed within the O&M building. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers.
- **Meteorological (MET)** data collection system with up to MET stations throughout the solar facility. Each MET station would be up to 10 feet tall with multiple weather sensors.
- **Battery energy storage system (BESS)**, requiring up to 35 acres, located near the substation. utilizing an AC-coupled battery or other similar storage system housed in electrical enclosures and capable of storing up to 650 MW of power for up to 4 hours.
- **Perimeter fencing** would be installed around the boundary of the developed areas using chain-link perimeter fences.
- **Newly constructed access roads** from Highway 177/Rice Road and throughout the interior of the Project limits. Ingress/egress would be accessed via locked gates located at multiple points.
- **Nighttime security lighting** limited to areas required for operation, safety, or security. Lighting would be directed away or shielded from major roadways or possible outside observers on adjacent properties. Lighting would be controlled by switches, motion detectors, etc., to light the areas only when required. Portable lighting may be used occasionally and temporarily for maintenance activities during operations.
- **Site security system** includes infrared security cameras, motion detectors, and/or other similar technology to allow for monitoring of the site through review of live footage 24 hours a day, 7 days a week. Such cameras or other equipment would be placed along the perimeter of the facility and/or at the inverters.

- **New 500 kV Gen-tie Line** (approximately 6.7 miles, within a 175-foot right-of-way [ROW] on BLM-administered land).

ES.4.3 Applicant Proposed Measures

As part of the Project, the Applicant proposes to implement measures to ensure the Project would occur with minimal environmental impacts and in a manner consistent with applicable rules and regulations. These measures would be implemented during the design, construction, and operation of the Project.

The Applicant Proposed Measures (APMs) listed below are considered part of the Project and are considered in the evaluation of environmental impacts (see Section 3, Environmental Analysis). Project

approval would be based upon the Applicant adhering to the Project as described in this document, including this project description and the APMs, as well as any mitigation measures that may be imposed as conditions of approval.

APM AES-1 **Weathering Coating of Security Fencing.** To reduce operational visual impacts of the Project to the community of Lake Tamarisk, the Project owner will apply a weathering coating (Natina or substantially similar) to the Project security fencing located closest to the Community. The total length of fencing that will be coated is approximately one mile and may be contiguous or separate sections, depending on the final Project design and the location(s) of most visible security fencing.

APM NOISE-1 **Construction Timing**. Applicant will avoid or minimize use of any impact hammer for pile driving or other equipment similarly capable of producing disruptive noise during construction activities within a one-mile radius from the residential parcel on the northeast corner of the Lake Tamarisk Desert Resort community during the winter months of highest residency (November 1 to March 31). If based on the final construction schedule, use of such equipment is necessary within this geographic area during the aforementioned time period, the Applicant will avoid or minimize this construction activity prior to 7:00 am and after 6:00 pm. The Applicant will also avoid nighttime equipment deliveries between 10:00pm and 7:00am.

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 Lake Tamarisk Alternative, and an evaluation of 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: Lake Tamarisk Alternative.** Under the Lake Tamarisk Alternative, the Project would be similar to the proposed Project but would move the onsite substation and BESS and would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk, such that the solar panels, substation, and BESS would be farther from the community of Lake Tamarisk compared to the proposed Project. The electrical output and energy storage capacity would not be appreciably reduced compared to the proposed Project.

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 alternatives were considered but eliminated from further evaluation, for the reasons explained below:

- **Federal Land Alternative.** An alternative site on BLM-managed lands farther from the community of Lake Tamarisk Desert Resort would not likely reduce any potentially significant impacts from the proposed Project, as the proposed Project is sited primarily on previously disturbed private lands and BLM-administered lands within a DFA. Also, it may not be feasible to find an alternative site on BLM-managed lands, because most of the land within the DFA is in use, proposed for other solar energy projects, have constraints with implementation of DRECP Conservation and Management Actions (CMAs), or are within mountainous areas and areas with hydrological concerns. The Federal Land Alternative would not present significant environmental advantages over the proposed Project and has thus been eliminated from consideration.
- **Private Land Alternative.** An alternative that would develop the solar facility on other private lands elsewhere was not considered further, because it is considered speculative and infeasible based on the number of landowners whose agreement would be required. In addition, another site, such as one farther from the community of Lake Tamarisk, would likely have environmental impacts equal to or greater than the proposed site, which is located on disturbed private land and BLM-administered land that is within a DRECP DFA, and thus, targeted for renewable energy development.
- **Alternative Solar Technologies.** The following alternative solar technologies have been screened and eliminated from detailed analysis since they are considered infeasible.
  - **Solar Power Tower Technology.** Solar power tower technology is a concentrating solar power (CSP) technology that tracks the sun and focuses solar energy on a central receiver atop a high tower to heat a transfer fluid to produce steam to run a power generator. This alternative was eliminated from consideration because no substantial reduction in impacts would occur under this alternative technology and visual impacts would be greater due to the height of the towers. Due to the extent of the facility, the height of the power towers and a greater potential for glare, impacts to the Desert Center Airport would be potentially greater under this alternative. It has also been suggested that power tower projects pose a greater risk to avian species by creating an invisible zone where the concentrated solar power can singe feathers and interfere with flight.
  - **Solar Parabolic Trough Technology**. Parabolic trough technology is a CSP technology that uses large U-shaped (parabolic) reflectors (focusing mirrors) that have fluid-filled pipes running along their center, or focal point. Parabolic trough technology has been eliminated from consideration because it would have the potential for more severe impacts than the proposed solar PV technology due to more dramatic degradation of visual resources (due to use of mirrors), more extensive ground disturbance, increased industrial construction for the generators, and use of potentially hazardous heat transfer fluids.
  - **Distributed Solar Technology.** A distributed solar alternative would use PV panels installed on residential, commercial, or industrial building rooftops or in other areas such as parking lots or disturbed areas adjacent to existing structures. Distributed generation projects cannot meet one of the fundamental objectives of a utility-scale solar project: to provide renewable energy to utility off-takers and their customers. Other challenges associated with the implementation of a distributed solar technology with comparable output to the proposed Project include widely varying codes, standards, and fees; environmental requirements and permitting concerns; interconnection of distributed generation; inefficiencies; and integration of distributed generation. As a result, this technology was eliminated from detailed analysis.

- **Alternative Renewable Energy Technologies.** Alternative renewable energy technologies, such as wind, geothermal, biomass, tidal, and wave power technologies, have been eliminated from consideration because they are not within the Applicant's area of expertise or not feasible at the Project site.
- **Conservation and Demand-Side Management.** Affecting consumer choice to the extent that would be necessary for a conservation and demand-side management solution would be beyond the control of BLM, the County of Riverside, and/or the Applicant. Conservation and demand-side management has been eliminated from detailed analysis because it is considered remote or speculative and would not meet the stated Project objectives.
- **Earthen Berms.** Installation of earthen berms to be used for visual screening of the solar and BESS facility from the community would change stormwater flow on and offsite, which could affect surface water flow and flooding of adjacent parcels and could also alter vegetation patterns. Furthermore, given the desert environment and sandy soil, an earthen berm would be difficult to stabilize with vegetation, and therefore, could become a source of erosion and sediment. The changed water flow paths due to adding berms would also have the potential to increase erosion due to water in new areas. Due to creation of greater hydrological and erosion concerns, use of earthen berms as a project design feature has been eliminated from consideration.

ES.6 Environmental Impacts

Detailed descriptions of impacts of proposed 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
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

ES.7.1 Alternatives Impact Summary

Alternative 1: No Project Alternative. No substantially adverse and long-term impacts would occur to the environment as a result of the No Project Alternative. However, the No Project Alternative would not achieve any of the environmental benefits of increasing renewable energy generation consistent with federal goals and the State of California's Renewable Portfolio Standard (RPS) and helping to alleviate the "duck curve" problem.

Alternative 2: Lake Tamarisk Alternative. Alternative 2 would have similar types of impacts to the proposed Project, but would disturb a slightly smaller area within the Project application area and would move solar panel development and associated construction disturbances farther from the community of Lake Tamarisk. This alternative would not reduce any of the Project's significant and unavoidable impacts to a less-then-significant level or result in a change to overall impact classifications or significance conclusions.

ES.7.2 Comparison of Alternatives to the Proposed Project

Each alternative was evaluated for its ability to meet the Applicant's Project objectives and purpose and need for the proposed Project, which are listed in Section ES.2 (Project Objectives). The No Project Alternative would fail to meet any of the Project's objectives and would not achieve any of the environmental benefits increasing renewable energy generation consistent with federal goals and the State of California's Renewable Portfolio Standard (RPS) and helping to alleviate the "duck curve" problem.

The Lake Tamarisk Alternative would meet all Project objectives. The Lake Tamarisk Alternative would not reduce any of the Project's significant and unavoidable impacts to a less-then-significant level or result in a change to overall impact classifications or significance conclusions.

Table ES-1 compares the potential impacts of the proposed Project to the alternatives evaluated. The table compares the project alternatives based on differences in the level of similar impacts resulting from ground disturbance, as well as the size and duration of construction activities, operations and decommissioning.

ES.7.3 Environmentally Superior Alternative

Section 15126.6 of the State CEQA Guidelines requires 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 proposed 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 EIR Chapter 3. It is possible that if the proposed Project were not approved, another solar project would be constructed, which would have impacts similar to the Project.

In accordance with section 15126.6 of the State CEQA Guidelines, ***the Lake Tamarisk Alternative would be the Environmentally Superior Alternative*** since it would result in fewer impacts to Aesthetics and Noise and Vibration than the proposed Project and would reduce the visual impacts of the Project on the Lake Tamarisk Desert Resort, although the visual impacts would remain significant and unavoidable. The Lake Tamarisk Alternative would have a slightly reduced level of ground disturbance and would be a greater distance from the residences in Lake Tamarisk, which would reduce construction-related disturbances such as noise.

The Lake Tamarisk Alternative, like the proposed Project, would meet all of the Project objectives, would be feasible, would generate the same amount of renewable energy and would have the same energy storage capacity. Because the Lake Tamarisk Alternative would achieve the Project objectives and would have fewer impacts when compared to the proposed Project, the Lake Tamarisk Alternative is considered environmentally preferred.

ES.7.4 Summary of Impacts and Mitigation Measures (includes Impact Summary Table)

Table ES-2 identifies the impact statements addressed for each resource topic and presents the conclusions regarding the significance of the impacts during both construction and O&M. Where mitigation measures apply, these are identified. In instances where the level of significance would vary (e.g., depending on location of a viewer of the Project) the worst case is used. The cause and nature of the impacts and the details on what is included in the mitigation measures are provided in the individual resource discussions in Chapter 3 of the EIR, organized by resource topic. Decommissioning activities and potential impacts would be similar to the activities and resulting potential impacts during construction.

Table ES-2 applies to the proposed Project and the Lake Tamarisk Alternative (Alternative 2). Potential impacts from the Project would be eliminated under the No Project Alternative and no mitigation would be implemented.

Table ES-1 Summary of Impacts and Mitigation Measures

Aesthetics		
Impact AES-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? (Public views are those that are experienced from publicly accessible vantage points). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?*		
■ Construction and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-5	Vegetation Resources Management Plan
	MM AQ-1	Fugitive Dust Control Plan
	MM AES-3	Night Lighting Management Plan

■ O&M: *Significant and Unavoidable*		
Applicant Proposed Measure	APM VIS-1	Weathering Coating of Security Fencing.
Mitigation Measures	MM AES-1 MM AES-2	Surface Treatment of Project Structures and Buildings Project Design
Impact AES-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: Less than Significant		
■ O&M: Less than Significant with Mitigation		
Applicant Proposed Measure	APM VIS-1	Weathering Coating of Security Fencing.
Mitigation Measures	MM AES-1 MM AES-2 MM AES-3	Surface Treatment of Project Structures and Buildings Project Design Night Lighting Management Plan
Impact AES-2. *Would the Project result in the creation of an aesthetically offensive site open to public view?*		
■ The aesthetic effects visible to the public are assessed from representative viewpoints and are discussed under Impact Criterion AES-3		
Impact AES-3. *Would the Project expose residential property to unacceptable light levels?*		
■ The Project's night lighting effects are discussed under Impact Criterion AES-4		
Impact AES-4. *Would Project construction, operation, or decommissioning result in an inconsistency with regulatory plans, policies, and standards applicable to the protection of aesthetics?*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM AES-1 MM AES-3	Surface Treatment of Project Structures and Buildings Night Lighting Management Plan
Cumulative Impacts		
Significance after Mitigation	Cumulatively Considerable (*Significant*) visual impacts when viewed by sensitive viewing populations along I-10 and SR-177, from nearby residences, from portions of JTNP, and in the surrounding mountains and wilderness	
Applicant Proposed Measure	APM VIS-1	Weathering Coating of Security Fencing.
Mitigation Measures	MM AES-1 MM AES-2 MM AES-3 MM BIO-5	Surface Treatment of Project Structures and Buildings Project Design Night Lighting Management Plan Vegetation Resources Management Plan
Agriculture and Forestry		
Impact AG-1. *The Project would conflict with existing zoning for agricultural use, a Williamson Act contract, or land within an agricultural preserve.*		
■ Construction, O&M, and Decommissioning: Significant and Unavoidable		
Mitigation Measures	No feasible mitigation would reduce this impact to a less-than-significant level, however, cancellation of the Williamson Act contracts would avoid this impact.	
Impact AG-2. *The Project would cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625, "Right-to-Farm").*		
■ Construction, O&M, and Decommissioning: Less than Significant		
Impact AG-3. *The Project would conflict with land within a Riverside County Agricultural Preserve*		

■ Construction, O&M, and Decommissioning: Significant and Unavoidable		
Mitigation Measures	No feasible mitigation would reduce this impact to a less-than-significant level, however, cancellation of the Williamson Act contracts would avoid this impact.	
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Air Quality		
Impact AQ-1: *Would the Project conflict with or obstruct implementation of the applicable air quality plan?*		
■ Construction, O&M, and Decommissioning: Less than Significant		
Impact AQ-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?*		
■ Construction and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM AQ-2	Control On-Site Off-Road Equipment Emissions
■ O&M: Less than Significant		
Impact AQ-3: *Would the Project expose sensitive receptors to substantial pollutant concentrations?*		
■ Construction and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM AQ-2	Control On-Site Off-Road Equipment Emissions
■ O&M: Less than Significant		
Impact AQ-4: *Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*		
■ Construction, O&M, and Decommissioning: Less than Significant		
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM AQ-2	Control On-Site Off-Road Equipment Emissions
Biological Resources		
Impact BIO-1: *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. Fish and Wildlife Service?*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-6	Wildlife Protection
	MM BIO-8	Bird and Bat Conservation Strategy (BBCS)
	MM BIO-9	Gen-tie lines
	MM BIO-10	Burrowing Owl Avoidance and Relocation
	MM BIO-11	Desert Kit Fox and American Badger Relocation
	MM BIO-12	Streambed and Watershed Protection
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 17.12)?*		

■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-6	Wildlife Protection
	MM BIO-7	Desert Tortoise Protection
	MM BIO-8	Bird and Bat Conservation Strategy (BBCS)
	MM BIO-9	Gen-tie lines

Impact BIO-3: *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.*

■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-6	Wildlife Protection
	MM BIO-7	Desert Tortoise Protection
	MM BIO-8	Bird and Bat Conservation Strategy (BBCS)
	MM BIO-9	Gen-tie lines
	MM BIO-10	Burrowing Owl Avoidance and Relocation
	MM BIO-11	Desert Kit Fox and American Badger Relocation

Impact BIO-4: *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?*

■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan

Impact BIO-5: *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?*

■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-12	Streambed and Watershed Protection

Impact BIO-6: *Would the Project conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts

	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-6	Wildlife Protection
	MM BIO-7	Desert Tortoise Protection
	MM BIO-8	Bird and Bat Conservation Strategy (BBCS)
	MM BIO-9	Gen-tie lines
	MM BIO-10	Burrowing Owl Avoidance and Relocation
	MM BIO-11	Desert Kit Fox and American Badger Relocation
	MM BIO-12	Streambed and Watershed Protection
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM BIO-1	Biological Monitoring
	MM BIO-2	Worker Environmental Awareness Training
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-4	Integrated Weed Management Plan
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-6	Wildlife Protection
	MM BIO-7	Desert Tortoise Protection
	MM BIO-8	Bird and Bat Conservation Strategy (BBCS)
	MM BIO-9	Gen-tie lines
	MM BIO-10	Burrowing Owl Avoidance and Relocation
	MM BIO-11	Desert Kit Fox and American Badger Relocation
	MM BIO-12	Streambed and Watershed Protection
Cultural Resources and Tribal Cultural Resources		
Impact CUL-1: *The Project would cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5.*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM AES-1	Surface Treatment of Project Structures and Buildings.
	MM AES-2	Project Design
Impact CUL-2: *The Project would cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5.*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM AES-1	Surface Treatment of Project Structures and Buildings.
	MM AES-2	Project Design
	MM CUL-1	Project Archaeologist and Cultural Resource Monitoring Plan
	MM CUL-2	Develop and Implement Cultural Resources Environmental Awareness Training
	MM CUL-3	Archaeological Monitoring
	MM CUL-4	Unanticipated Discovery
	MM CUL-5	Treatment of Human Remains
	MM CUL-6	Phase IV Monitoring Report
Impact CUL-3: *The Project would cause a substantial adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations, Section 15064.5.*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM CUL-1	Project Archaeologist and Cultural Resource Monitoring Plan
	MM CUL-2	Develop and Implement Cultural Resources Environmental Awareness Training
	MM CUL-3	Archaeological Monitoring
	MM CUL-4	Unanticipated Discovery

	MM CUL-5	Treatment of Human Remains
	MM CUL-6	Phase IV Monitoring Report
Impact CUL-4: *The Project would disturb any human remains, including those interred outside of dedicated cemeteries.*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM CUL-5	Treatment of Human Remains
Impact TCR-1: *The Project would cause adverse change in the significance of a Tribal Cultural Resource determined by the Lead Agency.*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM CUL-1	Project Archaeologist and Cultural Resource Monitoring Plan
	MM CUL-2	Develop and Implement Cultural Resources Environmental Awareness Training
	MM CUL-3	Archaeological Monitoring
	MM CUL-4	Unanticipated Discovery
	MM CUL-5	Treatment of Human Remains
	MM CUL-6	Phase IV Monitoring Report
	MM TCR-1	Native American Monitor
	MM TCR-2	Artifact Disposition
Impact TCR-2: *The Project would cause adverse change in the significance of a Tribal Cultural Resource eligible for or listed on the CRHR or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k).*		
■ Construction, O&M, and Decommissioning: Less than Significant with Mitigation		
Mitigation Measures	MM CUL-1	Project Archaeologist and Cultural Resource Monitoring Plan
	MM CUL-2	Develop and Implement Cultural Resources Environmental Awareness Training
	MM CUL-3	Archaeological Monitoring
	MM CUL-4	Unanticipated Discovery
	MM CUL-5	Treatment of Human Remains
	MM CUL-6	Phase IV Monitoring Report
	MM TCR-1	Native American Monitor
	MM TCR-2	Artifact Disposition
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM AES-1	Surface Treatment of Project Structures and Buildings.
	MM AES-2	Project Design
	MM CUL-1	Project Archaeologist and Cultural Resource Monitoring Plan
	MM CUL-2	Develop and Implement Cultural Resources Environmental Awareness Training
	MM CUL-3	Archaeological Monitoring
	MM CUL-4	Unanticipated Discovery
	MM CUL-5	Treatment of Human Remains
	MM CUL-6	Phase IV Monitoring Report
	MM TCR-1	Native American Monitor
	MM TCR-2	Artifact Disposition

Energy

Impact E-1. *Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact E-2. *Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

- Construction, O&M, and Decommissioning: No impact

Cumulative Impacts

Significance Beneficial (no mitigation required)

Geology, Soils and Mineral Resources

Impact GEO-1. *The Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving strong seismic ground shaking.*

- Construction, O&M, and Decommissioning: Less than Significant

Impact GEO-2. *The Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.*

- Construction, O&M, and Decommissioning: Less than Significant

Impact GEO-3. *Would the Project result in substantial soil erosion or the loss of topsoil?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM BIO-1	Biological Monitoring
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-5	Vegetation Resources Management Plan
	MM HWQ-1	Drainage Erosion and Sedimentation Control Plan
	MM HWQ-5	Project Drainage Plan

Impact GEO-4. *Would the Project be located on geologic units 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?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact GEO-5. *Would the Project be located on expansive soil, as defined in Table 18-1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact GEO-6. *Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact MR-1. *Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts

Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM BIO-1	Biological Monitoring
	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-5	Vegetation Resources Management Plan.
	MM HWQ-1	Drainage Erosion and Sedimentation Control Plan
	MM HWQ-5	Project Drainage Plan

Greenhouse Gas Emissions

Impact GHG-1: *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact GHG-2: *Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts

Significance	Not Cumulatively Considerable (Less than Significant)

Hazards and Hazardous Materials

Impact HAZ-1. *Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

- Construction and Decommissioning: Less than Significant with Mitigation
- O&M: Less than Significant

Mitigation Measures	MM HAZ-1	UXO Identification, Training, and Reporting Plan

Impact HAZ-2. *Would the Project 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, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM HAZ-2	Worker Environmental Awareness Program
	MM FIRE-1	Fire Safety

Impact HAZ-3. *Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

- Construction and Decommissioning: Less than Significant with Mitigation
- O&M: No Impact

Mitigation Measures	MM HAZ-1	UXO Identification, Training, and Reporting Plan
	MM HAZ-2	Worker Environmental Awareness Program
	MM HAZ-3	Soil Management Plan

Impact HAZ-4. *Would the Project be located within 2 miles of a public use airport and result in a safety hazard or excessive noise for people residing or working in the Project area?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact HAZ-5. *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact HAZ-6. *Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM FIRE-1	Fire Safety

Cumulative Impacts

Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)

Mitigation Measures	MM AQ-1	Fugitive Dust Control Plan
	MM FIRE-1	Fire Safety
	MM HAZ-1	UXO Identification, Training, and Reporting Plan
	MM HAZ-2	Worker Environmental Awareness Program
	MM HAZ-3	Soil Management Plan

Hydrology and Water Quality

Impact HWQ-1. *Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-13	Streambed and Watershed Protection
	MM HWQ-1	Drainage Erosion and Sedimentation Control Plan
	MM HWQ-2	Septic System Review and Permitting
	MM HWQ-3	Palo Verde Mesa Groundwater Basin (PVMGB) Protection
	MM HWQ-5	Project Drainage Plan

Impact HWQ-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, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM HWQ-3	Palo Verde Mesa Groundwater Basin (PVMGB) Protection

Impact HWQ-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:*

Impact HWQ-3a. *Result in substantial erosion or siltation on or off site?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Impact HWQ-3b. *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Impact HWQ-3c. *Create or contribute runoff water which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Impact HWQ-3d. *Impede or redirect flood flows?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM BIO-3	Minimization of Vegetation and Habitat Impacts
	MM BIO-5	Vegetation Resources Management Plan
	MM BIO-13	Streambed and Watershed Protection
	MM HWQ-1	Drainage Erosion and Sedimentation Control Plan
	MM HWQ-5	Project Drainage Plan

Impact HWQ-4. *Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM HWQ-1	Drainage Erosion and Sedimentation Control Plan
	MM HWQ-5	Project Drainage Plan
	MM HWQ-6	Flood Protection

Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM HWQ-3	Palo Verde Mesa Groundwater Basin (PVMGB) Protection
	MM HWQ-4	Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP)

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?*

- Construction, O&M, and Decommissioning: Less than Significant (no conflict)

Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant) No mitigation required.	

Noise

Impact N-1. *Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

- Construction: Less than Significant with Mitigation
- Decommissioning and O&M: Less than Significant

Applicant Proposed Measure	APM NOISE-1	Construction Timing
Mitigation Measures	MM N-1	Construction Restrictions
	MM N-2	Public Notification Process
	MM N-3	Noise Complaint Process

Impact N-2. *Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)	
Applicant Proposed Measure	APM NOISE-1	Construction Timing
Mitigation Measures	MM N-1	Construction Restrictions
	MM N-2	Public Notification Process
	MM N-3	Noise Complaint Process

Paleontological Resources

Impact PR-1. *Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM PR-1	Paleontological Resource Monitoring and Mitigation Plan (PRMP)
	MM PR-2	Worker Environmental Awareness Program (WEAP)
	MM PR-3	Paleontological Monitoring and Fossil Recovery
	MM PR-4	Paleontological Resources Monitoring Report
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (Less than Significant with Mitigation)	
Mitigation Measures	MM PR-1	Paleontological Resource Monitoring and Mitigation Plan (PRMP)
	MM PR-2	Worker Environmental Awareness Program (WEAP)

MM PR-3	Paleontological Monitoring and Fossil Recovery
MM PR-4	Paleontological Resources Monitoring Report

Population and Housing

Impact PH-1. *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)?*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts

Significance	Not Cumulatively Considerable (Less than Significant); No mitigation required.

Public Services and Utilities

Impact PSU-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, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

Fire protection?

- Construction, O&M, and Decommissioning: Less than Significant

Police protection?

- Construction, O&M, and Decommissioning: Less than Significant

Schools?

- Construction, O&M, and Decommissioning: Less than Significant

Parks?

- Construction, O&M, and Decommissioning: Less than Significant

Other public facilities (health services, libraries)?

- Construction, O&M, and Decommissioning: Less than Significant

Impact PSU-2. *Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

- Construction, O&M, and Decommissioning: Less than Significant

Impact PSU-3. *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, O&M, and Decommissioning: Less than Significant

Impact PSU-4. *Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts

Significance after Mitigation	Not Cumulatively Considerable (Less than Significant) No mitigation required

Recreation

Impact REC-1. *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.*

- Construction, O&M, and Decommissioning: Less than Significant

Cumulative Impacts

Significance after Mitigation	Not Cumulatively Considerable (Less than Significant)

Traffic and Transportation

Impact TRA-1. *Would the Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM TRA-1	Construction Traffic Control Plan

Impact TRA-2. *Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) [Criteria for Analyzing Transportation Impacts]?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM TRA-1	Construction Traffic Control Plan

Impact TRA-3. *Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM TRA-1	Construction Traffic Control Plan
	MM TRA-2	Repair Roadways and Transportation Facilities Damaged by Construction Activities

Impact TRA-4. *Would the Project result in inadequate emergency access or access to nearby properties?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM TRA-1	Construction Traffic Control Plan

Cumulative Impacts

Significance after Mitigation	No Cumulatively Considerable (Less than Significant)	
Mitigation Measures	MM TRA-1	Construction Traffic Control Plan
	MM TRA-2	Repair Roadways and Transportation Facilities Damaged by Construction Activities

Wildfire

Impact FIRE-1. *Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?*

- Construction: Less than Significant with Mitigation
- O&M and Decommissioning: Less than Significant

Mitigation Measures	MM TRA-1	Construction Traffic Control Plan

Impact FIRE-2. *Would the Project expose occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

- Construction, O&M, and Decommissioning: Less than Significant with Mitigation

Mitigation Measures	MM FIRE-1	Fire Safety

Impact FIRE-3. *Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk?*

- Construction, O&M, and Decommissioning: Less than Significant
- O&M: Less than Significant with Mitigation

Mitigation Measures	MM FIRE-1	Fire Safety

Impact FIRE-4. *Would the Project expose people or structures to risks of loss, injury, or death involving wildfires?*		
■ Construction and O&M: Less than Significant with Mitigation		
■ Decommissioning: Less than Significant		
Mitigation Measures	MM FIRE-1	Fire Safety
Cumulative Impacts		
Significance after Mitigation	Not Cumulatively Considerable (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 Easley Renewable Energy Project (Easley or Project). As the CEQA Lead Agency, the County is responsible for coordinating with the Project applicant, IP Easley, 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 400 megawatts (MW) and store up to 650 MW of electricity from solar photovoltaic (PV) panels on approximately 3,735 acres in Riverside County, California. The Project consists of 24 parcels on private land (~990 acres), and 13 parcels on public lands administered by the U.S. Bureau of Land Management (BLM) (~2,745 acres).

The Applicant would site the solar facility, battery energy storage system, onsite substation, and a short portion of a 500 kilovolt (kV) generation intertie (gen-tie) line within the County of Riverside's jurisdiction, requiring a Conditional Use Permit (CUP 220021), Public Use Permit (PUP 230002), Variance (VAR 230003), and Development Agreement (DA 2200016) for construction, operation, and decommissioning.

There are 8 parcels on the Project site enrolled in contracts under the California Land Conservation Act of 1965 (referred to as the Williamson Act). Nonrenewal applications were filed in September 2022. Prior to CUP approval, the Williamson Act contracts would need to be cancelled per statutory findings made by the Riverside County Board of Supervisors along with a decision on agricultural diminishment, or it must be determined that the Project is compatible under Riverside County Ordinance 509.

In addition to CUP 220021, PUP 230002, VAR 230003, and DA 2200016, the Applicant is seeking ministerial approval by Riverside County to vacate the facility's interior roadways and merge contiguous Project parcels within the Project area into a contiguous area. Roads along the Project perimeter on the solar facility lands would remain dedicated public access. Ancillary permits, including encroachment permits, grading and construction permits, and certificates of occupancy, are anticipated from the County. These permits and approvals are local ministerial actions that will follow CEQA compliance and CUP and DA approval.

If approved, the Project would interconnect to the electrical grid at Southern California Edison's (SCE) Red Bluff Substation. Approximately 6.5 miles of the Project's 6.7-mile gen-tie line leading to Red Bluff Substation would traverse federal lands managed by the BLM and require a Right-of-Way (ROW) Grant. The gen-tie line would start at the onsite substation, expected to be located on private property (APN 808-023-018). Just south of the substation, the 500 kV gen-tie line would enter the Oberon Renewable Energy Project site and would traverse BLM-administered land for the remainder of the route to interconnect into an existing substation on the Oberon site, an adjacent solar and energy storage facility owned by Intersect Power. From the Oberon onsite substation, the power generated by the Easley Project would be transmitted to the SCE Red Bluff Substation via the existing Oberon 500 kV gen-tie line.

Public lands within the Project solar application area are lands designated as Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD), and thus, have been targeted for renewable energy development. Because the proposed Project is partially located on federal land under management of the U.S. Bureau of Land Management (BLM), the BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq.

As explained below, although this EIR will consider the environmental impacts of the Project as a whole, including components outside State and local agency jurisdiction, the BLM will prepare and rely on its own environmental review document in accordance with NEPA. As part of the NEPA process, the BLM requires a Plan of Development (POD) and associated technical appendices to specify the terms under which a right-of-way across federal lands is to be granted for the Oberon Renewable Energy Project (IP Easley, 2023).

The Applicant has also applied for certification by the Governor as an Environmental Leadership Development Project (ELDP). Therefore, the Office of Planning and Research (OPR) is reviewing the Project under the ELDP criteria set forth in Senate Bill (SB) 7.

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 proposed Project. If the proposed 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 proposed Project modifications and operations are conducted in accordance with the mitigation measures and other permit conditions.

1.2.1. Purpose of the EIR

This EIR is an informational disclosure document for the County, responsible agencies, and other interested parties. According to Section 15121(a) of the State CEQA Guidelines:

> *"[An EIR] will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency."*

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."*

This Draft EIR has been distributed for review to responsible agencies, trustee agencies with resources affected by the Project, and other interested agencies and individuals. 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 taking action on the proposed Project. The County will consider whether to approve the CUP 220021 and PUP 230002 for the construction, operation, maintenance, and decommissioning of the proposed Project on lands 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's purpose for the Project is to generate, store, and transmit renewable energy to the statewide wholesale electricity grid. The Applicant's identified Project objectives, which have been considered by the County in developing a reasonable range of alternatives, are:

- Support climate and clean energy goals of the Inflation Reduction Act of 2022 by helping to tackle the climate crisis and work towards achievement of President Biden's goal of a zero-carbon power sector by 2035 and zero-carbon economy by 2050 through development of clean electricity (power sector);
- Assist the nation to meet its Nationally Determined Contribution commitments under Article 4 of the Paris Climate Agreement to achieve a 50 to 52 percent reduction in U.S. greenhouse gas pollution from 2005 levels by 2030, and to achieve 100 percent carbon pollution-free electricity by 2035 in the electricity sector;
- Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
- Deliver up to 400 MW of affordable, wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
- Assist with achieving California's renewable 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;
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 650 MW of 2-hour and/or 4-hour 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;
- Bring living-wage jobs to Riverside County; and
- 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.
- Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior; and
- Make the highest and best use of primarily disturbed, retired agricultural land in and around a federal "Solar Energy Zone" and "Development Focus Area" to generate, store, and transmit affordable, wholesale solar electricity.

1.4. Financial and Technical Capability of the Applicant

IP Easley, LLC, is a subsidiary of Intersect Power, LLC. Founded in 2016, Intersect Power is a fully integrated clean infrastructure platform that develops and owns some of the world's largest renewable energy resources across multiple technologies and power markets. Intersect provides low-carbon electricity, fuels, and related products to customers across North America, enabling new pathways between clean electricity and the broader economy.

Intersect has a portfolio of 2.2-gigawatt peak (GWp) of solar PV + 1.4 GWh of battery storage, all of which will be under construction by Q2 2022 and operational by 2023. Intersect also has an emerging pipeline of 8.5 GWp + of renewable generation, 8 GWh+ of energy storage and 600 MW+ of green hydrogen production.

The Intersect team has shared experience in delivering over 6 GWp across more than 70 high-quality projects over the past decade. In the past ~2 years, Intersect has closed over $5B in project financings and raised more than $1B in corporate equity, which includes backing from TPG Rise Climate, Climate Adaptive Infrastructure, and Trilantic North America. In early 2023, Intersect secured up to $800 million in corporate debt from a consortium of global project finance and corporate investment bank lenders to support its development pipeline and expansion of its clean energy platform.

Prior to forming Intersect, the Company's core team was critical in developing and building the Recurrent Energy platform. The team's functional expertise spans all relevant disciplines including site acquisition, permitting, interconnection, origination, engineering, procurement, construction, and finance. Intersect Power's team includes real estate, entitlement, and CEQA and NEPA expertise for energy infrastructure projects sited on both private and federal land in California.

The Intersect Power team has successfully developed four solar PV plus battery storage projects on a combination of private and public, BLM-managed lands in Riverside County, California, including the Athos I, Athos II, Blythe Mesa Solar II, and Oberon Renewable Energy Projects.

1.5. Summary of the Project Evaluated in this EIR

The County of Riverside is the Lead Agency for the proposed Project, under whose authority this EIR has been prepared. For purposes of this EIR, the term "Project" refers to the discretionary actions required to implement CUP 220021, PUP 230002, and VAR 230003, as proposed, along with all of the activities associated with its implementation including planning, construction, and long-term operation. In summary, the Project, as evaluated throughout this EIR considers the impacts that would occur as a result of developing the Project site in accordance with the land uses that will be specified in the Continuous Parcel Mergers. Specifically, IP Easley LLC is requesting the following governmental approvals from the County of Riverside to implement the Project (refer to Section 2, Description of the Proposed Project and Alternatives, for a complete description of the Project's construction and operational characteristics):

- **Conditional Use Permit (CUP 220021)** is proposed for the construction, operation, and decommissioning of the proposed solar facility, electrical storage equipment, and portions of the gen-tie line within the County of Riverside's jurisdiction.
- **Development Agreement (DA 2200016)** would be signed between the Applicant and Riverside County in accordance with Board of Supervisors' Policy B-29 (discussed below) to compensate the County for the use of its real property.
- **Public Use Permit (PUP 230002)** would be required for crossings of roadways under County jurisdiction, including medium voltage collector line crossings of Investor Road, Bellsby Road, and Jojoba Road, and the 500 kV gen-tie line crossing of Orion Road.

- **Variance (VAR 230003)** will be necessary for all structures located within the Natural Assets (N-A) zone that would be higher than 20 feet and in the Light Agriculture (A-1) and Controlled Development Area (W-2) zones that would exceed 105 feet.
- **Continuous Parcel Mergers.** The Applicant is planning to merge contiguous Project parcels within the Project area into a contiguous area. Roads along the Project perimeter on the solar facility lands would remain dedicated public access.
- **Cancellation of a Williamson Act Contract.** Williamson Act contracts would need to be cancelled, for 8 parcels that would be included as part of the Project.

Provided below is a list of known discretionary and ministerial actions needed by Riverside County to implement the proposed Project. This EIR covers all federal, state, and local government approvals which may be needed to construct or implement the Project, whether explicitly noted below or not.

Riverside County Board of Supervisors

1. Approval by resolution of agricultural diminishment for parcels under Williamson Act contract
2. Approval by resolution of CUP 220021
3. Approval by resolution of PUP 230002
4. Approval of VAR 230003
5. Enter into a Development Agreement with IP Easley, LLC, per Board of Supervisors Policy B-29 (discussed below)
6. Certify this EIR and make appropriate CEQA Findings

Subsequent Project Approvals

Subsequent approvals associated with the proposed Project and covered by this EIR may include, but are not limited to, the following. A table of required permits is also included in Table 1-1 in Section 1.9 (Anticipated Permits and Approvals).

1. Cancellation of Williamson Act contracts by the County of Riverside.
2. Conditional Use Permit and Public Use Permit by the County of Riverside, approving development of specific uses conditionally permitted by the approved zoning.
3. Implementation of the continuous parcel mergers.
4. Grading permits, road improvements, and drainage improvements (included in the Construction Permit) by the County of Riverside and Riverside County Flood Control and Water Conservation District to allow implementation of the Project.
5. Grant of Right-of-Way and Temporary Use Permit by the U.S. Bureau of Land Management for the construction and operation of the solar and energy storage facility, gen-tie line, and associated facilities on BLM-administered land.
6. Encroachment permits by the County to allow access within County rights-of-way, for utility trenching within a public right-of-way, as well as an encroachment permit by the California Department of Transportation for installation of ingress egress lane(s) and construction of the gen-tie line.
7. Lake and Streambed Alteration Agreement and Incidental Take Permit by California Department of Fish and Wildlife and Waste Discharge Requirement permit from the Colorado River Basin Regional Water Quality Control Board.

Board of Supervisors Policy B-29. The proposed Project is subject to Policy B-29, and the developer would need to enter into a development agreement with the County. The purpose of Policy B-29 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. 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. 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. Once the development agreement is enacted, the proposed Project would comply with this policy.

1.6. Public Review and Noticing

CEQA requires lead agencies to solicit, record, and evaluate feedback from other agencies, the public, and other interested parties on the environmental effects of a 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 proposed Project has and will continue to occur through the steps described below.

1.6.1. Notice of Preparation

In compliance with State CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was issued on November 14, 2022. The notice briefly described the proposed Project, Project location, environmental review process, potential environmental effects, and opportunities for public involvement. A map was included that illustrated the Study Area boundary.

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 November 14, 2022. It was mailed to agencies, organizations, local governments, elected officials, Native American Tribes, all residents within 300 feet of the Project boundaries and individuals on the County's interested parties list. A newspaper ad was also published in the Desert Sun and Press-Enterprise newspapers, and the NOP was mailed to the Lake Tamarisk Library in Desert Center.

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 January 6, 2023. A full copy of the NOP and the list of agencies, elected officials, and Native American Tribes that received the NOP are provided in Appendix A (Scoping Report). Section 1.7 includes a summary of the written and oral comments received.

1.6.2. 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:

December 5, 2022, at 1:30 p.m.
Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, California 9250

The CEQA Scoping Report, provided in Appendix A of this EIR, contains copies of the PowerPoint Presentation, sign-in sheets and speaker registration cards that were used at the scoping meeting, as well as a summary of oral comments received at the meeting. Approximately 20 attended the scoping meeting in person and virtually.

1.6.3. Native American Tribal Outreach

In compliance with Assembly Bill 52 (AB52), on July 12, 2022, the County of Riverside mailed certified letters to representatives of 12 tribes that had previously submitted a written request to the County of Riverside to receive notification of proposed projects. These tribes included Colorado River Indian Tribe, Quechan Indian Nation, Morongo Band of Mission Indians, Torres-Martinez Desert Cahuilla Indians, Twenty-Nine Palms Band of Mission Indians, Cahuilla Band of Indians, Ramona Band of Cahuilla Indians, Santa Rosa Band of Mission Indians, Cabazon Band of Mission Indians, Augustine Band of Cahuilla Indians, Agua Caliente Band of Cahuilla Indians, and Soboba Band of Luiseno Indians. The letters included a brief description of the proposed 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 Augustine Band of Cahuilla Indians, Agua Caliente Band of Cahuilla Indians, and Soboba Band of Luiseno Indians. Additional details on the AB 52 consultation process are included in Section 3.6 (Cultural and Tribal Cultural Resources) and EIR Appendix D.

1.6.4. 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.

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 is available for review online at http://www.rctlma.org/planning/. To request a hardcopy, please reach out to Tim Wheeler 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:

Tim Wheeler, Planner
County of Riverside TLMA Planning Department
4080 Lemon Street, 12th Floor, Riverside CA, 92501
Phone: (951) 955-6060
Email: TWheeler@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.

1.6.5. 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 2023.

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 proposed 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.

1.7. Scoping Comments

1.7.1. Scoping Comments Summary

This section summarizes the verbal and written comments received from the public and agencies during the scoping period for the proposed Project. In addition to comments received during the scoping meeting, 46 different entities submitted written comment letters: 4 from federal, state, and local agencies; 3 from organizations and businesses; 1 from the Native American Heritage Commission; and 38 from individuals. Copies of the original comment letters received during the NOP scoping period may be found in the Scoping Report. A full copy of the Scoping Report is provided in Appendix A.

List of Agencies/Other Commenting Groups

Agencies

- Southern California Association of Governments
- California Department of Fish and Wildlife
- US Fish and Wildlife Service
- Metropolitan Water District of Southern California

Organizations and Businesses

- California Unions for Reliable Energy
- Sempra Utilities
- Lake Tamarisk Desert Resort (LTDR)

Tribal Agency

- Native American Heritage Commission

Private Citizens

- Steve and Vickie Jones
- Vicki Bucklin 2
- June McArthur
- Robert Stiver #2
- Lester Beatty
- John Wilmoth
- Sharon Dilley
- Linda Armstrong
- Kathy Schofield
- Nancy Ray
- Ron Simmons
- Kenneth Jacks
- William and Leanna Kingsley
- Robert Stiver
- Cynthia Green
- Tim LeForge
- Jim and Janice Baker
- Mable Beatty
- Lori Carney
- Bruce McArthur
- Peter Longman
- Candace and Ross Ryding
- Barry Reid
- Gary and Debbie Lundberg
- Wally and Carolyn White
- Patti Cockcroft
- Vicki Bucklin 1
- Georgia Beckwith
- Leann Kingsley
- Ken Stamp
- Julie Anderson
- Vicki Bucklin #3
- Brian Hagman
- Frankie Nobert
- Bob and Judy Walston
- Robert C. Mitchell
- Lee Petersen
- Debra Westcott

Oral Commenters at Scoping Meeting

- Mark Goddard
- Peggy Davis
- Kim Fraser
- John Wilmoth
- Robert Stiver
- Don Sned
- Kathy
- Tim LeForge
- Vicki Bucklin

- Mark Goddard
- Bob Mitchell
- John Wilmoth
- Theresa Pierce
- Kathy
- Cynthia Walker

1.7.2. Environmental Topics Addressed

Applicable scoping comments for each resource are discussed and addressed under the proposed Project Impact Analysis for each issue area section in Section 3. The issues identified in scoping efforts are also listed in Table 1-1 and described in more detail in Appendix A (Scoping Report).

Public comments received addressed the following topics: project description, purpose and need, visual resources, air quality and greenhouse gas emissions, cultural and tribal cultural resources, existing and planned land uses, energy, noise and vibration, public health and safety, recreation and off-highway vehicle use, transportation and traffic, hazards and hazardous materials, hydrology and water quality, soils, biological resources, mitigation measures, indirect and cumulative impacts, project alternatives, and permitting and consultation, among other issues.

Comments related to the Oberon Renewable Energy Project construction have been considered as applicable to environmental impacts associated with the Easley Project and have been directed to the Applicant.

Table 1-1. Scoping Issues Identified

Scoping Topic	Section Addressed
Project Description	
Potential impacts to Metropolitan Water District's transmission system, as a Potentially Affected System for this proposed Project.	Section 2 Section 3.12
Aesthetics/Visual Resources	
Proximity of the solar panels to the community being an eyesore, which could cause reduction in quality of life	Section 3.2
Light and glare reflecting off of the solar panels, which could also affect pilots in the area.	Section 3.2 Appendix I
Light pollution from the Project affecting the dark skies environment	Section 3.2
General visual impacts on Desert Center and Joshua Tree National Park	Section 3.2
Visual impacts of fencing and debris that gets caught in it	Section 3.2
Air Quality	
Increased risk of Valley Fever.	Section 3.4 Section 3.10
Increased airborne dust created from solar projects due to the ground disturbance and removal of vegetation and the potential transport of airborne silica and herbicides.	Section 3.4 Section 3.5 Section 3.10
Potential for airborne dust settling and accumulating on items in the community and on water in Lake Tamarisk.	Section 3.4
Standards for regulating silica and using ground matting to reduce exposure to dust.	Section 3.4
Biological Resources	
Impacts to vegetation communities, desert dry wash woodlands, ironwood trees, and desert wildflowers.	Section 3.5 Appendix C Appendix F
Impacts to displaced wildlife (including desert tortoise, deer, coyote, cougar, lizards, and migrating birds), loss of habitat, and new barriers to movement routes. Concerns that fewer wildlife are seen in the community since solar development started.	Section 3.5 Appendix C Appendix F

Scoping Topic	Section Addressed
Impacts to desert tortoise habitat connectivity between designated critical habitat units and loss of gene flow.	Section 3.5 Appendix C Appendix F
Potential "lake effect" that may attract birds, resulting in collisions with facilities. Impacts of power lines on birds, resulting in electrocution. Impact of solar development on health and presence of migratory birds.	Section 3.5 Appendix C Appendix F
Ground disturbance and grading resulting in modifications to washes, stormwater runoff, and potential for floods in the community. Impacts of vegetation management on erosional patterns during flash flooding.	Section 3.5 Appendix C Appendix F
Success of post-construction revegetation, considering climate change in an arid climate.	Section 3.5 Appendix C Appendix F
Increase in termite swarms and rattlesnake encounters.	Section 3.5 Section 4.5 Appendix C Appendix F
Need to consider acreage already lost to solar development in the BLM Development Focus Area, and what is likely to be developed in the future.	Section 3.5 Appendix C Appendix F
Potential for increased local temperatures due to "PV heat island effect".	Section 3.5 Appendix C Appendix F
Cultural/Tribal Cultural Resources	
Impacts to artifacts and the General Patton Desert Training Center historical area.	Section 3.6 Appendix D
Early consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the Project.	Section 1.6.3 Section 3.6 Appendix D
Avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.	Section 3.6 Appendix D
Energy	
Energy required to cool the BESS facility	Section 3.7 Section 4.4
The amount of energy that would be taken from the local grid.	Section 3.7 Section 4.4
Heat in the region affecting battery efficiency.	Section 3.7
Meeting renewable energy goals.	Section 1.3 Section 3.7 Section 5
Geology and Soils	
Impacts of ground disturbance and grading changing drainages and washes.	Section 3.8 Section 3.11
Erosion due to the removal of stabilized soils and soil crusts.	Section 3.8
Ability of the soil to support revegetation after the Project's life due to chemical vegetation treatments resulting in sterilization of the soil.	Section 3.8
Adverse effects on carbon sequestration in desert vegetation and desert soils due to Project grading and soil disturbance.	Section 3.8

Scoping Topic	Section Addressed
Greenhouse Gas Emissions	
Use of water and temperatures of the region, relating to quantification of GHG emissions attributable to energy consumed for the purposes of delivering the water supply.	Section 3.9 Appendix J
The "Heat Island Effect"	Section 3.5
Production of the solar panels that could be used for the Project, and the potential carbon footprint (for example, emissions created by manufacturing and transporting) of imported or foreign-produced solar panels.	Full life-cycle analysis is beyond the scope of a CEQA document for a given project.
Hazards and Hazardous Materials	
Health effects from the increase in wind-blown dust, which carries silica, pollens, and other chemicals/pollutants (herbicides).	Section 3.10
Concerns relating to Valley Fever.	Section 3.4 Section 3.10
Health hazards related to EMF.	Section 3.10
Increased risk of wildfire due to presence of power lines.	Section 3.10 Section 3.19
Contamination from chemicals used for vegetation management.	Section 3.10
Concerns regarding hazardous materials releases if/when the solar panels are broken.	Section 3.10
Hydrology and Water Quality	
Regarding surface water, concerns were raised about the potential for floods due to the modification of washes and removal of vegetation.	Section 3.11
Regarding surface water, concerns were raised about creating impacts to stormwater runoff.	Section 3.11
Flash floods causing changes in erosion patterns.	Section 3.11
Regarding ground water, concerns were raised about Project construction and operational water use.	Section 3.11 Appendix G
Project water use contributing to a chronic lowering of groundwater levels and groundwater in storage; thereby potentially impacting existing community and domestic water supply infrastructure and decreasing groundwater availability.	Section 3.11 Appendix G
Observed climate change and the potential impacts to groundwater in the Chuckwalla Valley Groundwater Basin.	Section 3.11 Appendix G
Project maintenance operations (e.g., weed abatement) impacting groundwater quality.	Section 3.10 Section 3.11
Project use of water classified as Colorado River water from below the "accounting surface."	Section 3.11
Land Use and Planning	
BLM's Area of Critical Environmental Concern (ACEC) west of Kaiser Road needs to remain protected.	Section 3.12 Note that this ACEC is outside of the Project area and is located on BLM-administered land. The management actions on the ACEC are under BLM jurisdiction and are outside of the scope of this EIR.
Original plans for Lake Tamarisk Desert Resort included a second 9-hole golf course.	Section 3.12
Desert Center Area Plan (DCAP) focuses on preserving the unique features found in the Desert Center area; the DCAP should apply, but it is being ignored.	Section 3.12 Applicable DCAP policies are listed under each issue area in Section 3.

Scoping Topic	Section Addressed
Metropolitan Water District must be allowed to maintain its ROW and have unobstructed access to its facilities adjacent to the Project site.	Section 3.12
Solar projects planned for sites west of SR-177/Rice Road should be shifted to lands east of SR-177 and away from the Lake Tamarisk community.	Section 3.12 Section 2.9
Potential for decreased property values due to the proximity of the Project to the Lake Tamarisk Desert Resort, including impacts from noise, traffic, night lighting, and dust.	Section 3.2 Section 3.4 Section 3.12 Section 3.13 Section3.18 Section 4.7
Noise and Vibration	
Noise from construction, especially due to the proximity of the proposed development to homes in the Lake Tamarisk Desert Resort and nearby communities, as well as noise from increased traffic.	Section 3.13
Increase in noise due to loss of vegetation.	Section 3.13
Constant “loud buzzing sound.”	Section 3.13
Land use change on a large-enough scale to alter the natural effect of ground absorption.	Section 3.13
Public Services and Utilities	
Waste that batteries cause when they are no longer useful,	Section 3.16
Potential for an increased need for law enforcement.	Section 3.16
Lake Tamarisk sewage settlement ponds are on BLM-administered land within the perimeter of the proposed Project and suggested the sewage pond land needs to be assigned to Riverside County in care of County Service Area 51.	Section 3.16
Recreation	
Decrease in quality and availability of recreation due to heat and wind and the presence of solar developments.	Section 3.5 Section 3.17
Preventing access for OHVs, hiking, or other recreational activities.	Section 3.17
Decrease in the scenic value of the region.	Section 3.2 Section 3.17
Allowing passages through Project to allow for easier access to recreational areas for OHV use and hiking.	Section 3.17
Transportation and Traffic	
Increased disturbance, dust, and noise created by construction vehicles and trucks, and the speed and presence these trucks impacting the safety of residents.	Section 3.4 Section 3.5 Section 3.13 Section 3.18
Coordination with the Department of Defense (DoD), as the Project is in a fly zone, which the military uses for training.	Section 3.18
Wildfire	
Increased risk of wildfires due to the increased presence of power lines	Section 3.19
Other CEQA Considerations	
Potential loss of property value as a result of solar projects being developed nearby and the potential for compensation.	Section 3.12 Section 4.7
Moratorium on permitting of solar projects with 5 miles of Lake Tamarisk Desert Resort until the 2012 BLM Western Solar Plan is revised and defines setbacks and exclusion zones around communities and that these are agreed upon by the community of Lake Tamarisk.	Section 4.7*
Increase in occurrence of termites and rattlesnakes	Section 4.7

Scoping Topic	Section Addressed
Alternatives	
A no-large-scale energy alternative is justified and should be analyzed.	Section 2.9 Section 5
Analyze an alternative that focuses on rooftop solar, and maximizes wildlife protection by avoiding, minimizing, and fully mitigating all direct, indirect, and cumulative impacts to wildlife and wildlife habitat to at least a no-net loss standard.	Section 2 Section 3.5 Section 5
Include a no-action alternative based on local small scale distributed battery technology in urban centers.	Section 2.8 Section 2.9 Section 5
Members of Lake Tamarisk Desert Resort requested installation of earthen berms to be used for visual screening of the solar facility from the community	Section 2.9
Community members at the Lake Tamarisk Desert Resort requested a 5-mile "Natural Desert Zone" buffer from the community to the nearest solar installation	Section 2.9

* In February 2023, BLM announced that it chose not to include the area under the DRECP in its update to the 2012 Western Solar Plan, as "the BLM continues to believe the DRECP supports an acceptable balance between conservation and renewable energy opportunities within its planning area boundary." [https://www.blm.gov/press-release/bureau-land-management-announces-end-public-comment-period-utility-scale-solar-review]

1.8. EIR Format and Content

This EIR was prepared in accordance with State and County administrative guidelines established to comply with the 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. Figures are referenced as necessary in each section to graphically represent the topic at hand and are located together in EIR Appendix A.

- **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 proposed Project evaluated in the EIR and a summary of the objectives for the Project. This section also discusses agency use of the document and provides a summary of the contents of the EIR.
- **Section 2. Description of the Proposed Project and Alternatives**. This section gives an overview of solar technology and 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 proposed Project. The alternatives that made it 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, Project impacts, 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, and a discussion of impacts that are applicable to permitting with the California Department of Transportation. 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.
- **Section 5. Comparison of Alternatives**. This section 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 EIR figures, CEQA Scoping Report, technical reports and studies, and other relevant information are included as appendices to support the environmental analyses.

1.8.1. 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: 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 the proposed Project and that the proposed 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 the Project.

Indirect or secondary impacts: Impacts that would result from proposed Project implementation 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 proposed 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 the proposed Project's significant environmental effects. Effective mitigation measures can:

- avoid the impact altogether;
- 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.

Applicant Proposed Measures (APMs): Measures that avoid, minimize, or reduce impacts, which are distinguished from mitigation measures in this EIR, because IP Easley, LLC, commits to complying with these measures to reduce potential impacts during construction and operation. Any APMs discussed in the EIR are inherently part of the proposed Project and are not additional mitigation measures proposed as a result of the significance findings from the CEQA environmental review process.

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 this proposed Project. Any BMPs discussed in the EIR are inherently part of the proposed 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.

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.

1.9. Anticipated Permits and Approvals

The Easley Project would be located on both private and BLM-administered lands. Due to the private land components, which are under County jurisdiction, discretionary approvals from Riverside County would be required. The Applicant is seeking a minimum 40-year CUP (CUP 220021) and PUP (PUP 230002) for the construction, operation, and decommissioning of the proposed solar facility and gen-tie line, which would be accompanied by a development agreement that would be coextensive with the operation of the solar facility. As part of the Project, the Applicant is seeking cancellation of parcels under Williamson Act contract and to merge contiguous Project parcels. Roads along the Project perimeter on the solar facility lands would remain dedicated public access.

The Applicant has also applied for certification by the Governor as an Environmental Leadership Development Project (ELDP). Therefore, the Office of Planning and Research (OPR) is reviewing the Project under the ELDP criteria set forth in Senate Bill (SB) 7.

Ancillary permits, including encroachment permits and construction permits are anticipated from the County. These permits and approvals are local ministerial actions that will follow CEQA compliance. Other State and local agencies or regulatory entities that could exercise authority over specific elements of the proposed Project are described in Table 1-1.

Table 1-2 provides a list of permits and other approvals that will (or may) be needed for the proposed Project. The County, as the CEQA lead agency, will act first on the Project before any of the responsible agencies. Riverside County decision-makers (Board of Supervisors) will certify the EIR as being in compliance with CEQA and will 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. Then the County decision-makers will use the EIR for decision-making regarding the proposed Project. If the proposed Project is approved by all required permitting agencies, the County and BLM would be responsible for reviewing and approving all pre-construction compliance plans and ensuring that the proposed Project modifications and operations are conducted in accordance with the Project mitigation measures and other permit conditions within their respective jurisdictions.

Table 1-2. Permits and Approvals for the Easley Renewable Energy Project

Agency	Permit	Applicability
Federal		
BLM	Grant of Right-of-Way	For solar and energy storage facility, gen-tie line, and associated facilities construction and operation on BLM-administered land.
U.S. Fish & Wildlife Service	Biological Opinion	For compliance with Section 7 of the federal Endangered Species Act.

Agency	Permit	Applicability
U.S. Army Corps of Engineers	Clean Water Act Section 401/404 Certification	Only if Waters of the United States are determined to be present and potentially impacted on the Project site.
County		
Riverside County	Conditional Use Permit	Construction of the solar and energy storage facility on private land under County jurisdiction
	Public Use Permit	Construction of the medium voltage collector lines and/or gen-tie line on or across County-owned land under County jurisdiction
	Parcel Mergers	Merging of contiguous solar facility parcels pursuant to State Subdivision Map Act.
	Variance	For all structures located within the N-A zone that would be higher than 20 feet and for structures in the A-1 and W-2 zones that would exceed 105 feet.
	Construction Permit (Building Permit)	Riverside County authorizes construction activities under the master Construction Permit. This permit encompasses grading, building, electrical, mechanical, landscaping, and other activities. The County's review for ordinance standards is undertaken as part of this review.
	Encroachment Permit	Riverside County requires an Encroachment Permit for utility trenching within a public right-of-way. The proposed gen-tie line would be overhead when crossing roadways, however, driveway aprons for proposed access roads may require an encroachment permit. As part of the application for the Encroachment Permit, the Applicant must submit construction drawings and a traffic control plan for any work that would take place in public streets.
State or Regional Approvals		
South Coast Air Quality Management District (SCAQMD)	Dust Control Plan	A dust control plan is required to be submitted and approved by the SCAQMD prior to initiation of ground disturbances activities associated with construction.
	Authority to Construct and Permit to Operate	Facility backup generator permits for Project operations, if required.
California Department of Transportation (Caltrans), District 8*	Encroachment Permit	An encroachment permit would be required for installation of ingress egress lane(s) along SR-177, and construction of the gen-tie line across SR-177.
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement	For compliance with Fish and Game Code 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.
Colorado River Basin Regional Water Quality Control Board (RWQCB)	CWA section 401 Water Quality Certification or Waste Discharge Requirements	Regulates the discharge of dredged or fill material under section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act.

* A summary of the EIR analysis that supports Caltrans permitting is included in EIR Section 4.6 (California Department of Transportation CEQA Summary).

The Project is being pursued in accordance with land use plan amendments adopted by Riverside County. These include General Plan Amendment (GPA) 1080, which added Land Use Policy LU 15.15, stating: "[p]ermit 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."

1.9.1. Related Federal Review and Consultation Requirements

Approximately 2,735 acres of the solar and energy storage facility would be located on public lands administered by BLM. The power produced by the Project would be conveyed to the statewide power grid via an overhead 500 kV gen-tie transmission line interconnecting to the Oberon Substation, which is connected to the SCE Red Bluff Substation, an existing substation located south of Interstate 10 (I-10) on BLM-administered land. After exiting the onsite substation parcel, the 500 kV gen-tie transmission line would be located within a 175-foot ROW, across BLM-administered lands managed by the Palm Springs-South Coast Field Office. Construction, operation, and maintenance of the solar and energy storage facility and gen-tie line will be analyzed in this EIR and additionally in an Environmental Assessment (EA) under NEPA.

It is anticipated that BLM may rely upon the information contained in this EIR when it prepares the EA for its proposed actions under NEPA. However, such review would occur on a separate schedule. While the BLM is being consulted in preparation of this document, the BLM is not participating as a joint preparer of this document, and the BLM is not circulating this document for comments.

1.10. Primary Contact Person

The primary contact person for this EIR is Tim Wheeler and his contact information is listed below:

Tim Wheeler, Planner
County of Riverside TLMA Planning Department
4080 Lemon Street, 12th Floor, Riverside CA, 92501
Phone: (951) 955-6060
Email: TWheeler@rivco.org

2. DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES

2.1. Introduction

IP Easley, LLC (Applicant or Proponent), a subsidiary of Intersect Power, LLC, proposes to construct, operate and decommission the Easley Renewable Energy Project (Easley Project or Project), a utility-scale solar photovoltaic (PV) electrical generating and storage facility, and associated infrastructure to generate and deliver renewable electricity to the statewide electricity transmission grid.

The proposed Project application area is located on approximately 3,735 acres of private and BLM-administered land, in Riverside County north of Desert Center, California (see Figure 2-1). The Project would generate up to 400 megawatts (MW) of renewable electricity via arrays of solar photovoltaic (PV) panels, store up to 650 MW in a battery energy storage system (BESS), and include appurtenant facilities. A 6.7-mile 500 kilovolt (kV) generation-tie (gen-tie) line would mainly traverse across the Oberon Renewable Energy Project site (south of the Project site) and connect into an existing substation on the approved Oberon Project site. The Oberon Project is a solar PV and energy storage facility owned by Intersect Power. From the Oberon onsite substation, the power generated by the Easley Project would be transmitted to the Southern California Edison (SCE) Red Bluff Substation via the existing Oberon 500 kV gen-tie line (see Figure 2-2).

Public lands within the Project solar application area are lands designated as Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD), and thus, have been targeted for renewable energy development. Because the proposed Project is partially located on federal land under management of the U.S. Bureau of Land Management (BLM), the BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq.

Depending on the timing of the interconnection agreement, the Easley Project could be operational as early as late 2025. The Project would operate for a minimum of 35 years and up to 50 or more years. At the end of its useful life, the Project would be decommissioned, and the land returned to its pre-Project conditions. Revegetation would be conducted in accordance with the Decommissioning and Revegetation Plan.

2.1.1. Overview of Solar Technology

Solar cells, also called PV cells, convert sunlight directly into electricity. PV gets its name from the process of converting light (photons) to electricity, which is called the “photovoltaic effect.” PV cells are located on panels, which are mounted at a fixed angle facing south or on a tracking device that follows the sun. Many solar panels on multiple rows combined together and controlled by a single motor create one system called a solar tracker. For large electric utility or industrial applications, hundreds of solar trackers are interconnected to form a utility-scale PV system.

2.1.2. Insolation

Insolation is a measure of solar radiation energy received on a given surface in a given time. It is commonly expressed as an average irradiance in watts per square meter (W/m2) or kilowatt-hours per square meter per day (kWh/m2/day). The region in which the proposed Project is located receives greater than 6.5 kWh/m2/day of solar radiation energy, giving it a higher degree of solar radiation than most areas within the United States.

2.2. Project Location and Surrounding Land Uses

The Easley Project is located in Riverside County, north of Interstate 10 (I-10) and approximately 2 miles north of the town of Desert Center, California. The Easley solar and energy storage facility is located on private and BLM-administered land, with the legal description by parcel presented in Table 2-1.

Figure 2-1 (Project Vicinity) illustrates the location of the proposed Project and its relationship to major highways, access roads, and communities. Figure 2-2 (Project Area) shows the Project area and the gen-tie line. Figure 2-3 (Project Layout) shows the Proposed Project's panel, substation and BESS layout with preliminary engineering. Nearby land uses include previously developed or developing solar facilities, transmission lines, fallow and active agriculture, and rural residences. The private parcels consist of primarily manmade features that include deciduous orchard/ fallow agriculture or developed areas.

The existing Desert Sunlight and Desert Harvest solar projects are north of the proposed Project and the Athos Renewable Energy Project is located to the east. Solar Projects that are under construction nearby include the Oberon Renewable Energy Project to the southeast and the Arica and Victory Pass Solar Projects to the southeast. The Sapphire Solar Project, proposed by EDF Renewables, is adjacent to the northern area of the Easley Project. Figure 2-4 (Desert Center Solar Projects & DRECP Context) shows the proposed Easley Project in relation to other existing, approved, and proposed solar facilities in eastern Riverside County and illustrates the proposed consolidation of the gen-tie corridors. The Applicant is in negotiations with Metropolitan Water District (MWD) and EDF Renewables to ensure that there are no conflicts with existing or proposed easements across the Easley Project site.

Figure 2-5 (Easley Renewable Energy Project Site Photographs) includes ground-level photographs of the Project site.

Table 2-1. Solar and Energy Storage Facility Parcels

Property Owner	APNs	Section(s)	Township & Range	USGS Quad
Private Parcels				
American Coal Liquefaction, LLC	808-023-005 808-030-002	Sec. 12 E1/2 SE1/4	T. 5 S., R. 15 E.	East of Victory Pass, Corn Spring
Benedicto M Estoesta & Divina Gracia A. Estoesta Trust	808-023-032 808-023-031	Sec. 2, SE1/4 and SW1/4	T. 5 S., R. 15 E.	Victory Pass
Cook, Robert H. Cook, Laurie M.	811-270-015	Sec. 6, NW1/4SW1/4	T. 5 S., R. 16 E.	East of Victory Pass
Dean Trust	811-141-011	Sec. 7, NW1/4, N1/2NE1/4, SW1/4NE1/4, and N1/2SW1/4	T. 5 S., R. 16 E.	East of Victory Pass, Corn Spring
Draskovich, Todd Culver Draskovich, John Steven	808-240-007	Sec. 1, SE1/4SE1/4	T. 5 S., R. 15 E.	East of Victory Pass
Fundlandoil, LLC	811-270-006	Sec. 6, SW1/4SE1/4	T. 5 S., R. 16 E.	East of Victory Pass
JC Investments	808-030-011	Sec. 12, SE1/4SE1/4 Sec. 7, SW1/4SW1/4	T. 5 S., R. 15 E. T. 5 S., R. 16 E.	Corn Spring
JMP Inc., a Nevada Corporation	808-023-018	Sec. 13, W1/2NW1/4	T. 5 S., R. 15 E.	Corn Spring, Desert Center
MiJo Investments, LP, Blowers Family Trust	808-280-004 808-280-005 808-280-006 808-280-007	Sec. 13, NE1/4 and SE1/4NW1/4	T. 5 S., R. 15 E.	Corn Spring

Property Owner	APNs	Section(s)	Township & Range	USGS Quad
	808-280-008 808-280-002 808-280-003 808-280-001			
Spindle Top Bayou Farm, Inc., a Texas Corporation	811-270-001 811-270-002 811-270-003 811-270-004 811-270-005 811-270-007	Sec. 6, S1/2SE1/4 and S1/2SW1/4	T. 5 S., R. 16 E.	East of Victory Pass
BLM-Administered Parcels				
USA 807	807-172-027 807-172-015 807-191-029	Sec. 34, NE1/4, SE1/4, E1/2NW1/4, and E1/2SW1/4; Sec. 35	T. 4 S., R. 15 E.	Victory Pass
USA 808	808-023-022 808-023-030 808-023-024 808-270-012 808-270-007 808-230-005 808-023-027 811-122-005	Sec. 2, N1/2SW1/4; Sec. 3, E1/2NE1/4 and E1/2SE1/4; Sec. 10, E1/4NE1/4, and NE1/4SE1/4; Sec. 11; Sec. 12, NW1/4, NE1/4, N1/2SW1/4, and NW1/4SE1/4; Sec. 13, N1/2SW1/4, and SW1/4SW1/4; Sec. 14, NE1/4NE1/4	T. 5 S., R. 15 E.	Victory Pass, Desert Center, Corn Spring
USA 811	811-121-008 811-121-007	Sec. 5, W1/2SW1/4; Sec. 6, NE1/4 and NW1/4	T. 5 S., R. 16 E.	East of Victory Pass

2.3. Project Components

The proposed Project would consist of the following major components, which are described in greater detail in this section and illustrated on Figure 2-3 (Project Layout):

- **Solar and Energy Storage Facility** (990 acres of private land, 2,745 acres of BLM-administered land):
  - **Solar array field**, which may include thin-film PV panels, crystalline silicon panels, or any other commercially available PV technology. The proposed panel mounting system will depend on the PV panels ultimately selected but is expected to be single-axis trackers with a portrait module orientation. Either mono-facial or bi-facial modules could be used, and modules would either be mounted as single panels or stacked two high.
  - **Power conversion stations** on a concrete pad or steel skid for each 2 to 5 MW increment of generation, containing up to 6 inverters, a transformer, a battery enclosure, a switchboard 8 to 11 feet high, a shade structure (depending on meteorological conditions), and a security camera at the top of an approximately 20-foot wood or metal pole.
  - System of **34.5 kV interior collection power lines** located between inverters and substations, located either underground or installed overhead on wood poles.
  - At least one, and up to 2, **onsite substation yards**, each substation and associated equipment would require 25 acres within the Project site. Electrical transformers, switchgear, and related substation

facilities would transform 34.5 kV medium-voltage power from the Project's delivery system to the 500 kV gen-tie system.

- **Upgrades to the Oberon Substation** within its fenceline to accommodate interconnection of the Easley 500 kV gen-tie line.
- One **operations and maintenance (O&M) building** for Project security, employee offices, and parts storage. The O&M building would be constructed on a concrete foundation, approximately 6 feet by 20 feet in size and approximately 15 feet at its tallest point. The O&M facility would also include four to six 40-foot CONEX containers spaced about 15 feet apart with some of the space between covered by shade structures. The location of the O&M building within the Project site has not yet been determined, but it is anticipated to be near the main substation yard.
- **12 kV electrical distribution line** would supply electricity to the O&M building and substation via a new overhead or underground 12 kV distribution line from the existing SCE distribution system adjacent to the solar facility site.[1]
- **Supervisory Control and Data Acquisition System (SCADA) and telecommunications facilities** to allow remote monitoring of facility operation and/or remote control of critical components. The fiber-optic or other cabling typically would be installed in buried conduit within the access road, leading to a SCADA system cabinet centrally located within the Project site or a series of appropriately located SCADA system cabinets constructed within the O&M building. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers.
- **Meteorological (MET)** data collection system with up to MET stations throughout the solar facility. Each MET station would be up to 10 feet tall with multiple weather sensors.
- **Battery energy storage system (BESS)**, requiring up to 35 acres, located near the substation. Utilizing an AC-coupled battery or other similar storage system housed in electrical enclosures and capable of storing up to 650 MW of power for 2 to 4 hours.
- **Perimeter fencing** would be installed around the boundary of the developed areas using chain-link perimeter fences.
- **Newly constructed access roads** from State Route (SR-) 177/Rice Road and throughout the interior of the Project limits. Ingress/egress would be accessed via locked gates located at multiple points.
- **Nighttime security lighting** limited to areas required for operation, safety, or security. Lighting would be directed away or shielded from major roadways or possible outside observers on adjacent properties. Lighting would be controlled by switches, motion detectors, etc., to light the areas only when required. Portable lighting may be used occasionally and temporarily for maintenance activities during operations.
- **Site security system** includes infrared security cameras, motion detectors, and/or other similar technology to allow for monitoring of the site through review of live footage 24 hours a day, 7 days a week. Such cameras or other equipment would be placed along the perimeter of the facility and/or at the inverters.

- **New 500 kV Gen-tie Line** (approximately 6.7 miles, within a 175-foot right-of-way [ROW] on BLM-administered land).

[1] Electrical distribution systems carry power the last few miles from the transmission or sub-transmission grid to interconnect with consumers at a lower voltage. Distribution networks are distinguished from transmission networks by their voltage level and topology.

2.3.1. Photovoltaic Modules and Support Structures

The proposed solar facility would include several million solar panels; the final panel count would depend on the technology ultimately selected at the time of procurement. The ultimate decision for the panel types and racking systems described here would depend on market conditions and environmental factors, including the recycling potential of the panels at the end of their useful lives.

Types of panels that may be installed include thin-film panels, crystalline silicon panels, or any other commercially available PV technology. Solar thermal technology, in which solar energy is used to heat a liquid as an intermediate step to generating electricity, is not under consideration. The proposed panel mounting system will depend on the PV panels ultimately selected, but the Applicant is currently planning to use a single-axis tracker with a portrait module orientation. Either mono-facial or bi-facial modules could be used, and modules would either be mounted as single panels or stacked two high. A diagram of a typical single-axis tracker is shown in Figure 2-6 and 2-7.

The PV modules would be manufactured at an offsite location and transported to the Project site. Panels would be arranged in strings with a maximum reveal height of 14 feet at full tilt or slightly higher due to topography. Panel faces would be minimally reflective, dark in color, and highly absorptive.

For single-axis tracking systems, each row of panels would be up to 450 feet along a north/south axis. For fixed-tilt systems, a row consists of multiple tables (4 panels high by 10 panels wide, depending on design), each table approximately 65 feet along the east/west axis, with 1 foot spacing between each table. Spacing between each row would be a minimum of 4 feet. The solar panel array would generate electricity directly from sunlight, which would be collected, converted to alternating current, stored, and delivered to the on-site Project substation.

Structures supporting the PV modules would consist of steel piles (e.g., cylindrical pipes, H-beams, helical screws, or similar structures), which would be driven into the soil using pneumatic techniques such as a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically would be spaced 10 feet apart north-to-south, and 17 feet to 25 feet apart east-to-west with a 50% to 30% ground cover ratio (GCR). For a single-axis tracking system, piles typically would be installed to a reveal height of approximately 4 feet above grade (but could be higher to compensate for terrain variations and clearance due to water/flooding). For single-axis tracking systems, following pile installation, the associated motors, torque tubes, and drivelines (if applicable) would be placed and secured. Some designs allow for PV panels to be secured directly to the torque tubes using appropriate panel clamps. For some single-axis tracking systems, a galvanized metal racking system, which secures the PV panels to the installed foundations, would be field-assembled and attached according to the manufacturer's guidelines. Tracking arrays would be oriented along a north-south axis with panels tracking east to west to follow the movement of the sun.

Where excavations are required, the majority of proposed construction activities would be limited to less than 6 feet in depth; however, some excavations, such as those undertaken for the installation of the gen-tie structures and substation components, may reach depths of 45 feet or more.

2.3.2. Inverters, Transformers, and Electrical Collection System

The Project would be designed and laid out primarily in module blocks of 2 to 5 MW. Each module block would include a Power Conversion Station area measuring 40 feet by 25 feet. The color of the Power Conversion Station would be desert tan, depending on availability from the manufacturer, or treated BLM standard environmental color Carlsbad Canyon. As necessary, module blocks would be designed and sized as appropriate to accommodate the irregular shape of the Project footprint. The final module block sizes ultimately would depend on available technology and market conditions. Each 2 to 5 MW block would

include a Power Conversion Station constructed on a concrete pad or steel skid centrally located within the PV arrays. Each Power Conversion Station would contain up to six inverters, a transformer, a battery enclosure, and an 8 to 11 feet high switchboard (see Figure 2-7 for the layout of a typical inverter skid). The pads would contain a security camera at the top of an approximately 20-foot wood or metal pole. If required based on site meteorological conditions, an inverter shade structure would be installed at each pad. The shade structure would consist of wood or metal supports and a durable outdoor material shade structure (metal, vinyl, or similar). The shade structure, if utilized, would extend up to 10 feet above the ground surface, and depending on the material used would be Carlsbad Canyon or a similar desert tan provided by the manufacturer.

Panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground cables would be installed to convey the direct current (DC) electricity from the panels via combiner boxes located throughout the PV arrays, to inverters located at the Power Conversion Station that would convert the DC to alternating current (AC) electricity. The output voltage of the inverters would be stepped up to the required collection system voltage at pad mount transformers located near the inverters within the Power Conversion Station.

The 34.5 kV collection cables would be buried underground in a trench about 4 feet deep, with segments installed overhead on wood poles to connect all of the solar facility development areas to the onsite substation, which would involve an overhead or underground crossing of SR-177/Rice Road to connect the solar panels located to the east of SR-177/Rice Road to the onsite substation. Thermal specifications require 10 feet of spacing between the medium-voltage lines, and in some locations closer to the onsite substation interconnection more than 20 medium-voltage AC lines could run in parallel.

If the collection system is installed overhead, up to approximately 30 wood poles located between 150 to 250 feet apart could be installed on the site in areas where several circuits would need to cross each other. The typical height of the poles would be approximately 30 to 60 feet, with diameters varying from 12 to 20 inches (see Figure 2-9, Typical 34.5 kV Medium Voltage Line Structures).

2.3.3. Project Substation Yards

At least one, and up to 2, Project substation yards would transform or “step up” the voltage from 34.5 kV to 500 kV. The area of each substation and associated equipment would require approximately 25 acres within the Project site. The substation(s) would collect consolidated intermediate voltage cables from the MV and PV collector system. Electrical transformers, switchgear, and related substation facilities would be designed and constructed to transform medium-voltage power from the Project’s delivery system via the new gen-tie to the Oberon Substation, at which point Easley solar-generated power would be transmitted to the SCE Red Bluff Substation via the Oberon 500 kV gen-tie line, which is currently under construction and anticipated to be online by the end of 2023 (see Figure 2-2).

The internal arrangement for each substation would include:

- Power and auxiliary transformers with foundations
- Pre-fabricated control buildings to enclose the protection and control equipment, including relays and low-voltage switchgear (each building is approximately 20 feet by 40 feet, and 10-20 feet high);
- Metering stand;
- Capacitor bank(s);
- Circuit breakers[2] and disconnect switches;
- One microwave tower adjacent to the control building comprising a monopole structure up to 100 feet in height mounted with an antenna up to 5 feet in diameter;

[2] In accordance with CARB requirements, use of SF6 equipment will be avoided to the greatest extent feasible.

- Dead-end structure(s) up to 199 feet in height to connect the Project substation to the grid; and
- One or more Control Buildings.

The substation area would be graded and compacted to an approximately level grade, although the substation pad may be elevated a few feet pending detailed hydrological study of the area. Concrete pads would be constructed on site as foundations for substation equipment, and the remaining area would be graveled to a maximum depth of approximately 12 inches. Because each of the substation transformers would contain mineral oil, the substation would be designed to accommodate an accidental spill of transformer fluid by the use of containment-style mounting. Each substation would be surrounded by an up-to 7-foot-high chain-link fence topped with one foot of barbed wire. Each of the dead-end structures would require foundations excavated to a depth of 20 feet or more.

2.3.4. 500 kV Gen-tie Transmission Line

The Project would include an approximate 6.7-mile 500 kV gen-tie line starting at the onsite substation located on private property (APN 808-023-018). Just south of the substation, the 500 kV gen-tie line would enter the Oberon Renewable Energy Project site and would be located on BLM-administered land for the remainder of the route. The gen-tie line would exit the substation and travel approximately 0.2-mile due south to cross SR-177/Rice Road, where it would turn southwest to parallel the eastern side of SR-177/Rice Road for 1.1 miles before turning east and then southeast for nearly 1 mile to meet BLM Open Route DC379. The line would parallel the north side of BLM Open Route DC379 and the existing Desert Sunlight and Desert Harvest 230 kV gen-tie lines for 3.8 miles before turning south for 0.6 miles to interconnect to the Oberon Substation.

From the Oberon Substation, the solar power generated by the Easley Project would be transmitted to the SCE Red Bluff Substation via the Oberon 500 kV gen-tie line. The Project 500 kV gen-tie line would be located within a 175-foot ROW, across BLM-administered lands. Conductor span lengths generally range from a minimum of 400 feet to a maximum of 2,200 feet for 500 kV lines.

The Project gen-tie line would be constructed with either monopoles, lattice steel structures, or wooden H-frame poles. Gen-tie structures would be on average 120 feet tall, with a maximum height up to approximately 199 feet. The total number of gen-tie support structures would be approximately 25 structures with the exact number to be determined by the final alignment of the gen-tie line. See Figure 2-10 for a depiction of typical 500 kV gen-tie line structures.

2.3.5. Operations and Maintenance Building

New O&M facilities would be constructed at the Project site. The facilities would be designed for Project security, employee offices, and parts storage. The O&M building would include a 60-foot by 20-foot building plus four to six 40-foot CONEX containers, each separated by 15 feet and with some of the spaces covered by a shade structure. The O&M building would be approximately 15 feet at its tallest point. The O&M building may be constructed on a concrete foundation. A diagram of a typical O&M building floor plan is shown in Figure 2-11.

2.3.6. SCADA and Telecommunications Facilities

The facility would be designed with a comprehensive Supervisory Control and Data Acquisition System (SCADA) system to allow remote monitoring of facility operation and/or remote control of critical components. The fiber-optic or other cabling required for the monitoring system would typically be installed in buried conduit, leading to a SCADA system cabinet centrally located within the Project site or a series of appropriately located SCADA system cabinets constructed within the O&M building. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired

connections to locally available commercial service providers. The Project's SCADA system would interconnect to this fiber-optic network at the onsite substation and may include an up to 50-foot telecom pole.

The California Independent Systems Operator (CAISO) and Project's interconnecting utility, SCE, require that 500 kV power plant interconnection facilities contain three fiber-optic communications lines -- one primary and two redundant. They must be separate to ensure full and true redundancy.

Therefore, the Easley Project requires three paths of communication between the substations with at least 30 feet of separation between each line. As a result, two of those communication lines would be attached on the 500 kV gen-tie line transmission structures. A third fiber-optic line would be installed underground, likely in the gen-tie line access road to accommodate the separation requirements and minimize operational visual impacts. The underground fiber-optic line would be installed in a trench approximately 1 foot wide by 2 feet deep.

2.3.7. Battery Energy Storage System

Battery energy storage systems (BESS) can assist grid operators in more effectively integrating intermittent renewable resources into the statewide grid. The Project could include, at the Applicant's option, a battery or flywheel storage system capable of storing up to 650 MW of electricity for 4 hours, requiring up to 35 acres that would be located near the substation or inverters (see Figure 2-12 for a photograph of a typical BESS enclosure). If provided, the storage system would consist of battery or flywheel banks housed in electrical enclosures and buried electrical conduit. The battery system would be located near the Project switching station to facilitate interconnection and metering. Alternatively, smaller individual BESS systems may be located near each inverter.

Up to 300 electrical enclosures measuring approximately 40 feet by 8 feet by 8.5 feet high would be installed on concrete foundations designed for secondary containment. The Project could use any commercially available battery technology, including but not limited to lithium ion, zinc, lead acid, vanadium, sodium sulfur, and sodium or nickel hydride.

Battery systems would require air conditioners or heat exchangers and inverters. In addition, a 10,000-gallon water tank is anticipated for each BESS unit/area to provide fire safety.

The BESS would comply with the current California Fire Code (CFC), which governs the code requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for load shedding, load sharing and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosure and the site installation design are all required to be approved by the State Fire Marshal.

2.3.8. Meteorological Data Collection System

The Project would include a meteorological (met) data collection system, such as a Soil Climate Analysis Network (SCAN) station or other applicable technology. Each met station would have multiple weather sensors: a pyranometer for measuring solar irradiance, a thermometer to measure air temperature, a barometric pressure sensor, and wind sensors to measure speed and direction. The 4-foot horizontal cross-arm of each met system would include the pyranometer mounted on the left-hand side and the two wind sensors installed on a vertical mast to the right. The temperature sensor would be mounted inside the solar shield behind the main mast. Each sensor would be connected by cable to a data logger inside the enclosure.

2.3.9. Access Roads

Figure 2-2 and Figure 3.18-1 (Project Roads and Access) illustrate the proposed driveways access roads to the solar facility site from SR-177/Rice Road and Kaiser Road, as well as interior dirt access roads within the solar facility site.

2.3.9.1. Main Access

Access to the Project site would be provided from SR-177/Rice Road through multiple primary and secondary driveway entrances and from Kaiser Road. BLM open routes and agricultural roads would also be improved. If building structures, such as the O&M Building, and associated access roadways would be within 1,320 feet of Highway 177, secondary access is not required by the Riverside County Fire Department.

All new and improved access roads would be at least 24 feet wide with a two-foot-wide shoulder on each side, for a total width of approximately 30 feet, including allowances for side slopes and surface runoff control. Construction of the access road segments would include compacting subsurface soils and placing a four-inch-thick layer of asphalt concrete over a 6-inch-thick layer of compacted aggregate base.

2.3.9.2. Internal Roadway System

The Project's on-site roadway system would include a perimeter road surrounding the solar panels within the development fencelines, access roads, and internal roads. Inverters are provided dedicated access roads for maintenance and emergency services, including turnarounds that would accommodate standard fire and emergency vehicle standards.

The perimeter road and main internal access roads and gates would be consistent with the California Building Code and County requirements. These roads would be surfaced with gravel, compacted dirt, or another commercially available surface and would provide a fire buffer, accommodate Project O&M activities, such as cleaning of solar panels, and facilitate on-site circulation for emergency vehicles.

Dust control would be implemented as necessary to mitigate dust plumes. If wildlife-friendly fencing is installed during operation, the roadway system would be specially designed to accommodate the safe passage of desert tortoise and other wildlife across the site. If gravel is used for road surfaces, portions of road lengths would remain free of gravel in strategic locations to facilitate tortoise movement. Culverts may also be placed along internal roads.

2.3.10. Solar Facility Site Security, Fencing and Lighting

2.3.10.1. Controlled Access

Multiple points of ingress/egress would be accessed via locked gates located at multiple points. Each Project unit would have at least one point of access. The driveway aprons off of SR-177/Rice Road and approximately 100 feet of roadway (or as dictated by Caltrans) would be paved to prevent trackout.

2.3.10.2. Fencing

The solar facility would be enclosed with fencing that meets National Electric and Safety Code (NESC) requirements for protective arrangements in electric supply stations. The boundary of the Project components (i.e., solar arrays, substation, BESS) would be secured by at least 6-foot-high chain-link perimeter fences, likely topped with one foot of three-strand barbed wire. The fence would be set approximately 10 to 100 feet (average of 20 feet) from the edge of an array. Desert tortoise exclusion

fencing would be constructed along the bottom of the security fence for Project construction. Desert tortoise exclusion fencing would remain in place during operations except in places where wildlife-friendly fencing may be implemented over a portion of the solar facility site, as described in Section 4.6 (Wildlife-Friendly Fencing).

Project infrastructure would maintain 20-foot setbacks from external private land property boundaries, and internally, panel infrastructure would be set back 5 feet on the private side from public/private parcel boundaries. External fencing would be set back 5 feet from all external parcel boundaries. Linear features, such as fences, medium voltage collector line cabling, internal roadways, etc., may cross public/private property boundaries.

2.3.10.3. Lighting

Care would be taken to prevent undue light pollution from the nighttime security lighting. Lighting at high illumination areas is not required on a continuous basis so would be controlled by switches, motion detectors, etc., to light areas only when required. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and major roadways.

To reduce offsite lighting impacts, lighting at the facility would be restricted to areas required for safety, security, and operation, such as the O&M building. Security lights would use motion sensor technology that would be triggered by movement at a human's height, as not to be triggered by smaller wildlife. The level and intensity of lighting during operations would be the minimum needed. Portable lighting may be used occasionally and temporarily during construction and for maintenance activities during operations, such as emergency work that must occur at night.

2.3.10.4. Other Security Measures

Nighttime activities are anticipated to be minimal during Project operations. Off-site security personnel could be dispatched during nighttime hours or could be on site, depending on security risks, emergency maintenance requirements, and operating needs. Infrared security cameras, motion detectors, and/or other similar technology would be installed to allow for monitoring of the site through review of live footage 24 hours a day, 7 days a week. Such cameras or other equipment would be placed along the perimeter of the facility, at the inverters, laydown areas and/or pre-fabrication areas. Security cameras located at the inverters would be posted on poles approximately 20 feet high.

2.3.11. Water Requirements During Construction

Water for construction needs and related dust control would be obtained from either an on-site ground-water well or purchased off site. Water tanks would likely be set up by any groundwater wells and near the O&M building.

During the construction phase, it is anticipated that a total of up to 1,000 acre-feet of water would be used for dust suppression (including truck wheel washing) and other purposes during the 20-month construction timeframe. To reduce water usage, calcium chloride may be applied to dirt roadways for dust abatement purposes.

During construction, restroom facilities would be provided by portable units to be serviced by licensed providers.

2.3.12. Waste Generation

Waste would be stored in a locked container within a fenced and secure temporary staging area. As there would be regulated hazardous materials on site, storage procedures would be dictated by a Hazardous

Materials Plan that would be developed prior to construction. Spill prevention measures and secondary containment would be implemented as part of the Project where warranted; however, strict compliance under 40 CFR 112 or CWA Section 311 would not be required, because there would be no discharges to waters of the U.S. (i.e., navigable waterways or shorelines).

Trucks and construction vehicles would be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and county regulations. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 355 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or legally disposed of as a result of Project construction. Material Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel.

Construction materials would be sorted on site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. Recycling would be in accordance with application California state requirements.[3] Wooden construction waste (such as wood from wood pallets) would be sold, donated, recycled, or chipped and composted. Other compostable materials, such as vegetation, might also be composted off-site. Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at county landfills. Hazardous waste and electronic waste would not be placed in a landfill, but rather would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling). All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

2.3.13. Fire Safety During Construction

Fire protection would be provided to limit risk of personnel injury, property loss, and possible disruption of the electricity generated by the Project. Fire protection would include minimizing flammable materials in the solar field, such as vegetation.

A Fire Management and Prevention Plan would be prepared for construction, operation, and decommissioning of the facility. The plan would include measures to safeguard human life, preventing personnel injury, preserve property and minimize downtime due to fire or explosion. Of concern are fire-safe construction, including during any welding, reduction of ignition sources, control of fuel sources, availability of water, and proper maintenance of firefighting systems.

Vegetation would be cleared for construction of the drainage controls, including berms if needed. Construction of the Project would involve preparation, installation, and testing of electrical components such as cables, inverters, wiring, modules, and a transformer. Wires would be buried at a minimum of 18 inches below grade, minimizing the potential for faulty wiring to ignite a fire. All electric inverters and the transformer would be constructed on concrete foundation structures or steel skids and tested prior to use to ensure safe operations and avoid fire risks. Prior to wire setup, work areas would be cleared of vegetation to reduce the risk of ignition from any vehicles or equipment. Small quantities of hazardous chemicals such as fuels and greases would be stored at the site during construction. Due to the remote location of the Project site, if on-site fuel tanks are utilized for equipment refueling, they are assumed to be no larger than 1,000 gallons each and they would comply with all applicable regulations. All hazardous chemicals would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages and accidental fires.

[3] As of January 1, 2020, CALGreen requires covered projects to recycle and/or salvage for reuse a minimum 65% of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance, whichever is more stringent.

During construction, a fire-suppression system may be placed in service if required by the County or BLM Fire. Fire extinguishers and other portable fire-fighting equipment would be available onsite, as well as additional water for use at the O&M facility. These fire extinguishers would be maintained in accordance with local and federal Occupational Safety and Health Administration (OSHA) requirements.

Locations of portable fire extinguishers would include, but not be limited to, office spaces, hot work areas, flammable storage areas, and mobile equipment such as work trucks and other vehicles. Fire-fighting equipment would be marked conspicuously and be accessible. Portable equipment would be routinely inspected, as required by local and federal laws, ordinances, regulations, and standards, and replaced immediately if defective or needing charge.

2.4. Construction Activities

2.4.1. Construction Schedule and Workforce

Construction is anticipated to require approximately 20 months, depending on Power Purchase Agreement (PPA) and financing requirements. The on-site workforce would consist of laborers, craftsmen, supervisory personnel, supply personnel, and construction management personnel. The onsite workforce is expected to reach its peak of approximately 530 individuals with an average construction-related on-site workforce of 320 individuals.

Preconstruction surveys, including desert tortoise exclusion fencing installation and clearance surveys, would be conducted, followed by construction of the main access road, security fencing around solar facility site, clearing and construction of a laydown yard, site grading and preparation, construction of the O&M building, parking area, and pad mounts for transformers. Construction would continue with the installation of temporary power, construction of on-site roads, construction of the Project substation, and assembly and installation of panel blocks and wiring.

Construction would occur between the hours of 6:00 a.m. and 7:00 p.m. Monday through Friday for up to a maximum of 13 hours per day. During summer months, construction may begin earlier to minimize work during the hottest periods of the day. Likewise, limited, targeted night work may also be required by the interconnecting utility or for similar electrical work. Weekend construction work is not expected to be required on a regular basis, but may occur on occasion, depending on scheduling considerations.

2.4.2. Ground Disturbance

Table 2-2 provides the details of the ground disturbance required by construction, operation, and decommissioning of the solar and BESS facility, gen-tie line, and access roads on BLM and private land. Ground disturbance estimates would be refined during final engineering.

Table 2-2. Disturbance Estimates for Easley Renewable Energy Project

Component	Temporary Disturbance (acres)	Permanent Disturbance (acres)
Solar & BESS Facility	0	2,050.5
Exterior Components (Roads & Collector/Distribution Lines)	0	40.7
500 kV Gen-tie Line (monopole structures)	18	0.6 (175-ft ROW: 138.3 acres)
Conductor Pull & Tensioning Sites (outside of structure erection areas)	46	0
Guard Structures at Road/Line Crossings	1.8	0

Component	Temporary Disturbance (acres)	Permanent Disturbance (acres)
Spur Roads	0	0.04
TOTAL	**65.8 acres**	**~2,100 acres**

Ground Disturbance Assumptions

- Permanent disturbance at each 500 kV pole location would be ~0.03 acre. Up to approximately 20 gen-tie structures would be located on BLM-administered land within a 175-foot ROW. Final gen-tie line impact acreages will be less than the 175-foot-wide ROW shown in the table, as impacts would occur only at structures and spur roads. Furthermore, structures would be micro-sited to minimize impacts to sensitive habitats and resources to the maximum extent feasible.
- Span length for the 500 kV line would vary from 400 to 2,200 feet.
- Temporary structure erection is 200 feet by 200 feet (~0.9 acre) at each structure location.
- Temporary pull and tension sites: 600 feet long by 200 feet wide (~2.8 acre); Angle poles sites: 1,000 feet long by 200 feet wide (~4.6 acre) Temporary disturbance for pull and tensioning generally extends past each dead-end or angle structure. Necessary for conductor stringing equipment and placement of wire reels (approximately 10 wire pulling sites are needed, most of which are angle poles). For all but angle structures, temporary disturbance for pull and tensioning would occur within the 175-foot ROW or extend into the solar facility development footprint.
- New spur roads would typically have circle-type turnaround areas averaging 450 square feet around each structure location.
- Guard Structures: 100 feet wide by 100 feet long (~0.23 acre). Placed on either side of existing roads, crossings of existing lower voltage distribution or transmission lines, or other obstacles to maintain vertical clearance during construction activities only (approximately 8 guard structures needed).
- Temporary trench width per 34.5 kV line: 40-foot width.

2.4.3. Pre-Construction Activities

Pre-construction activities at the Project site would be undertaken to prepare the site and crews for construction. These pre-construction activities are listed below.

2.4.3.1. Pre-Construction Surveys

Qualified biologists would conduct pre-construction surveys for sensitive species. Sensitive resource areas would be flagged or fenced so they are avoided or appropriately managed during construction. If necessary, wildlife, and certain types of qualifying cacti would be removed from the site and relocated so that construction and necessary conservation work may be conducted in the work area. Species relocation areas would be established in consultation with U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), BLM, and County staff.

2.4.3.2. Geotechnical Evaluation

The Applicant would conduct a geotechnical evaluation to gather information on the physical properties of the soil and rock for incorporation into the design of the facility. Subsurface scientific testing and analysis would include geotechnical borings, trenching, and pile testing along the routes. Geotechnical work may be conducted in advance of issuance of an executed ROW Grant on BLM-administered land under a scientific collection permit from the BLM. In all cases, biological and cultural resources surveys would occur in advance of any ground-disturbing activities, and environmental monitoring would occur during such activities.

2.4.3.3. Construction Crew Training

Prior to construction, all contractors, subcontractors, and Project personnel would receive a County and BLM approved Worker Environmental Awareness Program (WEAP) training, which would emphasize the following:

- Appropriate work practices necessary to effectively understand and implement the environmental resource commitments in the project description;
- Implementation of the mitigation measures;

- Compliance with applicable environmental laws and regulations;
- How to avoid and minimize impacts; and
- Understanding the importance of environmental resources and the purpose and necessity of protecting them.

2.4.3.4. Surveying, Staking, and Flagging

Pre-construction field survey work would include identifying precise locations of the site boundary, security fence, and ROW boundary. These features would be subsequently staked in the field. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate survey or construction limits. All off-road vehicle travel across BLM-administered land would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate.

2.4.3.5. Desert Tortoise Fence Installation

A desert tortoise exclusion fence, if required, would be installed per the USFWS protocol. The permanent desert tortoise fence would be integrated with the site security fence for maximum durability. Fence installation would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate. Following installation, clearance surveys would be conducted.

2.4.3.6. Biological Clearance Surveys

Desert tortoise, mammal, and burrowing owl clearance surveys would be conducted following fence installation. Mammals and owls would be passively relocated using one-way doors or other techniques. Desert tortoise individuals within the solar facility fence line would be actively translocated to an approved site pursuant to an approved Translocation Plan to be developed in consultation with USFWS and the CDFW.

Due to its low elevation, the Chuckwalla Valley historically becomes warmer much earlier than the majority of the desert tortoise range in higher elevation. Clearance surveys are challenging to complete within the limited temperature constraints during the protocol survey period since ambient temperatures often exceed 100 degrees Fahrenheit before the end of April and into October in Chuckwalla Valley. Therefore, temperature thresholds for clearance surveys may be up to 40 degrees C (104 degrees F) in areas that do not have a high modelled desert tortoise occupancy; and/or historical data did not have active desert tortoise sign within the area or in immediate adjacent areas; and/or are adjacent to SR-177/Rice Road, with a higher level of human disturbances. If a desert tortoise is found within the fenced areas during clearance surveys when temperatures are beyond 35 degrees C (95 degrees F), the desert tortoise would be observed for the day by a biologist (at a distance with binoculars) until dusk when it settles. It will be located at dawn again and observed until it can be handled within the proper temperature to affix a transmitter by an authorized biologist. Any handling of desert tortoises would always be below the temperature of 95 degrees.

2.4.3.7. Establishment of Construction Staging Area

Several staging areas would be established within the solar facility site boundaries for storing materials, construction and pre-fabrication equipment, and vehicles. The staging areas would be surveyed and monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate.

2.4.4. Construction Phase 1: Site Preparation

2.4.4.1. Construction-Related Grading and Vegetation Management

Mass grading would not be conducted on the Project site. Several solar and storage facility locations would require specific ground treatments, but this represents a minority of the ground surface of the facility. The substation, storage container, O&M facility, laydown yards, pre-fabrication areas, and internal and external road locations would require mowing, grubbing, grading and compaction. Inverter station locations would require light grubbing. The solar array areas would require mowing and rolling of woody vegetation to a height of 12 inches in an effort to preserve vegetation and provide for better and faster post-construction site revegetation. In some locations, root balls would need to be removed, which would require light grading. Woody vegetation, such as palo verde trees, that are in areas adjacent to infrastructure where it does not impact solar panel performance would be partially cut, leaving the lower trunk intact to allow regrowth of branches and leaves. Certain areas of the site with highly irregular topography that provide important hydrologic functions to the site would be avoided by Project design. Other irregular areas would be leveled or smoothed to provide for construction access and installation.

Best management practices identified in the Project's Fugitive Dust Control Plan would be implemented during all grading and vegetation removal activities, including the possibility of using mulching. To reduce water usage, calcium chloride or a similar soil binder may be applied to dirt roadways for dust abatement purposes.

The site cut and fill would be approximately balanced, as shown in Table 2-3 (final design may require slightly different volumes). The Project would require some import of non-native materials, but minimal import/export would be necessary. The substation and BESS would be graded to an elevation above the surrounding grade to avoid flooding and excavated soils (net export) would likely be used at the to create a balanced cut/fill for the project. On-site pre-assembly of trackers would take place in the staging area. Temporary laydown/prefabrication areas would be located within the solar facility footprint, gen-tie work areas, and/or Oberon Substation yard.

Table 2-3. Estimated Cut and Fill Volumes (Pending Final Engineering)

Project Component	Approximate Acreage	Cut/Fill (CY)	Comments
Solar Arrays, including Access Roads	~2,000	Balanced	The solar array areas would be mowed and grubbed, and more-or-less leveled or smoothed to provide for construction access and installation.
Substation	25	40,333 CY* Import	These sites would be graded and backfilled to an elevation above the surrounding grade to avoid flooding. In addition to imported base, excess soils from storm water basin excavations would be used as well.
BESS	35	56,467 CY* Import	
O&M	10	Balanced	The O&M site would be graded and compacted.
Storm Water Basins	n/a	Export	Excavated soils would be relocated and used in the substation/BESS areas.
Temporary Parking & Laydown	5	Balanced	Temporary parking and laydown areas would be graded and compacted.

*Estimated base, assuming 12-inch depth.

2.4.4.2. Erosion and Sediment Control and Pollution Prevention

A Stormwater Pollution Prevention Plan (SWPPP) or SWPPP-equivalent document would be prepared by a qualified engineer or erosion control specialist, and once approved by the State Water Resources Control Board and a BLM hydrologist, would be implemented before and during construction. The SWPPP 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.

2.4.5. Construction Phase 2: Photovoltaic Panel System

Construction of the O&M building and the 12 kV distribution line connection would be part of the initial solar facility development in tandem with the beginning of PV module construction. The construction activities associated with the distribution line would be similar to the medium-voltage collector lines described below. The site of the O&M building would be cleared and graded, followed by installation of a concrete foundation.

All or a portion of the PV panel arrays may be pre-assembled in a fabrication assembly plant located on site.

The structures supporting the PV module arrays would consist of steel piles (e.g., cylindrical pipes, H beams, or similar) driven into the soil using pneumatic techniques, similar to a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically are spaced 10 feet apart in the north-south direction and 22 feet apart in the east-west direction. For a single-axis tracking system, piles typically would be installed to a reveal height of approximately 4 to 6 feet above grade, while for a fixed-tilt system the reveal height would vary based on the racking configuration specified in the final design. For single-axis tracking systems, following pile installation the associated motors, torque tubes, and drivelines (if applicable) would be placed and secured. Some designs allow for PV panels to be secured directly to the torque tubes using appropriate panel clamps. For some single-axis tracking systems and for all fixed-tilt systems, a galvanized metal racking system, which secures the PV panels to the installed foundations, would be field-assembled and attached according to the manufacturer's guidelines.

2.4.6. Construction Phase 3: Inverters, Transformers, Substations, Electrical Collectors, & BESS

Direct current (DC) lines would be installed in conduits. The lines would be collected and combined and routed to the inverters to be converted to alternating current (AC) and stepped up to 34.5 kV via a pad-mount transformer. Within the arrays this wiring would typically be hung from the racking equipment. Final sections would be connected to the inverters via an underground stub. Trenches for the collector lines would be run from the inverters to the onsite Project substation.

Electrical inverters would be placed on steel skids or concrete pads, elevated as necessary with steel piles to allow for runoff to flow beneath the inverter structures. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. The substation equipment, inverters, collector system, and PV array systems would be tested prior to commencement of commercial operations. Upon completion of successful testing, the equipment would be energized.

Medium-voltage (34.5 kV) cabling from the inverters to the 34.5 kV/500 kV substation would be installed either underground, or overhead along panel strings in a CAB[4] system to avoid the need for underground cabling and trenching. At the combiner box, cables would be combined and routed overhead on wood poles roughly 30 to 50 feet high, depending on voltage.

Underground cables would be installed using direct-bury equipment and/or ordinary trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. An underground 34.5 kV line would likely be buried at a minimum of 36 inches below grade, but could go as deep as 6 feet and include horizontal drilling to avoid environmental resources. Shields or trench shoring would be temporarily installed for safety to brace the walls of the trench, if required based on the trench depth. After the excavation, cable rated for direct burial would be installed in the trench, and the excavated soil would be used to fill the trench and compress to 90 to 95 percent maximum dry density or in accordance with final engineering.

For any overhead 34.5 kV line, pole foundations would be excavated to an average depth of approximately 10 feet. Installation would consist of the following basic steps:

- Deliver new pole to installation site;
- Auger new hole using line truck attachment to a depth of up to 35 feet and include concrete supports depending on final engineering;
- Pour concrete foundation;
- Install bottom pole section by line truck, crane, or helicopter; and
- Install top pole section(s) by line truck, crane, or helicopter, if required.

Once poles are erected, the 34.5 kV conductor would be strung generally using a wire truck, crane and/or helicopter, splicing rig and puller from conductor pull and tension sites at the end of the power line. Each conductor would be pulled into place at a pre-calculated sag and then tension-clamped to the end of each insulator using sag cat and static truck/tensioner equipment. The sheaves and vibration dampers and accessories would be removed once installation is complete.

Substation areas would be excavated for the transformer equipment and control building foundation and oil containment area. The site area for the substation would be graded and compacted to approximately level grade. Foundations for the substation would be formed with plywood and reinforced with structural rebar. Concrete pads would be constructed as foundations for substation equipment, and the remaining area would be graveled. Concrete for foundations would be brought on site from a batching plant in Blythe or would be produced by a portable batch plant on site as necessary.

The energy storage facility 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 concrete foundations are in place for the BESS, the batteries, inverters, and other electrical equipment would be mounted and installed. Equipment would be delivered to the site on trucks.

2.4.7. 500 kV Gen-tie Line Construction

The Project gen-tie line would be located within a 175-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. Gen-tie structures would be on average 120 feet tall but could be as tall as 199 feet and would be composed of lattice steel structures, steel H-frames, and

[4] Cambria Association for the Blind and Handicapped produces overhead cable management systems comprised of cable trays, hooks, and other devices. The sale of CAB Products helps support its services to persons with disabilities.

monopole steel structures. A 3-phase 500-kV bundled set of conductors would be strung along the structures, and the line would be equipped with a ground wire and a telecommunications fiber-optic cable. Helicopters would be used to support overhead construction. Drones may also be used to support gen-tie and medium voltage collector line construction, as described in Section 2.5.5 (Drone Use).

During stringing of the conductor, pull and tensioning and temporary work areas may be required outside of the 175-foot ROW. The temporary disturbance area for each structure is 200 feet by 200 feet on the generally flat terrain of the Project area. The average size of pull and tension sites is 600 feet long by 200 feet wide; however, angle poles sites can increase to 1,000 feet by 200 feet. Foundation sizes (permanent disturbance) would be 30 to 40 feet in diameter depending on topography.

The Applicant would also perform any required upgrades to the Oberon Substation during this time.

2.4.7.1. Helicopter Use

Helicopters would likely be used for wire stringing activities including hanging travelers, pulling conductor and optical ground wire (OPGW), dead-end activities, and the installation of bird diverters for the gen-tie line. There would be one Helicopter Landing Zone (HLZ), likely located in the project substation laydown yard. A water truck would be onsite to water the HLZ prior to helicopter activities to prevent fugitive dust from rotor wash. Helicopter refueling will be done within the HLZ from a construction vehicle equipped as a fuel truck. Refueling may also occur at the Desert Center Airport, where the helicopter may be hangered overnight, before and/or after each day the helicopter is utilized. While the helicopter may land briefly within approved, existing disturbance areas on the gen-tie line to pick up equipment, materials, or personnel, no helicopter refueling will occur on BLM-administered land. Helicopter activities would occur over a temporary period within the proposed 2-year construction of the Project and would occur within the typical construction hours Monday through Friday 7:00am to 7:00pm. It is estimated that helicopters would be used for up to 200 hours over approximately 40 days. The helicopter activities would reduce ground disturbance by eliminating certain on-the-ground equipment that is typically used for overhead gen-tie line construction, including cranes, backhoe, and trucks. Helicopter use would also reduce the total duration of gen-tie construction by approximately 10 to 15 days. A full-time avian monitor would be onsite for the full duration of helicopter activities to specifically monitor helicopter activities.

All helicopter operations would be in accordance with a County and BLM approved Helicopter Use Plan, and all aircraft, pilots, linemen, and mechanics would be in full compliance with applicable FAA requirements and standards.

2.4.8. Construction Access, Equipment, and Traffic

All equipment and materials for the Project's construction would be delivered by flatbed trailers and trucks. Most truck traffic would occur on designated truck routes and major streets. Project components would be assembled on site. Traffic congestion resulting from construction activities would be temporary and could occur along area roadways as workers commute and materials move to and from the Project site. Helicopters and drones could be used to support construction activities and designated landing and refueling zones would be established. Materials deliveries during construction would travel up to 150 miles one way from sources to the Project site.

During construction, an average of 320 workers per day would commute to the Project site with a maximum of 530 workers during peak construction. In addition, an estimated 80 round trips per day would be required to deliver materials and equipment to the Project site. Water for construction-related dust control and operations would be obtained from several potential sources, including multiple on-site or offsite groundwater wells, and/or trucked from an offsite water purveyor.

Flagging operations at site access points may be implemented during construction if/when traffic control needs are indicated through either monitoring traffic operations during construction or determined to be required during construction stage planning.

2.4.9. Post-Construction Cleanup

Construction sites would be kept in an orderly condition throughout the construction period by using approved enclosed refuse containers. All refuse and trash would be removed from the sites and disposed of in accordance with BLM regulations. No open burning of construction trash would occur. All vegetation that may interfere with equipment would be trimmed and removed using manual non-mechanical means or sprayed with an approved herbicide, as necessary.

2.4.10. Construction Site Stabilization, Restoration, and Wildlife Monitoring

Following the completion of major construction, temporarily disturbed areas would be revegetated pursuant to an approved Restoration Plan. The Plan would describe the Applicant's strategy to minimize adverse effects on native vegetation, soils, and habitat. Where necessary, native re-seeding or vertical mulching techniques to alleviate compaction would be used. However, it is anticipated that many species will regenerate post-construction due to preservation of desert vegetation during the construction phase.

At the conclusion of restoration activities, and if determined beneficial by USFWS, CDFW, and BLM biologists, any previously relocated plants and wildlife would be reintroduced to the Project site and monitored for safety and health.

2.5. Operation and Maintenance Activities

Upon commissioning, the Project would enter the operations phase. The solar modules at the site would operate during daylight 7 days a week, 365 days a year. Operational activities at the Project site would include:

- Maintaining safe and reliable solar generation;
- Site security;
- Responding to automated electronic alerts based on monitored data, including actual versus expected tolerances for system output and other key performance metrics; and
- Communicating with customers, transmission system operators, and other entities involved in facility operations.

Site standby power would be provided by backup generator(s). The California Air Resources Board (CARB) requires stationary generator engines rated 50 brake-horsepower (bhp) (equivalent to 37 kW) or greater to obtain an air quality permit issued by the local air district. If backup generators for the substation are 50 MW or greater, then the Applicant would obtain necessary permits from the California Energy Commission as well.

2.5.1. Operation and Maintenance Workforce

During operation of the proposed Project, up to 10 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. Alternatively, approximately 2 permanent staff and 8 Project operators would be located off site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. Security personnel would be on call. The staff would be sourced from nearby communities in Riverside County. The O&M building would house the security monitoring equipment, including security camera feeds for monitoring the Project 24 hours per day.

2.5.2. Site Maintenance

The Project site maintenance program would be largely conducted during daytime hours. Equipment repairs could take place in the early morning or evening when the plant would be producing the least amount of energy. Key program elements would include maintenance activities originating from the on-site O&M facility.

Maintenance typically would include: panel repairs; panel washing; maintenance of transformers, inverters, energy storage system, and other electrical equipment; road and fence repairs; and vegetation and pest management. The Applicant would recondition roads up to approximately once per year, such as after a heavy storm event that may cause destabilization or erosion.

Revegetation would be the primary strategy to control dust across the solar facility site. Soil binders would be used to control dust on roads and elsewhere on the solar facility site, as needed.

On-site vegetation would be managed to ensure access to all areas of the site, reduce fire risk, and to assist in screening Project elements as needed. Onsite vegetation may be trimmed approximately once every three years, as needed. For the first year, weed management and control would be performed quarterly.

Solar modules would be washed as needed (up to four times each year) using light utility vehicles with tow-behind water trailers to maintain optimal electricity production. No chemical agents would be used for module washing.

No heavy equipment would be used during normal operation. O&M vehicles would include trucks (pickup and flatbed), forklifts, and loaders for routine and unscheduled maintenance and water trucks for solar panel washing. Large heavy-haul transport equipment may be brought to the solar facility infrequently for equipment repair or replacement. No helicopter use is proposed during routine operations although they may be used for emergency maintenance or repair activities.

Long-term maintenance schedules would be developed to arrange periodic maintenance and equipment replacement in accordance with manufacturer recommendations. Solar panels are warrantied for 35 years or longer and are expected to have a life of 50 or more years, with a degradation rate of 0.5 percent per year. Moving parts, such as motors and tracking module drive equipment, motorized circuit breakers and disconnects, and inverter ventilation equipment, would be serviced on a regular basis, and unscheduled maintenance would be performed as necessary.

2.5.3. Fire Safety During Operation

Solar arrays and PV modules are fire-resistant, as they are constructed largely of steel, glass, aluminum, or components housed within steel enclosures. As the tops and sides of the panels are constructed from glass and aluminum, PV modules are not vulnerable to ignition from firebrands from wildland fires. In a wildfire situation, the panels would be rotated and stowed in a panel-up position. The rotation of the tracker rows would be controlled remotely via a wireless local area network. All trackers could be rotated simultaneously in a hazard situation.

The BESS would comply with the current California Fire Code (CFC), which governs the code requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for load shedding, load sharing, and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosure and the site installation design are all required to be approved by the State Fire Marshal. If applicable, the BESS would be certified to UL 9540, the standard associated with control, protection, power conversion, communication, controlling the system environment, air, fire detection and suppression systems related to the functioning of the energy storage system. The battery

would be tested to UL 9540A, a test method intended to document the fire characteristics associated with thermal event or fire and would confirm that the system will self-extinguish without active fire-fighting measures. The system would be designed such that, during a fire event, the results of the UL 9540A test would show that any internal fire is contained within the enclosure and not spread to the other parts of the facility. The results of this test are used to inform facility safety system design and emergency response plans which would be shared with first responders. If applicable, the system would use a chemical agent suppressant-based system to detect and suppress fires. If smoke or heat were detected, or if the system were manually triggered, an alarm would sound, horn strobes would flash, and the system would release suppressant, typically FM-200, NOVEC 1230 or a similar clean agent[5] from pressurized storage cylinders. However, final safety design would follow applicable standards and would be specific to the battery technology chosen, including, but not limited to, National Fire Protection Association 855 (standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code.

During O&M activities, standard defensible space requirements would be maintained surrounding any welding or digging operations. Fire safety and suppression measures, such as smoke detectors and extinguishers, would be installed and available at the O&M facility, if required by the County and/or BLM.

As described above, a Fire Management and Prevention Plan will be prepared in coordination with the County, BLM Fire, or other emergency response organizations to identify the fire hazards and response scenarios that may be involved with operating the solar facility and BESS. This would include information on response to accidents involving downed power lines or accidents involving damage to solar arrays and facilities.

2.5.4. Wildlife-Friendly Fencing

The Applicant may elect to utilize wildlife-friendly fencing on portions of the proposed facility based on its success at the Oberon Project. If wildlife-friendly fencing is implemented, after vegetation is substantially reestablished, temporary desert tortoise exclusion fencing may be removed after construction. If wildlife-friendly fencing is implemented, it would likely be located in the portion of the solar facility within the Pinto Wash Linkage and/or areas adjacent to desert dry wash woodland that provide higher value wildlife habitat.

This would allow desert tortoise and other wildlife passage through portions of the Project site for the life of the Project. In areas where wildlife-friendly fencing is implemented, the security fence would leave a 6- to 8-inch gap between the lower fence margin (rail or mesh) and the ground. The bottom of the fence fabric (chain-link or similar material) would be wrapped upward so that no sharp edges are exposed along the lower fence margin. O&M safety practices, including worker training and biological monitoring of nesting, burrowing, or denning wildlife, would be implemented to maximize long-term safety of desert tortoises and other wildlife present at the site.

2.5.5. Drone Use

Drones would be used to perform annual thermal and visual inspections of the gen-tie line and overhead medium-voltage collector line structures. The maximum drone operation heights would be restricted to 300 feet, which is higher than the maximum height of the gen-tie line structures.

Annual visual inspections are required by NERC FAC-003-4 Transmission Vegetation Management and utilized for preventative maintenance to reduce the risk of equipment malfunction or failure. Drone inspections would be performed once per year between September and November to avoid potential

[5] Clean agents, including inert gases, are commonly used to suppress fires in machinery and electrical equipment, including occupied spaces, because they do not damage components and are considered safe for people and the environment.

impacts to nesting native and migratory birds. A team of two Federal Aviation Administration (FAA) approved and Unmanned Aircraft System (UAS) certified pilots would drive a truck on gen-tie ROW access roads as close to the inspection sites as is safe and feasible, park on the road, and begin the inspection. The drones used would be battery-powered *Matrice 300 RTK or Matrice 200 series* drones or similar and would perform the inspections between approximately 76-300 feet above ground level (AGL). Operating hours for inspections would be between the hours of 10:00 a.m. and 3:00 p.m. The drone pilots would work in pairs with one flying and one spotting for safety. The use of drones for gen-tie infrastructure inspections would minimize the need for larger vehicles, such as bucket trucks, and no ground disturbance would occur during drone use.

2.5.6. O&M Water Requirements

During the operations and maintenance phase, water would be required for panel washing and maintenance and for workforce facilities. Substation restroom facilities would be located adjacent to the O&M building. If the septic system is not self-contained, an associated leach field would be required. The leach field would be permitted by Riverside County and would not be located within 0.25 mile of any drinking water well.

During operation, the solar array portion of the Project would require the use of a total of approximately 50 acre-feet of water annually for panel washing (which would occur up to four times per year) and other uses. No wastewater would be generated during panel washing as water would be absorbed into the surrounding soil or would evaporate. Water would be obtained from an onsite groundwater well or purchased off site.

2.6. Decommissioning and Repowering

The facility's equipment has a useful life of 30 to 50 years. At the end of the initial power purchase agreement's contract term of approximately 10 to 25 years, the Project would still be able to generate power. At that time, the facility would likely be optimized to increase the plant's efficiency by swapping out inverters for more efficient units, and potentially swapping out some of the facility's modules. Ground-disturbing work would not be necessary for optimization activities. The Project would be offline for several weeks or months during optimization activities but would subsequently continue delivering electricity to the wholesale market for many decades. Conditional Use Permit (CUP), Public Use Permit (PUP), and ROW renewals would be sought from the County and BLM, as necessary. Long-term operations would be the same as described above.

At the end of the Project's useful life, the solar arrays and gen-tie line would be decommissioned and dismantled per an agency-approved Closure and Decommissioning Plan. It is assumed that decommissioning would take approximately 20 months, similar to the construction duration, and would likewise use up to 1,000 AF of water for dust suppression (including truck wheel washing) and other purposes during the 20-month period.

Upon ultimate decommissioning, a majority of Project components would be suitable for recycling or reuse, and Project decommissioning would be designed to optimize such salvage as circumstances allow and in compliance with all local, State, and federal laws and regulations in effect at the time of decommissioning. Following removal of the above-ground and buried Project components as required in the Closure and Decommissioning Plan, the site would be restored to its pre-solar facility conditions, or such condition as appropriate in accordance with County and BLM policies at the time of decommissioning.

Decommissioning activities would require similar equipment, workforce, and duration (20 months) as construction, but would be substantially less intense. The following activities would be involved:

- Dismantling and removal of all above-ground equipment (solar panels, track units, transformers, inverters, substation, O&M buildings, switchyard, distribution lines, etc.)
- Excavation and removal of all above-ground cables
- Removal of solar panel posts
- Removal of primary roads (aggregate-based)
- Break-up and removal of concrete pads and foundations
- Removal of septic system and leach field
- Removal of 34.5 kV collector lines
- Dismantling of gen-tie line
- Scarification of compacted areas

The panels could be sold into a secondary solar PV panel market. The majority of the components of the solar installation are made of materials that can be readily recycled. If the panels can no longer be used in a solar array, the silicon can be recovered, the aluminum resold, and the glass recycled. Other components of the solar installation, such as the tracker structures and mechanical assemblies, can be recycled, as they are made from galvanized steel. Equipment such as drive controllers, inverters, transformers, and switchgear can be either reused or their components recycled. The equipment pads are made from concrete, which can be crushed and recycled. Underground conduit and wire can be removed by uncovering trenches, removing the conduit and wire, and backfilling. The electrical wiring is made from copper and/or aluminum and can be reused or recycled, as well. It is estimated that 100 percent of copper components would be recycled and approximately 50 percent of aluminum and other components would be recycled.

Decommissioning of the aboveground portion of the gen-tie and overhead medium voltage collector lines consists of removal of the overhead conductors and removal of poles (risers). All steel would be recycled, and the overhead structure foundations removed to a depth of at least 2 feet below the ground surface. Aluminum from overhead conductors would be recycled. Procedures would be designed to ensure public health and safety, environmental protection, and compliance with all applicable laws, ordinances, regulations, and standards.

2.7. Applicant Proposed Measures

As part of the Project, the Applicant proposes to implement measures to ensure the Project would occur with minimal environmental impacts and in a manner consistent with applicable rules and regulations. These measures would be implemented during the design, construction, and operation of the Project.

The Applicant Proposed Measures (APMs) listed below are considered part of the Project and are considered in the evaluation of environmental impacts (see Section 3, Environmental Analysis). Project approval would be based upon the Applicant adhering to the Project as described in this document, including this project description and the APMs, as well as any mitigation measures that may be imposed as conditions of approval.

APM AES-1 **Weathering Coating of Security Fencing.** To reduce operational visual impacts of the Project to the community of Lake Tamarisk, the Project owner will apply a weathering coating (Natina or substantially similar) to the Project security fencing located closest to the Community. The total length of fencing that will be coated is approximately one mile and may be contiguous or separate sections, depending on the final Project design and the location(s) of most visible security fencing.

APM NOISE-1 **Construction Timing**. Applicant will avoid or minimize use of any impact hammer for pile driving or other equipment similarly capable of producing disruptive noise during construction activities within a one-mile radius from the residential parcel on the northeast corner of the Lake Tamarisk Desert Resort community during the winter months of highest residency (November 1 to March 31). If based on the final construction schedule, use of such equipment is necessary within this geographic area during the aforementioned time period, the Applicant will avoid or minimize this construction activity prior to 7:00 am and after 6:00 pm. The Applicant will also avoid nighttime equipment deliveries between 10:00pm and 7:00am.

Figure 2-13 depicts the one-mile radius described in APM NOISE-1.

2.8. Alternatives Analyzed in Detail

2.8.1. CEQA Requirements for Alternatives

Section 15126.6(a) of the State 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." Further, an EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives 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 alter-natives 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)" [CEQA Guidelines Section 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 5, 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 Project alternatives.

As presented below, a variety of alternatives to the Project were considered to determine potential alternatives which might produce fewer significant impacts, or reduce the severity of those significant impacts, than the proposed 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 proposed Project; and
- The alternative would attain most of the basic proposed Project objectives.

Alternatives considered included the No Project Alternative and those associated with a revised configuration of the solar and BESS facility. The No Project Alternative and other alternatives carried forward for evaluation in Section 3 (Environmental Analysis) are presented in Section 2.7. An alternative comparison is provided in Section 5. Alternatives considered, but not carried forward for further analysis are presented in Section 2.8.

2.8.2. Alternative 1: No Project Alternative

The No Project Alternative is required by CEQA. 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 is not approved and does not take place.

Under the No Project Alternative, the construction of the Easley Renewable Energy Project and associated infrastructure would not occur. Because no Project would be constructed, none of the construction, operation, or decommissioning impacts associated with the Project would occur to any of the resources identified and discussed in Section 3. Project-related off-site mitigation and contributions to cumulative impacts would not occur.

The No Project Alternative would not meet any of the Applicant's objectives for the Project and would not contribute to achieving any of the energy generation goals or GHG reduction goals under Senate Bill 350, Senate Bill 100, and AB 32. The DRECP ROD notes that "it is designed to both provide effective protection and conservation of important desert ecosystems, while also facilitating the development of solar, wind and geothermal energy projects in those unique landscapes."

Furthermore, Executive Order 14008, issued January 27, 2021, "Tackling the Climate Crisis at Home and Abroad," directs the Secretary of the Interior to identify steps that can be taken to increase renewable energy production on public lands and manage federal lands to support robust climate action (see sections 204 and 207).

If energy that would have been produced by the proposed Project is not replaced with energy provided from renewable sources, the alternative energy projects could result in greater emissions from, for example, the burning of fossil fuels. Such replacement projects would not contribute to meeting state or federal GHG reduction goals.

The No Project Alternative considers what would be reasonably expected to occur in the foreseeable future if the proposed Project is not approved and does not take place. The Project site is located on BLM-administered land within and on private lands adjacent to a Development Focus Area near an existing substation with available capacity for additional energy transmission. If the Project were not constructed, it is highly likely that a different solar developer would apply to construct a similar solar project at this location. If a different solar project were to be constructed in this location, the impacts of that solar project would be evaluated under CEQA and NEPA and may be similar to those identified for the proposed Project, as presented in Section 3 of this EIR.

2.8.3. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would be located within the proposed Project application area and has been developed in response to concerns expressed by the Lake Tamarisk Desert Resort community during the CEQA scoping process. The Alternative would be similar to the proposed Project but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk, such that the Project solar panels would be approximately 0.45 miles (2,350 feet) from the northeast corner of the Lake Tamarisk Desert Resort community compared to 750 feet under the proposed Project. With this reduction in acreage, the electrical output would not be appreciably reduced compared to the proposed Project.

In addition, in response to visual concerns, the onsite substation and BESS would be moved at least 0.7 mile to the northeast (farther from the community of Lake Tamarisk), on either BLM-administered land (Substation Alternative A) or private land adjacent to SR-177/Rice Road (Substation Alternative B) (see Figure 2-14). The alternative substation would be over 1.2 miles from the residences within Lake Tamarisk as opposed to approximately 0.6 mile under the proposed Project. The Applicant is in discussions with

MWD and EDF Renewables to ensure that there are no conflicts with existing or proposed easements across the Easley Project site.

The 500 kV gen-tie line from both of the Alternative substation location options would exit the substation to the south and would cross SR-177/Rice Road before turning to the southwest to parallel the roadway on BLM land within the Easley site to rejoin the proposed route where it would cross SR-177/Rice Road onto the Oberon Project. The gen-tie line ROW under the proposed Project and Lake Tamarisk Alternative would be 175 feet wide. At 7.5 miles, the length of the 500 kV gen-tie line under the Lake Tamarisk Alternative would be approximately 0.8 miles longer than the proposed 500 kV gen-tie line (6.7 miles).

2.9. Alternatives Considered and Eliminated from Further Analysis

2.9.1. Federal Land Alternative

During scoping, community members at the Lake Tamarisk Desert Resort requested a 5-mile "Natural Desert Zone" buffer from the community to the nearest solar installation. The commenters also suggested an alternative east of Highway 177 stating that there only remains approximately 6,000 acres west of Highway 177 for solar development, while there is 130,000 acres available east of Highway 177 in the BLM DFA.

Similar to the proposed Project, an alternative site on BLM-managed lands farther from the community of Lake Tamarisk Desert Resort would involve the construction, operation, maintenance, and decommissioning of an up to 400 MW solar facility and 500 kV gen-tie line. This alternative would be located within the East Riverside DRECP DFA. Additionally, the Federal Land Alternative would be located less than 15 miles from the Red Bluff Substation. It is also assumed that this alternative would require a BLM Right-of-Way Grant to allow for the construction and operation of solar facilities within BLM-managed lands.

BLM-administered lands within the East Riverside DFA and located to the east of SR-177/Rice Road, were included in the original Easley Project application to BLM, which totaled 10,160 acres (8,338 acres of BLM-administered land and 1,822 acres of private lands). Based on the results of biological resources surveys, the parcels were identified as located within an active sand (aeolian) transport corridor and within habitat for Mojave fringe-toed lizard and rare plants (chapparal sand verbena and Harwood's wooly aster). In addition, the areas had a higher sensitivity for cultural resources. The Applicant removed these parcels (3,847 acres) from the Project due to engineering challenges within the active sand transport corridor and significant biological resources development constraints from compliance with the DRECP Conservation and Management Actions (CMAs) and resource buffers. The remaining acreage was removed due to constraints with siting of the medium voltage collector lines from the parcels to the project substation and compliance with the DRECP CMAs.

The Federal Land Alternative on BLM-managed lands would not likely reduce any potentially significant impacts from the proposed Project, as the proposed Project is sited primarily on previously disturbed private lands and BLM-administered lands within a DFA. This alternative would likely have impacts similar to those of the proposed site for many resource elements, such as air quality and traffic. However, it is likely to have more severe biological, cultural, and visual resource impacts, as it would likely be located on undisturbed lands and may be a greater distance to existing transmission infrastructure required for interconnection. Also, it may not be feasible to find an alternative site on BLM-managed lands, because most of the land within the DFA is in use, proposed for other solar energy projects, or within mountainous areas and areas with hydrological concerns. Difficulties with compliance with the DRECP CMAs would also trigger the need for a BLM Land Use Plan Amendment as part of project approval, which would create regulatory feasibility challenges.

Finally, site control is also an issue, given that the DRECP and BLM Rents and Bonds Policy require a competitive auction to secure land within DFAs and BLM has yet to conduct one for sites in Riverside County. The Federal Land Alternative would not present significant environmental advantages over the proposed Project and has thus been eliminated from consideration.

2.9.2. Private Land Alternative

An alternative that would develop the solar facility on other private lands elsewhere was not considered further, because it is considered speculative and infeasible based on the number of landowners whose agreement would be required. In addition, another site, such as one farther from the community of Lake Tamarisk, would likely have environmental impacts equal to or greater than the proposed site, which is located on disturbed private land and BLM-administered land that is within a DRECP DFA, and thus, targeted for renewable energy development.

2.9.3. Alternative Solar Technologies

The following alternative solar technologies have been screened and are recommended for elimination from detailed analysis since they are considered infeasible or would have greater impacts.

2.9.3.1. Solar Power Tower Technology

Solar power tower technology is a concentrating solar power (CSP) technology that uses a flat mirror "heliostat" system that tracks the sun and focuses solar energy on a central receiver at the top of a high tower. The focused energy is used to heat a transfer fluid (to 800 to 1,000 degrees Fahrenheit [°F]) to produce steam and run a center power generator. The transfer fluid is super-heated before being pumped to heat exchangers that transfer the heat to boil water and run a conventional steam turbine to produce electricity. Although concentrated, solar power systems can store heated fluids to deliver electricity even when the sun is not shining. In areas of high solar insolation potential (i.e., desert environments), the land required to develop a CSP power tower facility is comparable to that required for a PV project.

This alternative was eliminated from consideration because no substantial reduction in impacts would occur under this alternative technology and visual impacts would likely be greater due to the height of the towers. In addition, due to the extent of the facility and the height of the power towers as well as a greater potential for glare, impacts to the Desert Center Airport would be potentially greater under this alternative. It has also been suggested that due to a phenomenon known as "solar flux," power tower projects pose a greater risk to avian species by creating an invisible zone where the concentrated solar power can singe feathers and interfere with flight. The fact that the nearby Palen Solar Energy Project was previously evaluated as a solar power tower project and struggled to secure approvals due to these same impacts before switching to PV solar technology further supports the conclusion that this technology is not feasible in this area.

2.9.3.2. Solar Parabolic Trough Technology

Parabolic trough technology is another CSP technology that uses large, U-shaped (parabolic) reflectors (focusing mirrors) that have fluid-filled pipes running along their center, or focal point. The mirrored reflectors are tilted toward the sun and focus sunlight on the pipes to heat the heat transfer fluid inside, similar to the solar power tower technology. The hot fluid is then used to boil water, which makes steam to run conventional steam turbines and generators.

Solar trough fields have stringent grading requirements, as parabolic troughs must be almost level along their troughs, and grades perpendicular to the troughs are generally benched to 2 percent or less. Therefore, most of the solar facility site would need to be graded and scraped free of vegetation. Use of

solar trough technology would also likely require engineered drainage channels along the facility boundary to intercept any modeled off-site surface flows and convey them around and through the site for discharge.

Therefore, similar to solar power tower and other CSP technologies, parabolic trough technology has been eliminated from consideration because it would have the potential for more severe impacts than the proposed solar PV technology. These impacts would include more dramatic degradation of visual resources (due to use of mirrors), more extensive ground disturbance, increased industrial construction for the turbines and power blocks, and use of potentially hazardous heat transfer fluids.

2.9.3.3. Distributed Solar Technology

There is no single accepted definition of distributed solar technology. The 2011 Integrated Energy Policy Report defines distributed generation resources as "(1) fuels and technologies accepted as renewable for purposes of the Renewables Portfolio Standard; (2) sized up to 20 MW; and (3) located within the low-voltage distribution grid or supplying power directly to a consumer." Distributed solar facilities vary in size from kilowatts to tens of megawatts but do not require transmission to get to the areas in which the generation is used.

A distributed solar alternative would consist of PV panels that would absorb solar radiation and convert it directly to electricity. The PV panels could be installed on residential, commercial, or industrial building rooftops, parking lots or areas adjacent to existing structures such as substations. To create a viable alternative to the proposed Project, there would have to be sufficient newly installed panels to generate up to 400 MW of capacity, which would be similar in size to the proposed Project. Alternatives to the Project that involve rooftop installation of solar generating facilities would avoid the loss of carbon sequestration that would otherwise occur due to the land use change related to construction and operation of the Project in desert habitat.

Although there is potential to achieve up to 400 MW of distributed solar energy in the greater California area, the limited number of existing facilities makes it unlikely to be feasible or present environmental benefits. Although the type of panel used for the proposed Project is not yet known, rooftop systems typically consist of less efficient fixed-tilt systems that may not be oriented optimally towards the sun, meaning that developers would need to obtain more surface area for the project if constructed on a rooftop instead of on the ground. The transaction costs of obtaining multiple rooftops, the complexity of mobilizing construction crews across multiple projects including the transporting and deployment of construction materials in a less efficient manner, the additional work needed to prepare rooftops to support a solar installation, and the need to develop the deals to secure the same amount of PV-produced electricity make this type of alternative infeasible.

The fact that distributed generation projects might have fewer impacts on certain resources because they do not utilize substations and transmission facilities illustrates that distributed generation projects cannot meet one of the fundamental objectives of a utility-scale solar project: to provide renewable energy to utility off-takers and their customers. Rooftop systems that are not connected to the utility side of the electric grid only generate power for on-site consumption. At the same time, the difficulties in supplying a comparable amount of MWs of clean energy to the public through the utility sector has its own set of impacts due to failure to offset the impacts of counterpart fossil fuel energy sources.

Challenges associated with the implementation of a distributed solar technology include widely varying codes, standards, and fees; environmental requirements and permitting concerns; interconnection of distributed generation; inefficiencies; and integration of distributed generation. The significant barriers to consolidating power generated through a distributed network of sites would furthermore make it unlikely that the project could achieve its storage goals and provide energy when the sun is not shining.

As a result, this technology was eliminated from detailed analysis as an alternative to the proposed Project.

2.9.4. Alternative Renewable Energy Technologies

Alternative renewable energy technologies, such as geothermal, biomass, tidal and wave power technologies, have been eliminated from consideration because they are not within the Applicant's area of expertise and would not be technically or economically feasible for the Applicant to implement. The BLM DFA lands within the Desert Center area have been targeted for solar energy development and are not within a wind energy zone. Given their height, installation of wind turbines would create greater operational visual impacts than the proposed Project, as well as noise concerns to the community of Lake Tamarisk and aviation safety concerns around the Desert Center Airport.

2.9.5. Conservation and Demand-Side Management

This alternative is not technically feasible as a replacement for the proposed Project because California utilities are already required to achieve aggressive energy efficiency goals. Affecting consumer choice to the extent that would be necessary for a conservation and demand-side management solution would be beyond the BLM, Regional Water Quality Control Board, and/or the Applicant's control. Even if additional energy efficiency beyond that occurring in the baseline condition may be technically possible, it is speculative to assume that energy efficiency alone would achieve the necessary greenhouse gas reduction goals. With population growth and increasing demand for energy, conservation and demand management alone is not sufficient to address all of California's energy needs. Furthermore, conservation and demand-side management would not by themselves provide the renewable energy required to meet the California renewable energy goals, a stated Project objective. Therefore, conservation and demand-side management has been eliminated from detailed analysis because it is considered remote or speculative and would not meet the stated Project objectives.

2.9.6. Earthen Berms

During scoping, members of Lake Tamarisk Desert Resort requested installation of earthen berms to be used for visual screening of the solar and energy storage facility from the community. As described in Section 2.4.4.1 (Construction-Related Grading and Vegetation Management), mass grading is not proposed, and the onsite hydrology would be maintained to the maximum extent feasible. Installation of earthen berms would change stormwater flow on and offsite, which could affect surface water flow and flooding of adjacent parcels and could also alter vegetation patterns (Nichols et al., 2023). Furthermore, given the desert environment and sandy soil, an earthen berm would be difficult to stabilize with vegetation, and therefore, could become a source of erosion and sediment. The changed water flow paths due to adding berms would also have the potential to increase erosion due to water in new areas. Due to creation of greater hydrological and erosion concerns, use of earthen berms as a project design feature has been eliminated from consideration.

3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1. Introduction to Environmental Analysis

Section 3 identifies the environmental impacts of the proposed Project, in accordance with State CEQA Guidelines sections 15126 and 15126.2. It also presents and applies criteria used to determine whether an adverse impact is significant under CEQA and describes feasible mitigation measures, if any, that could minimize each significant adverse impact to a level of less than significant.

3.1.1. Introduction to Impact Analysis

Methodology for Analysis

This section provides an analysis of potential impacts on resource areas that Riverside County has determined could result in "significant impacts" based on the scoping activities undertaken in advance of preparing this EIR. Specifically, the environmental issue areas identified for further discussion include the following:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources and Tribal 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
- Wildfire

Sections 3.1 through 3.19 discuss the environmental impacts that may result with approval and implementation of the Project, and where significant impacts are identified, recommends mitigation measures that, when implemented, would reduce those impacts to a less-than-significant level. The items addressed for each environmental issue area identified above are discussed in the following subsections.

3.1.1.1. Environmental Setting

This subsection presents the existing environmental conditions at the site and in the surrounding area as appropriate (i.e., the "baseline") that are relevant to the issues under evaluation, in accordance with section 15125 of the State CEQA Guidelines. The baseline conditions reflect the conditions around the time of the issuance of the NOP and are used for comparison to establish the type and extent of the potential environmental impacts. For purposes of these discussions, the term "Project area" refers to the site of the proposed Project, shown on Figure 2-2, and the immediate vicinity around the Project where Project impacts could affect the environment. Within the Project area parcels, the development footprint consists of the areas within the fenceline where the solar facility, on-site substation, and BESS would be constructed.

The information and data used to prepare the Environmental Setting were obtained from several sources including the Desert Center Area Plan, County of Riverside General Plan, and CDCA Plan, as Amended. In addition, information was obtained from various BLM planning documents, research publications prepared by various federal and State agencies, and private sources pertaining to key resource conditions found within the Project area. The discussions in this section were also informed by the surveys and studies conducted for the Project, as noted throughout this section.

3.1.1.2. Regulatory Framework

This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from local, state, and federal levels are discussed as appropriate.

The information and data used to prepare the Regulatory Framework were obtained from the same sources listed above under Environmental Setting.

3.1.1.3. Methodology for Analysis

The Methodology for Analysis subsections describe the process of analyzing the effects of the Project. In assessing impacts, this EIR presumes that existing regulations and other public agency requirements that have been incorporated into the Project will be implemented.

3.1.1.4. Application of CEQA Significance Thresholds

The CEQA Significance Criteria subsection 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 State CEQA Guidelines (Cal. Code Regs. tit. 14, div. 6, chapter 3, §§ 1500-15387). Other federal, state, or local standards, such as significance criteria from the County of Riverside's Environmental Assessment form, are also taken into account when defining significance thresholds.

3.1.1.5. Impact Analysis

The Impact Analysis subsection presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. The analysis in Chapter 3 applies to the construction, operations, and decommissioning of the Project as a whole unless specifically stated. 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" (State CEQA Guidelines § 15382). The terms "effect" and "impact" used in this document are synonymous and can refer to effects that are either adverse or beneficial.

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
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 measures, and the level of impact remaining compared to the applicable significance criteria. 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

The analysis in this EIR is prepared with the understanding that the Applicant would obtain all required permits and approvals from other agencies and comply with all legally applicable terms and conditions associated with those permits and approvals. Implementation of the Project, which is described in Section 2, Description of the Proposed Project and Alternatives, including implementation of mitigation measures and Applicant Proposed Measures (APMs) identified to reduce or avoid significant adverse impacts, would be monitored in accordance with a Mitigation Monitoring and Reporting Program (MMRP, summarized below).

3.1.1.6. Cumulative Impacts

The Cumulative Impacts subsection describes effects that may be individually limited but cumulatively considerable when measured along with other approved, proposed, or reasonably foreseeable future projects. Please refer to Section 3.1.2 for a detailed discussion regarding the cumulative impact approach and scenario.

3.1.1.7. Impacts of Alternatives

Pursuant to State CEQA Guidelines section 15126.6, an EIR must describe and evaluate a range of reasonable alternatives that would feasibly attain most of the project's basic objectives and would avoid or substantially lessen any of the significant impacts of the project as proposed. The range of alternatives is governed by the "rule of reason," that is, an EIR needs to describe and evaluate only those alternatives necessary to permit a reasoned choice and to foster informed decision-making and public participation. (State CEQA Guidelines, § 15126.6, subd. (f)) Section 4, Comparison of Alternatives, describes alternatives to the proposed Project and includes the impact analysis for each alternative scenario considered.

3.1.1.8. Mitigation Measures and Mitigation Monitoring and Reporting Program

An EIR is required to indicate the way any significant effects on the environment of a project can be mitigated or avoided; a governmental agency must prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives (discussed below) or mitigation measures when the agency finds the changes to be feasible. (CEQA, § 21002.1, subd. (a) & (b); State

CEQA Guidelines, § 15002, subd. (a).) Implementation of multiple mitigation measures may be needed to reduce an impact to a less-than-significant level. Impacts that still meet or exceed significance criteria after application of mitigation measures are considered residual impacts that remain significant.

Under CEQA, the lead agency must adopt a reporting or monitoring program for any changes made to the project or conditions of project approval adopted to mitigate or avoid significant effects on the environment (i.e., MMP). (CEQA, § 21081.6, subd. (a)(1).) The impact sections throughout Section 3, and the MMRP included in the Final EIR, identify all mitigation measures to reduce significant impacts. The County would ensure implementation of all mitigation measures.

3.1.1.9. Residual Impacts After Mitigation

The Significance after Mitigation subsection indicates the significance of the impact and whether impacts would remain even after application of the proposed mitigation measures. Any impacts that cannot be eliminated or reduced to a level of less than significant are considered residual impacts of the proposed Project.

3.1.2. Cumulative Impact Scenario

Within the framework identified above, the cumulative impacts scenario requires special consideration. This analysis takes into account a variety of parameters that the EIR must establish and further explain the reasons for selecting certain parameters (scope of the impact area, etc.). The following discussion explains the factors relied on to frame the cumulative impacts analysis in this EIR.

3.1.2.1. CEQA Requirements for Cumulative Impact Analysis

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." (State CEQA Guidelines § 15355; see also Pub. Resources Code § 21083, subd. (b).) Stated another way, "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." (State CEQA Guidelines § 15130, subd. (a)(1).)

State CEQA Guidelines section 15130 requires that an EIR discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." The definition of cumulatively considerable, provided in section 15065(a)(3), means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to section 15130(b) of the State CEQA Guidelines: "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great 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, which do not contribute to the cumulative impact."

For purposes of this EIR, the proposed 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; or

- The cumulative effects of other past, current, and probable future projects without the Project are already significant and the Project would result in a cumulatively considerable contribution to the already significant effect. The standards used herein to determine whether the contribution is cumulatively considerable include the existing baseline environmental conditions, and whether the project would cause a substantial increase in impacts, or otherwise exceed an established threshold of significance.

3.1.2.2. Methodology for Cumulative Impact Analysis

State 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 which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency; or

This EIR uses the list method, identifying past, present, and probably future projects.

Consistent with CEQA, the cumulative analysis uses a two-step approach. The first step determines whether the combined effects from the proposed Project and other projects would be cumulatively significant. This was done by adding the proposed 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 proposed project's incremental contribution to the combined significant cumulative impact would be cumulatively considerable as required by State CEQA Guidelines section 15130, subdivision (a).

State CEQA Guidelines section 15064, subdivision (h)(4), states that "[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable." Therefore, it is not necessarily true 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 in light of the impact caused by all projects considered in the analysis.

3.1.2.3. 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. 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 topography surrounding the Project area 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 [ROG]/nitrogen oxides [NOx] and particulate matter [PM]) and therefore includes the entire air basin. Conversely, in the case of noise impacts, which are localized impacts, 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:

- **Aesthetics:** One-mile area around the perimeter of the solar facilities and gen-tie line
- **Agriculture and Forestry:** 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:** Desert Center area
- **Energy:** Global
- **Geology, Soils, and Mineral Resources:** Eastern Riverside County
- **Greenhouse Gas Emissions:** Global
- **Hazards and Hazardous Materials, including Wildfire:** Areas extending one mile from the boundary of the Project site
- **Hydrology and Water Quality:** Chuckwalla Hydrologic Unit
- **Land Use and Planning:** Eastern Riverside County
- **Noise:** Area extending 0.5 miles 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, Pleistocene alluvium, and dry desert washes
- **Population and Housing:** Areas within a 2-hour commute to the Project site
- **Public Services and Utilities:** The service areas of each of the providers serving the Project
- **Recreation:** 20-mile area around the perimeter of the solar and BESS facility
- **Traffic and Circulation:** The study roadways and intersections and I-10. For aviation safety, the geographic study area is 20,000 feet, because that is the area where there would be potential impacts to the Desert Center Airport.

Temporal Scope

This cumulative impact analysis considers other projects that have been recently completed, are currently under construction, or are reasonably foreseeable (e.g., for which an application has been submitted or known to be in preparation). Both short-term and long-term cumulative impacts of the proposed Project, in conjunction with other cumulative projects in the area, are evaluated in this section of the EIR.

The schedule and timing of the proposed 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 Easley Project. This is a consideration for short-term impacts from the proposed Project. However, to be conservative, the cumulative analysis assumes that all projects in the cumulative scenario are built and operating during the operating lifetime of the proposed Project.

Cumulative Projects

Desert Center Area Plan. As part of the Riverside County General Plan Update (2015), the County updated the Desert Center Area Plan. The Desert Center Land Use Plan reflects the limited development potential in this region. The Area Plan designates most of the area Open Space-Rural, with some agriculture, rural residential, and other low-density residential and commercial opportunities. The 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 (Riverside County, 2015). This information was taken into consideration by the authors when drafting the cumulative analysis, as it indicates limited development on private land.

Tables 3.1-1 and 3.1-2 include the list of cumulative projects in the Desert Center and Blythe region. These projects are shown on Figure 3.1-1.

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

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
1	West-wide Section 368 Energy Corridors	Riverside County, parallel to I-10	BLM, DOE, U.S. Forest Service	Approved by BLM & USFS, 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.
2	Blythe PV Project	Blythe	Clearway Energy	Operational	200	21 MW solar PV project located on 200 acres outside of Blythe.
3	McCoy Solar Project	Blythe	NextEra	Operational	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. 250 MW began operation in June 2016 but it does not have a schedule for the remaining 500 MW.
4	Genesis Solar Energy Project	North of I-10, 25 miles west of Blythe and 27 miles east of Desert Center	NextEra	Operational	1,950	250 MW solar trough project north of the Ford Dry Lake. Project includes six-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.
5	Blythe Solar Power Project	Blythe	NextEra	Operational	4,100	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.
6	Desert Sunlight Solar Project	6 miles north of Desert Center	NextEra	Operational	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
7	SCE Red Bluff Substation	Southeast of Desert Center	SCE	Operational	75	220/500 kV substation to interconnect renewable projects near Desert Center to the Devers–Palo Verde (DPV) transmission line.
8	Devers–Palo Verde No. 1 Transmission Line	Palo Verde, Arizona, to Devers Substation near Palm Springs	SCE	Operational	N/A	Existing 500 kV transmission line parallel to I-10 from Arizona to the SCE Devers Substation, near Palm Springs. DPV1 loops into

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
						the SCE Colorado River Substation which is located 10 miles southwest of Blythe.
9	Devers–Colorado River Transmission Line	From Blythe to Devers Substation near Palm Springs	SCE	Operational	N/A	Existing 500 kV transmission line parallel to the I-10 from the SCE Colorado River Substation to the Devers Substation. ROW requires 130 feet on federal, state, and private land.
10	Blythe Energy Project Transmission Line	From Blythe to Julian Hinds Substation	Blythe Energy, LLC	Operational	N/A	Existing 230 kV transmission line.
11	SCE Colorado River Substation	Blythe	SCE	Operational	90	500/230 kV substation located east of Blythe. Includes 108-foot-high dead-end structures. Outdoor night lighting is designed to illuminate the switchrack when manually switched on.
12	NRG Blythe II	Blythe	Clearway Energy	Operational	150	20 MW solar PV facility next to Clearway's 21 MW Blythe Project that came online in spring 2017.
13	Desert Harvest Solar Project	North of Desert Center	EDF-RE	Operational	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.
14	Palen Solar Project	East of Desert Center	EDF-RE	Operational	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.
15	Desert Quartzite Solar Project	South of I-10, 8 miles southwest of Blythe	Desert Quartzite LLC (First Solar)	Operational	3,770	300 MW solar PV and 600 MWh energy storage facility with a project substation, access road, and transmission line, all located on BLM land.
16	Crimson Solar Project	South of I-10, 8 miles southwest of Blythe	Sonoran West Solar Holdings, LLC (Recurrent Energy)	Operational	2,500	350 MW solar PV project located on BLM land. The project interconnects to the SCE Colorado River Substation.
17	Blythe Mesa Solar Project	East of Blythe	Blythe Mesa Solar II, LLC	Operational	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.

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
18	Athos Renewable Energy Project	Desert Center	Soft Bank Energy	Operational	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.
19	Oberon Renewable Energy Project	Northeast of Desert Center	IP Oberon, LLC	Operational	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.
20	Ten West Link Transmission Line	From the Colorado River Substation in Blythe California west to Tonopah Arizona	Abengoa Transmission & Infrastructure, LLC, and Starwood Energy Group Global, Inc.	Approved by BLM in November 2019. Under construction.	N/A	500 kV transmission line from Tonopah, Arizona, to Blythe, California. It spans 114 miles, with all but 17 miles of the line in the Arizona counties of Maricopa and La Paz and the remainder in Riverside County, CA.
21	Victory Pass Solar Project	4.5 miles east of Desert Center, adjacent to north side of I-10	Clearway Energy Group, LLC	Approved by BLM in December 2021. Under construction.	1,800	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 connects to SCE Red Bluff Substation.
22	Arica Solar Project	Adjacent to north side of Victory Pass project, 5 miles east-northeast of Desert Center	Clearway Energy Group, LLC	Approved by BLM in December 2021. Under construction.	2,000	265 MW solar PV project with up to 200 MW of battery storage. A shared overhead 230 kV gen-tie line with Victory Pass Solar Project connects to SCE Red Bluff Substation.

1 - The data shown on Figure 3.1-1 for the Development Focus Areas, ACECs, and NLCS was taken from the DRECP Final EIS.
Source: RWQCB, 2021.

Table 3.1-2. Probable Future Projects in the Project Area

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
A	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	~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, CA.
B	Palo Verde Mesa Solar Project	East of Blythe, near Neighbors Boulevard	Renewable Resources Group	Approved by Riverside County in August 2017.	3,250	465 MW PV solar plant on 50 parcels totaling 3,250 acres, primarily on agriculture land. Gen-tie line is approximately

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
						11.8 miles to the Colorado River Substation.
C	Eagle Mountain Pumped Storage Project	Eagle Mountain iron ore mine, north of Desert Center	Eagle Crest Energy Company	FERC License issued June 2014. Project approved by BLM in August 2018. On April 12, 2022, FERC issued an order granting an extension of project construction deadlines to commence project construction by June 19, 2024, and the extended deadline to complete project construction is 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.
D	Sapphire Solar Project	Adjacent to Easley Project; northeast of Desert Center	EDF-RE	Under review by BLM (CACA 59623) and Riverside County (SCH 2023-05-0303).	1,123	117 MW solar PV project on 1,082 acres private land. The gen-tie line and access roads would cross BLM-administered land to connect into Desert Harvest Substation/Red Bluff Substation.
E	Lycan Solar Project	South of I-10, southeast of Desert Center and west of Blythe.	EDF-RE	Under review by BLM (CACA 59265).	6,944	600 MW solar PV project on BLM-administered land that would connect into Red Bluff Substation
F	Calypso I Solar Project	South of I-10, west of Blythe	EDF-RE	Under review by BLM (CACA 059319).	3,271	300 MW solar PV project on BLM-administered land that would connect into the Colorado River Substation.
G	Calypso II Solar Project	South of I-10, southwest of Blythe	EDF-RE	Under review by BLM (CACA 059320).	2,133	300 MW solar PV project on BLM-administered land that would connect into the Colorado River Substation.
H	Redonda Solar Project	East of Desert Center	Clearway Energy Group, LLC	Under review by BLM (CACA 059387).	3,483	250 MW solar PV project that would connect into the Arica and Victory Pass Substation.
I	Skybridge Eagle Mountain Hydrogen Project; Riverside County	7.5 miles northwest of Desert Center	Skybridge Energy, LLC	CUP Application filed with Riverside County in 2022.	133	50 MW solar PV facility to support 50 MW hydrogen electrolyzer generation.
J	Joshua Tree National Park Proposed Expansion	Adjacent to Joshua Tree National Park and northwest of Desert Center	Proposed by U.S. Rep. Raul Ruiz (25th Congressional District)	Under congressional consideration as the Chuckwalla National Monument Establishment and Joshua Tree National Park Expansion Act of 2023	17,000	Proposed expansion to Joshua Tree National to the east in the Eagle Mountain area.

ID	Project Name; Agency ID	Location	Ownership	Status	Acres	Project Description
K	Chuckwalla National Monument	Riverside and Imperial Counties	Proposed by U.S. Rep. Raul Ruiz (25th Congressional District)	Under congressional consideration as the Chuckwalla National Monument Establishment and Joshua Tree National Park Expansion Act of 2023	700,000	Proposed national monument along Joshua Tree National Park's southern boundary, stretching along I-10 from the edge of the eastern Coachella Valley to the Colorado River.

Source: RWQCB, 2021.

3.2. Aesthetics

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Specifically, such considerations include the elements of the landscape that contribute to the aesthetic and/or scenic character and quality of the environment. These elements can be either natural or man-made. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character and quality, whereas buildings, roads, and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual or aesthetic resources that contribute to the public's experience and appreciation of the environment.

This section describes the regulatory framework, environmental setting, and aesthetic impacts associated with the proposed Project and alternatives. This section also identifies the mitigation measures necessary to avoid or reduce any significant adverse aesthetic impacts that would result from Project implementation. All figures referenced in this section are presented in sequence in Appendix I.

The following paragraphs review some of the key terms used in this section.

The term Aesthetics (as defined above) is generally considered interchangeable with the term Visual Resources. Throughout this section, the use of the term Aesthetics will generally be adhered to though, in a few cases, the term Visual Resources is also used for greater specificity. The reader can view these terms as interchangeable and equal.

The title of the project being analyzed is Easley Renewable Energy Project. In this section, the title is shortened to Project (typically used), and proposed Project (occasionally used), and are distinct from references to the alternatives. Again, the reader can view the terms Project and proposed Project as interchangeable and equal.

There are several locational or area terms that are used throughout this Aesthetics section. Regional Landscape generally refers to the arid desert of southeastern California within which the Chuckwalla Valley and surrounding mountains are located. This is the largest geographic area referenced in the section. The term Viewshed is discussed in greater detail in Section 3.2.1.3 but generally refers to all areas from which some component of the Project may be seen. For the Project, this generally means the western and central portions of the Chuckwalla Valley and the surrounding, Project-facing mountain slopes and ridges.

The terms Project area or Area are imprecise references to the land area from which the Project would typically be viewed. In the present case, the Project area or Area would generally consist of the broader central portion of the Chuckwalla Valley where the Project would be located. Immediate Project Area simply refers to the area(s) in close proximity or adjacent to the Project facilities.

The terms Project Site or Site refer to the collective location of the various land parcels and routes where Project facilities would be situated. These terms are interchangeable and equal.

The terms Solar Facilities, Solar Arrays, or Array Field(s) are used to refer to the collective locations of solar panels and associated facilities (but not the generation tie [gen-tie] line). These terms are interchangeable and equal.

3.2.1. Environmental Setting

3.2.1.1. Regional Landscape

The Project landscape is part of the Great Basin section of the Basin and Range physiographic province, a vast desert area of the western U.S. extending from eastern Oregon to western Texas, characterized by

periodic north-south trending, highly eroded mountain ranges that rise sharply from, and are separated by, broad, flat desert valleys. The topography of the basin is relatively flat with occasional desert washes. The Project region marks the transition zone between the high elevation Mojave Desert to the north and the arid, lower elevation Sonoran Desert to the south and east. The Project is located in Chuckwalla Valley in eastern Riverside County. The Chuckwalla Valley is a broad, flat desert plain that includes scattered dry lakes and rolling sand dunes and is bordered by a number of rugged mountain ranges including the Eagle Mountains to the west and north, the Coxcomb and Granite mountains to the north, the Palen Mountains to the northeast, and the Chuckwalla Mountains to the south. The rugged ridges, angular forms, and bluish hue of the surrounding mountains provide a contrast of visual interest to the flat, light-colored, horizontal landform of the Chuckwalla Valley floor and Project site. Views within Chuckwalla Valley tend to be expansive in scope and capture a landscape that appears in transition from a predominantly natural-appearing desert landscape to that of a developed energy zone characterized by numerous solar energy projects and electric transmission lines.

3.2.1.2. Project Site

The Project site is located on approximately 3,735 acres of private land and public lands administered by the U.S. Department of Interior, Bureau of Land Management (BLM), collectively situated on both sides of State Route 177 (SR-177), approximately two miles north of Desert Center in Riverside County. The Project area is rural, non-urban in nature. The private parcels consist of primarily man-made features that include deciduous orchard/fallow agriculture or developed areas. The BLM-administered lands (the majority of the acreage) are primarily intact, consisting mainly of desert scrub (largely scattered creosote bushes). While the area surrounding the Project site is very lightly populated, and most of the lands making up the Project site are presently undeveloped, the Lake Tamarisk Desert Resort is located immediately to the west and south of the site and within 0.15 mile of the nearest proposed solar arrays. There are several desert washes that pass through or adjacent to the Project site, indicated primarily by associated vegetation (e.g., desert dry wash woodlands). While all lands have scenic value, areas with the most variety and most harmonious composition have the greatest scenic value. The relatively flat desert landscape of the Project site has a low level of variety and distinctiveness, exhibiting limited variation in form, line, color palette, and texture that is common to the region.

The vegetation on the Project site and in the Project area appears relatively non-descript and subdued in color. Although the distant mountain ranges that surround the Chuckwalla Valley provide backdrops of visual interest, the Project site's landscape is generally lacking in visual variety and scenic quality and is substantially influenced by the abundance of anthropogenic modifications in the Project area including several adjacent or nearby solar projects (either operational or under construction); numerous transmission lines; Red Bluff Substation; Interstate 10 (I-10); scattered residences and built structures; 4-wheel drive tracks and access roads throughout the area; and SR-177 that passes through the eastern portion of the Project site. Overall, the existing scenic quality of the Project site appears common to the region and would correspond to the BLM Visual Resource Management (VRM) Scenic Quality Classification C (i.e., low scenic value).

The BLM-administered public lands that would host solar arrays and associated facilities and the gen-tie line are located within a Development Focus Area (DFA) per the 2016 Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA), which allows activities associated with solar, wind, and geothermal development, as well as operation and decommissioning (BLM, 2016). Therefore, the public lands hosting Project facilities have been assigned VRM Class IV under the BLM's VRM System since the LUPA assigns VRM Class IV to DFAs.

As defined in BLM Manual H-8410-1 Visual Resource Inventory (BLM, 1986a), the **VRM Class IV** management objective is:

> *"…to provide for management activities, which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements in the predominant natural features of the characteristic landscape."*

3.2.1.3. Viewshed and Potentially Affected Viewers

The viewshed or area of potential visual effect (the area within which the Project could potentially be seen) is extensive and encompasses much of Chuckwalla Valley and the Project site-facing slopes and ridgelines of the surrounding mountains including areas within Joshua Tree National Park (JTNP). Figure 3.2-1A illustrates the visibility of the Project. However, this viewshed map is based solely on "line-of-site" terrain models that do not account for possible vegetation or structural screening. A notable feature of this flat desert landscape is the potential for large projects to be seen over great distances. This is due to the expansive areas of level topography and absence of intervening landscape features. However, due to the relatively low profile of the solar panels and the flat topographic character of Chuckwalla Valley, the majority of viewers would be located at elevations similar to that of the Project, and the views would typically be limited to the edges of the solar fields. The exception would be for the more elevated views available from Alligator Rock or portions of JTNP (see next paragraph) and other surrounding mountain ranges. Elevated (or superior) views from these locations would have the potential to see "into" the array fields. However, the typical viewing distance zone that most viewers would experience within the Project area is foreground/middleground (under five miles) due to the relatively close proximity of I-10, SR-177, and other Project area viewpoints to the Project facilities.

There are a number of sensitive land uses and protected areas within the expansive Project viewshed including Desert Lily Sanctuary Area of Critical Environmental Concern (ACEC), Palen Dry Lake and Sand Dunes Area, and Palen-McCoy Wilderness to the northeast; Palen Dry Lake ACEC and Ford Dry Lake Off-highway Vehicle Area to the east; Chuckwalla Mountains Wilderness to the south; Alligator Rock ACEC and Desert Center to the southwest; Lake Tamarisk Desert Resort to the south and west; and JTNP to the north and west.

Potentially affected viewers within the Project area include: (1) residential viewers in Lake Tamarisk Desert Resort and dispersed rural residences; (2) recreational visitors to ACECs, wilderness areas, and open public lands; and (3) travelers along the main transportation corridors (I-10 and SR-177). All three viewing groups are considered to have generally high visual sensitivity with high expectations for maintaining the existing landscape conditions. The introduction of new features exhibiting industrial character would typically be perceived as an adverse visual change.

3.2.1.4. Representative Key Observation Points (KOPs) and Landscape Setting Assessments

Representative KOPs

KOPs are representative, stationary viewing locations selected for the purpose of analyzing and describing existing visual resources in the Project area and for preparing visual simulations and contrast rating analyses. KOPs were generally selected to be representative of the most critical or typical public viewing locations from which the Project would be seen (see Section 3.2.1.3 above). KOP locations were selected at various vantage points based on their usefulness in evaluating existing landscapes and potential impacts on the affected viewing populations. Typical KOP locations for the Project include: (1) major or

significant travel corridors or points of visual access; (2) residential areas; (3) significant recreation areas; (4) locations that capture both the solar arrays and the gen-tie line; and (5) locations that capture different viewing distances and view orientation. At each KOP, the existing landscape was characterized and photographed. With the exception of KOP 4, photographs are presented as 8.5" x 15.25" color images at "life-size scale" when viewed at a standard reading/viewing distance of 18 inches (i.e., when the image is held at a distance of 18 inches from the eye, all landscape features in the images would appear to be the same scale and size as they would appear in the field at the viewpoint location). A panoramic view is presented for KOP 4, resulting in an image size of 8.5" x 37."

Six KOPs were selected to characterize the local setting and the visual contrast caused by the Project. KOP locations and view directions are shown on the KOP map presented as Figure 3.2-1B and are listed below.

- **KOP 1: Eastbound I-10**, approximately 1.6 miles west of the Desert Center/SR-177 overpass. This view to the north captures the western portion of the greater Chuckwalla Valley in the vicinity of SR-177 (see Figures 3.2-2A/2B).
- **KOP 2: Westbound I-10**, approximately 1.9 miles east of the Desert Center/SR-177 overpass. This view to the northwest captures the western portion of the greater Chuckwalla Valley in the vicinity of SR-177 (see Figures 3.2-3A/3B) but from a westbound perspective.
- **KOP 3: Alligator Rock**, just south of I-10 and approximately 0.5 mile southwest of Desert Center. This elevated view to the north captures the western portion of the greater Chuckwalla Valley in the vicinity of SR-177 (see Figures 3.2-4A/4B).
- **KOP 4: Lake Tamarisk Desert Resort**, at the playground area near the eastern boundary of the resort. This view to the east captures much of the greater Chuckwalla Valley, though the view is partially screened from view by immediate foreground vegetation (see Figures 3.2-5A/5B).
- **KOP 5: Northbound SR-177**, approximately 1.5 miles northeast of Desert Center. This view up SR-177 captures the western portion of the greater Chuckwalla Valley in the vicinity of SR-177 (see Figures 3.2-6A/6B).
- **KOP 6: Southbound SR-177**, approximately five miles northeast of Desert Center. Though partially screened by roadside vegetation, this view to the southwest presents an expansive view of the western Chuckwalla Valley in the immediate vicinity of SR-177 (see Figures 3.2-7A/7B).

Landscape Setting Assessment

The following paragraphs describe the landscape setting viewed from each of the six KOPs.

KOP 1 – Eastbound I-10. This viewpoint is representative of the Project's views from eastbound I-10, which is a County Eligible Scenic Corridor. Figure 3.2-2A presents the existing view to the north from KOP 1, which is approximately 1.6 miles west of the Desert Center/SR-177 (Rice Road) overpass. The view presented in Figure 3.2-2A captures the western portion of the greater Chuckwalla Valley and most of the Project area between Kaiser Road to just east of SR-177 (Rice Road). This expansive view also captures several existing solar fields and a backdrop consisting of the horizontal angular forms of the Coxcomb and more distant Granite and Palen mountains, features that contribute visual interest to the views from I-10. Landform colors range from light-tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. Vegetation appears as patchy clumps to irregular and continuous forms at distance. Vegetation colors include tans and pale to golden yellow for grasses with muted greens, tans, and some reddish hues for shrubs. The most prominent structures in this view beyond the linear, diagonal form of I-10 are the noticeable foreground, vertical, wood utility poles and several existing solar fields that appear as dark horizontal streaks along the valley floor. From this viewing distance, the landscape of the Project site appears rather non-descript and generally lacking in visual variety, though the adjacent

scenery (surrounding mountains) enhances the broader landscape scenic quality. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 1 Contrast Rating Form is provided in Appendix I.

While motorists on I-10 heading east would enjoy scenic desert views across the western Chuckwalla Valley, motorists' views and sensitivity would be somewhat tempered by the Project's viewing context, which would include the discordant features of several solar projects that are either existing or under construction, as well as the associated gen-tie transmission lines. The resulting viewer concern would be moderate to high. Viewer exposure would be high given the high visibility of the Project site in the foreground-middleground, the high volumes of travelers on I-10, and the moderate to extended duration of view of the Project site. For viewers in the vicinity of KOP 1, combining the equally weighted low to moderate visual quality, moderate to high viewer concern, and high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

KOP 2 – Westbound I-10. This viewpoint is representative of the Project's views from westbound I-10, which is a County Eligible Scenic Corridor. Figure 3.2-3A presents the existing view to the northwest from KOP 2, which is approximately 1.9 miles east of the Desert Center/SR-177 (Rice Road) overpass. The view presented in Figure 3A encompasses the western portion of the greater Chuckwalla Valley in the vicinity of SR-177. This expansive view also captures several existing solar fields (in the background) and gen-tie lines (in the foreground) backdropped by the horizontal to angular forms of the Eagle and Coxcomb mountains, features that contribute visual interest. Landform colors range from light tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. Vegetation appears as patchy clumps to irregular and more continuous forms at distance. Vegetation colors include tans and pale to golden yellow for grasses with muted greens and tans with reddish hues for shrubs. The most prominent structures in this view beyond the roadside fencing adjacent to I-10 are the noticeable vertical, dark, rust-colored, tubular Corten-steel, gen-tie poles associated with the existing solar projects that are also visible as dark horizontal streaks along the valley floor in the background. As noted previously, the landscape of the Project site is rather non-descript and generally lacking in visual variety, though the adjacent scenery (surrounding mountains) contributes visual interest to the views from westbound I-10 and enhances the broader landscape scenic quality. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 2 Contrast Rating Form is provided in Appendix I.

While motorists on I-10 heading west would enjoy scenic desert views across the western Chuckwalla Valley, motorists' views and sensitivity would be somewhat tempered by the Project's viewing context, which would include the discordant features of several solar projects that are either existing or under construction, as well as the associated gen-tie transmission lines. The resulting viewer concern would be moderate to high. Viewer exposure would be high given the high visibility of the Project site in the foreground-middleground, the high volumes of travelers on I-10, and the moderate to extended duration of view of the Project site. For viewers in the vicinity of KOP 2, combining the equally weighted low to moderate visual quality, moderate to high viewer concern, and high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

KOP 3 – Alligator Rock ACEC. This viewpoint is representative of the Project's views from the slightly elevated crest of Alligator Rock in the Alligator Rock ACEC. Figure 3.2-4A presents the existing view to the north-northeast from KOP 3, on the crest of Alligator Rock. The view presented in Figure 3.2-4A overlooks the central portion of Desert Center and the western portion of the greater Chuckwalla Valley in the vicinity of SR-177, north of I-10. This expansive view also captures several existing solar fields (operational or under construction) and the associated gen-tie transmission lines, the Lake Tamarisk Desert Resort, and a backdrop consisting of the horizontal to angular forms of the Coxcomb and Granite mountains, features that contribute visual interest to the landscape. Landform colors range from light tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. Vegetation appears

as patchy clumps to irregular and continuous forms at distance. Vegetation colors include tan and pale to golden yellow for grasses and muted greens with reddish hues for shrubs. The most prominent built features in this view are the linear, diagonal forms of eastbound and westbound I-10 (lower portion of the image), the curvilinear form of SR-177 (heading northeast in the right-center of the image), and the numerous dark streaks along the valley floor that indicate the locations of existing solar projects. The landscape of the Project site visible from this location is rather non-descript and generally lacking in visual variety, though this expansive and somewhat elevated view incorporates adjacent scenery (surrounding mountains) that imparts a higher scenic quality of the broader landscape. The overall visual quality is moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 3 Contrast Rating Form is provided in Appendix I.

Visitors to the Alligator Rock ACEC in general, and to the crest of Alligator Rock, specifically, enjoy panoramic desert views across the central Chuckwalla Valley that, from this location, exhibits a relatively natural appearance nearby to a developing renewable energy zone characterized by numerous solar energy projects and associated gen-tie transmission lines. Viewer concern would be high in that visitors to the ACEC and Alligator Rock would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (valley floor, background sky, or mountains) an adverse visual change. Viewer exposure would be moderate to high given the high visibility of the Project site in the foreground-middleground viewing distance zone, the low number of viewers, and the extended duration of view of the Project site. For viewers in the vicinity of KOP 3, combining the equally weighted moderate visual quality, high viewer concern, and moderate to high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

***KOP 4 – Lake Tamarisk Desert Resort*.** This viewpoint is representative of the Project's views from the eastern portion of Lake Tamarisk Desert Resort. Figure 3.2-5A presents the existing panoramic view to the northeast through the southeast from KOP 4 at the playground area near the eastern perimeter of the resort. This view captures a central portion of the Project site within the western Chuckwalla Valley backdropped by the rugged Coxcomb and Granite mountains to the northeast and Palen Mountains to the east. From this viewpoint, the landscape presents a predominantly natural appearance. Landform textures appear smooth to granular and coarse. Landform colors range from light tan to lavender and bluish hues at distance. Natural vegetation appears as patchy clumps to irregular and continuous forms at distance. Vegetation colors include tans and pale yellow for grasses with muted greens, tans, grays, and some reddish hues for shrubs. Very small portions of existing or under construction solar facilities are visible in the distance as dark patches on the valley floor. Other built features visible from this view include the numerous gen-tie lines, Red Bluff Substation south of I-10, and two telecommunications towers. Much of the Project site landscape that would be otherwise visible from the resort is effectively screened from view by intervening vegetation. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 4 Contrast Rating Form is provided in Appendix I.

Visitors to, and residents of, the Lake Tamarisk Desert Resort enjoy panoramic views across the central Chuckwalla Valley that, from this location, exhibit a relatively natural appearance. Viewer concern is high in that residents and visitors would consider any increase in industrial character, structure prominence, or view blockage of higher value landscape features (valley floor, background sky, or mountains) an adverse visual change. Viewer exposure would be moderate to high given the moderate to high visibility of the Project site (which would be partially screened by intervening vegetation), the foreground-middle-ground viewing distance, the low number of viewers, and the extended duration of view. For viewers in the vicinity of KOP 4, combining the equally weighted low to moderate visual quality, high viewer concern, and moderate to high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

KOP 5 – Northbound SR-177. This viewpoint is representative of the Project's views from northbound SR-177 (Rice Road) when approaching the Project from the south. Figure 3.2-6A presents the existing view to the north-northeast from KOP 5, approximately 1.5 miles northeast of Desert Center. This expansive view of the western portion of the Greater Chuckwalla Valley is backdropped by the horizontal to angular forms of the Coxcomb and more distant Granite mountains that rise abruptly from the valley floor, providing features of visual interest. Landform colors range from light tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. Vegetation appears as patchy to sequential clumps to irregular and continuous forms at distance. Vegetation colors include tans and pale to golden yellow for grasses with muted greens, tans, and some reddish hues for shrubs. The most prominent structure in this view, beyond the linear form of SR-177, is a wood-pole utility line paralleling the west side of SR-177. A distant communications tower on the east side of SR-177 is also faintly visible. In the distance to the north, two existing solar projects are visible as horizontal, medium-gray streaks along the valley floor. Although, travelers on SR-177 experience a predominantly natural desert landscape at this location, it should be noted that a considerable portion of the valley floor immediately adjacent to SR-177 is undergoing a transition from a predominantly natural-appearing desert landscape to that of a developed energy zone characterized by numerous solar energy projects that are either existing or under construction. Overall, the landscape of the Project site visible from this location is indistinct and appears similar to other portions of the valley floor. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 5 Contrast Rating Form is provided in Appendix I.

Although travelers on SR-177 experience a predominantly natural desert landscape in this location, there are a number of existing or under construction solar energy facilities that are screened from this view by vegetation the highway. Also apparent are a few scattered rural residences and roadside commercial buildings, wood-pole utility lines, and an adjacent communications tower. As a result, the somewhat tempered viewer concern over an additional solar project would be moderate to high. Viewer exposure would be high given the high visibility of the Project in the immediate foreground of views from SR-177 and the relatively high volumes of travelers on SR-177 with moderate to extended duration of views. For viewers in the vicinity of KOP 5, combining the equally weighted low to moderate visual quality, moderate to high viewer concern, and high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

KOP 6 – Southbound SR-177. This viewpoint is representative of the Project's views from southbound SR-177. Figure 3.2-7A presents the existing view to the southwest from KOP 6, approximately five miles northeast of Desert Center. This expansive view of the western portion of the Greater Chuckwalla Valley is backdropped by the horizontal to angular form of the Chuckwalla Mountains that rise abruptly from the valley floor, providing a feature of visual interest. Landform colors range from tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. Vegetation appears as patchy to sequential clumps to irregular and continuous forms at distance. Vegetation colors include tans and pale to golden yellow for grasses with muted greens, tans, and some reddish hues for shrubs. The most prominent structures in this view, beyond the linear form of SR-177, is a wood-pole utility line paralleling the west side of SR-177 and a communications tower on the east side of SR-177. A new solar project is also visible in the distance to the east (left) side of SR-177 as a dark streak on the valley floor. Overall, the landscape of the Project site visible from this location is indistinct and appears similar to other portions of the valley floor. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley. The applicable VRM Class Rating is Class IV. The KOP 6 Contrast Rating Form is provided in Appendix I.

Travelers on SR-177 experience a predominantly natural desert landscape that is in transition to a more industrial appearance with the development of new solar projects. Also apparent are a few scattered rural residences and roadside buildings, wood-pole utility lines, agricultural fields, and an adjacent communica-

tions tower. As a result, the somewhat tempered viewer concern over an additional solar project would be moderate to high. Viewer exposure would be high given the high visibility of the Project in the immediate foreground of views from SR-177 and the relatively high volumes of travelers on SR-177 with moderate to extended duration of views. For viewers in the vicinity of KOP 6, combining the equally weighted low to moderate visual quality, moderate to high viewer concern, and high viewer exposure results in an overall rating of moderate to high for overall visual sensitivity of the visual setting and viewing characteristics.

3.2.2. Regulatory Framework

3.2.2.1. Federal Laws, Regulations, and Policies

Federal Land Policy and Management Act

Section 102(a) of the Federal Land Policy and Management Act of 1976 (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 ROW shall contain terms and conditions which will …minimize damage to the scenic and esthetic values."

The Federal Land Policy and Management Act applies to the Project because a majority of the Project would be located on public lands administered by the BLM Palm Springs-South Coast Field Office.

BLM Visual Resource Management (VRM) System

BLM uses the VRM System to inventory and manage scenic values on lands under its jurisdiction. Guidelines for applying the system are described in the BLM Manual Section 8400 et seq (BLM, 1984). VRM classes are assigned through Resource Management Plans (RMPs). The assignment of VRM classes is based on the management decisions made in the RMPs. The 2016 DRECP LUPA assigned a VRM Class IV to the DFA 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.

California Desert Conservation Area (CDCA) Plan and Northern and Eastern Colorado Desert Coordination Management Plan

The Recreation Element of the CDCA Plan specifies that VRM objectives and the contrast rating procedure be used to manage visual resources (BLM, 1980). VRM objectives provide the visual management standards for future projects and for rehabilitation of existing projects. Activities within the landscape are designed or evaluated using contrast ratings (BLM, 1986b)

3.2.2.2. Local Laws, Regulations, and Policies

The Project is located partially on BLM-administered public land and partially on private lands subject to the County land use plans and ordinances. Therefore, local plans were reviewed to comply with CEQA Guidelines.

County of Riverside General Plan Land Use Element (LU)

The following policies of the General Plan Land Use Element are applicable to aesthetics/visual resources and 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:
    a) Compliance with the design standards of the appropriate area plan land use category.
    b) Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations.
    o) 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.
- **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 protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA, and 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**: 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.

County of Riverside General Plan Circulation Element (C)

The following policies of the General Plan Circulation Element are applicable to aesthetics/visual resources and the Project:

- **Policy C 19.1**: Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highway 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.

County of Riverside General Plan Multipurpose Open Space Element (OS)

The following policies of the General Plan Multipurpose Open Space Element are applicable to aesthetics/ visual resources and 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:** 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.

County of Riverside General Plan Desert Center Area Plan (DCAP)

The following policies of the Desert Center Area Plan are applicable to aesthetics/visual resources and 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.

Table 3.2-2 (Consistency with Regulatory Plans, Policies, and Standards) in Section 3.2.5 under Impact AES-5 addresses Project consistency with County policies, plans, and standards.

3.2.3. Methodology for Analysis

This section provides a discussion of the methodology used to assess impacts to aesthetic resources that could occur as a result of construction, operation, and decommissioning of the Project. The potential aesthetic, light, and glare impacts are evaluated on a qualitative basis. The methodology used to assess the potential Project effects is derived from the BLM's VRM System. Under the VRM System's visual contrast rating (VCR) method (BLM 1986b, 1984), a project (and alternatives) is analyzed for its effects on aesthetic or visual resources by comparing the landscape characteristics that would be created by the project to the existing landscape characteristics and arriving at an assessment of visual contrast that would result from changes in landforms and water, vegetation, and structures. The degree of contrast can range from none to strong and essentially evaluates a project's consistency with the visual elements of form, line, color, and texture already established in the landscape. In a sense, visual contrast indirectly indicates a particular landscape's ability to absorb a project's components and location without resulting in an uncharacteristic appearance. In other words, the amount of visual contrast between a project and the existing landscape character directly determines the degree to which a project would adversely affect the visual quality of an existing landscape.

Other elements that are considered in evaluating visual contrast include the degree of natural screening by vegetation and landforms; placement of structures relative to existing vegetation, landforms, and other

structures; observer's angle of view relative to the project; distance from the point of observation; viewing duration/spatial relationships; atmospheric conditions; season of use; lighting conditions; and relative size or scale of a project. These contrast determinations are made from the representative KOPs identified in Section 3.2.1.4.

Once the degree of anticipated contrast is determined, a conclusion on the overall level of change is made (ranging from very low to high) and either:

(a) compared to the applicable VRM Classification to determine conformance with the established VRM Class Management Objectives for lands administered by the BLM (approximately 2,747 acres), or

(b) considered within the context of the existing landscape's overall visual sensitivity (which is a summation of the three contributing and equally weighted factors of visual quality, viewer concern, and overall viewer exposure – see Section 3.2.1.4) to arrive at an impact significance conclusion for the facilities on private lands (approximately 980 acres). These impact significance conclusions for private lands are based on the CEQA impact significance criteria presented in Section 3.2.4.

3.2.3.1. Visual Simulations

Digital techniques were used to produce simulations of the Project as it would appear from each of the six KOPs. The simulations were compared to "pre-Project" photographs in order to predict future visual effects of the Project for each KOP and were utilized to complete contrast rating forms. The paired images (existing view and visual simulation) for each of the six KOPs are presented in Appendix I.

3.2.3.2. Assessment of Visual Contrast

As previously discussed, the degree of visual contrast that could result from changes in landforms and water, vegetation, and structures can be none, weak, moderate, or strong and evaluates a project's consistency with the visual elements of form, line, color, and texture already established in the landscape. Since there are no notable water features affected by the Project, this factor is not considered further. The VCRs are generally defined as follows:

- **None** – The element of contrast is not visible or perceived;
- **Weak** – The element of contrast can be seen but does not attract attention;
- **Moderate** – The element of contrast begins to attract attention and begins to dominate the characteristic landscape; and
- **Strong** – The element of contrast demands the viewer's attention and cannot be overlooked.

The assessment of visual contrast was done in the field from the six representative KOPs (see Figure 3.2-1B – KOP Map). To aid the analysis, a visual simulation was prepared for each KOP. The six VCR Data Sheets are presented in Appendix I, and the major components of the VCR Data Sheets are summarized in the following paragraphs.

Landform Contrast

Landform contrast is the contrast that ground-disturbing activities would create with the existing landscape. Soil exposure and grading, blading roads, and other activities that alter the ground or landforms create changes in color, shape, and slope that can contrast with the existing landscape. For example, depending on baseline conditions, even minimal grading on a flat site can expose soil and create a noticeable level of color contrast.

Vegetation Contrast

Vegetation contrast is the contrast that vegetation clearing would create with the vegetation in the existing landscape. Vegetation contrast considers just the change in vegetation and does not consider structures that are part of the Project. Depending on baseline conditions, removal of, or damage to, sparse vegetation or vegetation that is low-growing and/or is quickly restored, such as agricultural land, disturbed bare ground, and grasslands, would typically result in a weak level of contrast with the existing landscape. Removal of low, woody vegetation (brush or bushes) would typically result in a moderate level of contrast with the existing landscape, and removal of overstory vegetation (trees) would typically result in a strong level of contrast with the existing landscape. In an arid/desert landscape, unnatural lines of demarcation in vegetation resulting from grading or removal can cause visual contrast that persists over years due to the typical slow pace of its recovery.

Structure Contrast

Structure contrast is the contrast of the built or structural components of a project with the existing landscape. A strong level of contrast typically results from the introduction of a new structure(s) into a landscape absent structures of a similar design and scale. A moderate level of contrast typically exists when new structures are built near similar but smaller existing structures. A weak level of contrast typically exists when structures are built near similar structures of a similar or larger scale.

Project Dominance and View Blockage or Impairment

Two additional factors that contribute to the contrast determinations are project dominance and view blockage or impairment. Project dominance is a measure of a project feature's apparent size relative to other visible landscape features in the viewshed. A feature's dominance is affected by its relative location and the distance between the viewer and the feature. The level of dominance can range from subordinate to dominant. View blockage or impairment is a measure of the degree to which a project would obstruct views of higher value and previously visible landscape features due to the project's position and/or scale. Blockage of aesthetic landscape features or views can cause adverse aesthetic/visual impacts.

3.2.3.3. Determining Overall Visual Change and Visual Impact Significance

Once the degree of anticipated contrast for landform, vegetation, and structures is determined (by comparing the post-Project landscape characteristics with the existing landscape characteristics) and is documented in the contrast matrix of the VCR Data Sheet for each KOP (see Appendix I), the overall visual change can be qualitatively determined (ranging from very low to high). Under the VRM System for Project facilities on BLM-administered lands, the overall visual change conclusion enables a consistency determination with the applicable VRM Class management objective (in this case, Class IV, as defined in Section 3.2.1).

For the Project facilities on private lands, the overall visual change conclusion is combined with determinations of overall visual sensitivity at each KOP to arrive at visual impact significance conclusions as presented in Table 3.2-1 and defined as follows:

- **No Impact** represents impacts that are generally imperceptible to the casual viewer or are beneficial because they reduce visually discordant characteristics in the landscape, thereby improving visual quality.
- **Less than Significant** impacts are perceived as negative but are minor and do not exceed environmental thresholds.

- **Potentially Significant** impacts are perceived as negative and may exceed environmental thresholds depending on project- and site-specific circumstances. However, with feasible mitigation, significant impacts may be reduced to less-than-significant levels or avoided altogether.
- **Likely Significant** impacts are perceived as negative and likely exceed environmental thresholds even with mitigation. While mitigation may potentially reduce impacts to less-than-significant levels or avoid them altogether, the severity and/or scale of the impacts is such that the availability of successful mitigation is considered unlikely. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

While the interrelationships presented in Table 3.2-1 below are intended as guidance only, it is reasonable to conclude that lower visual sensitivity ratings paired with lower visual change ratings will generally correlate with lower degrees of impact significance. Conversely, higher visual sensitivity ratings paired with higher visual change ratings will tend to result in higher degrees of visual impact.

Implicit in this rating methodology is the acknowledgment that for a visual impact to be considered significant, two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers, and (2) the perceived incompatibility of one or more project elements or characteristics tends toward the higher extreme, leading to a substantial reduction in visual quality.

Table 3.2-1. General Guidance for Consistency Review of Adverse Impact Significance

Visual Sensitivity	Visual Change				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	No impact[1]	No impact[1]	Less Than Significant[2]	Less Than Significant[2]	Less Than Significant[2]
Low to Moderate	No impact[1]	Less Than Significant[2]	Less Than Significant[2]	Less Than Significant[2]	Potentially Significant[3]
Moderate	Less Than Significant[2]	Less Than Significant[2]	Less Than Significant[2]	Potentially Significant[3]	Potentially Significant[3]
Moderate to High	Less Than Significant[2]	Less Than Significant[2]	Potentially Significant[3]	Potentially Significant[3]	Likely Significant[4]
High	Less Than Significant[2]	Potentially Significant[3]	Potentially Significant[3]	Likely Significant[4]	Likely Significant[4]

1 - No Impact – Impacts are generally imperceptible to the casual observer or beneficial because they reduce visually discordant characteristics in the landscape, thereby improving visual quality
2 - Less Than Significant – Impacts are perceived as negative but do not exceed environmental thresholds.
3 - Potentially Significant – Impacts are perceived as negative and may exceed environmental thresholds depending on the implementation of effective mitigation measures.
4 - Likely Significant – Impacts are perceived as negative and will likely exceed environmental thresholds even with mitigation.

3.2.3.4. Daytime Glare

The following paragraphs summarize the method of analysis and types of glare assessed for the Project. The full Glare Assessment report is presented in Appendix I. As solar projects became more prevalent in the nation, potential glare from projects that could affect pilots approaching airports was a concern of the FAA. The FAA initially believed that solar energy systems could introduce a novel glint and glare effect to

pilots on final approach to airports. FAA has subsequently concluded that in most cases, the glint and glare from solar projects to pilots on final approach is similar to glint and glare pilots routinely experience from water bodies, glass facade buildings, parking lots, and similar features. Current FAA guidance applies to on-airport solar facilities at airports that have received federal support and have an Air Traffic Control Tower.

For the Easley Renewable Energy Project (Project), glare was modeled using ForgeSolar (2023) glare analysis tools. While the exact model of the PV panels has not been finalized, the parameters of the First Solar Series 7 technology were used as a best-guess technology to run the model to predict any potential impacts to pilots on approach to Desert Center or operators of motor vehicles in the Project area in eastern Riverside County. The model assumed the use of single-axis rotation tracking solar PV panels with a portrait module orientation made of smooth glass without anti-reflective coating, and it used default direct normal irradiance (DNI), which varies and peaks at 1,000 Watts per square-meter (W/m2). In addition, the model considered variations in panel reflectivity with respect to the position of the sun. The following assumptions regarding the solar panel configuration for all PV panel arrays analyzed were also used:

- Tracking axis orientation: 180.0 degrees (tracker rows oriented north/south with tracking direction from east to west)
- Tracking axis tilt: 0 degrees (system on flat, level ground would have axis tilt of 0 degrees)
- Tracking axis panel offset: 0.0 degrees
- Maximum tracking angle: 60.0 degrees
- Resting angle: 60.0 degrees
- Height above ground: 5 feet

Default observer eye characteristics were used for glare analysis, as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meter
- Eye focal length: 0.017 meter
- Sun subtended angle: 9.3 milliradians

Vertex Parameters:

- Latitude: 33°N
- Longitude: 115°W
- Elevation: approximately 550 to 720 feet
- Total Elevation (sum of height above ground and elevation): approximately 555 to 725 feet

Green glare is defined as glare with a low potential to cause an after-image, or flash blindness, when observed prior to a typical blink response time. Yellow glare is defined as glare with a potential to cause an after-image when observed prior to a typical blink response time. Overall, there is a possibility of green glare that could result from the Project PV arrays. However, there is no yellow glare that would result from the solar panels.

3.2.4. CEQA Significance Criteria

The criteria used to determine the significance of potential aesthetics/visual resources impacts are based on Appendix G of the State CEQA Guidelines. Individual Project impacts (e.g., AES-1) are addressed in Section 3.2.5. The proposed Project is in a non-urbanized area and would result in a significant impact under CEQA if it would:

- *In non-urbanized areas, substantially degrade the existing visual character or quality of views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage points). In an urbanized area, conflict with applicable zoning and other regulations governing scenic quality (see Impact AES-1).*
- *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Impact AES-2).*

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:

- *Result in the creation of an aesthetically offensive site open to public view (Impact AES-3).*
- *Expose residential property to unacceptable light levels (Impact AES-4)*

Two additional impact significance criteria used in the analysis include:

- *Would Project construction, operation, or decommissioning result in an inconsistency with regulatory plans, policies, and standards applicable to the protection of aesthetics (Impact AES-5).*
- *Would Project decommissioning result in long-term aesthetic effects resulting from increased visual contrast (since Project decommissioning would result in impacts similar to Project construction, see Impact AES-1, Section 3.2.5.1, Project Construction, as it pertains to long-term effects of ground surface disturbance and vegetation removal).*

The following CEQA significance criteria from Appendix G were not included in the analysis and are not discussed further beyond this summary:

- *Have a substantial adverse effect on a scenic vista.*

  The Riverside County General Plan does not designate the Project area as an important visual resource, and no scenic vistas were identified in the aesthetics/visual resources Project area. Therefore, no impacts would occur under this criterion. Impacts to views from I-10, which has been identified by the County of Riverside as eligible for designation as a scenic corridor, are addressed under Impact AES-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 at the Project sites and there are no designated state scenic highways in the Project area. Therefore, no impacts would occur under this criterion. Impacts to views from I-10, which has been identified by the County of Riverside as eligible for designation as a scenic corridor, are addressed under Impact AES-1.

- *Interfere with nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655.*

  The proposed Project area is located approximately 89 miles east of the Mt. Palomar Observatory, which far exceeds the distance to the Observatory's areas of sensitivity (Zone A at a 15-mile radius and Zone B at a 45-mile radius from the Observatory). The Project is expected to use minimal nighttime lighting during construction and operation, and such uses would be limited. Based on the Project area's distance to the observatory, Project lighting would result in no impacts to astronomical observation and research at the Mt. Palomar Observatory.

3.2.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to aesthetics/visual resources. Those concerns involved the proximity of the solar panels to

the community being an eyesore; the reduction in quality of life for the residents; the light and glare reflecting off of the solar panels; the light pollution from the Project affecting the dark skies environment; and general visual impacts on Desert Center and JTNP. Concerns were also expressed about the visual impacts of fencing and the debris that gets caught in it as well as the glare affecting pilots in the area. The remainder of this section will address these, and other potential aesthetics/visual resources impacts per the four CEQA Appendix G impact criteria, the three Riverside County significance criteria, and the two additional significance criteria identified above.

Applicant Proposed Measure

APM VIS-1 **Weathering Coating of Security Fencing.** To reduce operational visual impacts of the Project to the community of Lake Tamarisk, the Project owner will apply a weathering coating (Natina or substantially similar) to the Project security fencing located closest to the Community. The total length of fencing that will be coated is approximately one mile and may be contiguous or separate sections, depending on the final Project design and the location(s) of most visible security fencing.

Impact AES-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? (Public views are those that are experienced from publicly accessible vantage points). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

The Project is in a non-urbanized area of Riverside County and the majority of the Project's impacts fall into the Impact AES-1 category. Degradation of visual character or quality results from the introduction of noticeable visual contrast, which relates to spatial characteristics, visual scale, form, line, color, and texture. Degradation also results from Project dominance and the blockage of views to higher value landscape features (e.g., mountains and ridgelines). The aesthetic impacts associated with Project construction and Project operations and maintenance (O&M) are described in the following paragraphs. Project decommissioning impacts would be the same as those described under Project construction and are, therefore, not addressed further.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. Construction and decommissioning activities could cause short-term direct and indirect aesthetic impacts from the visible presence of equipment, materials, vehicles, and workforce at the sites of the proposed solar facilities and along the gen-tie right-of-way; from visible contrast associated with vegetation removal; from visible fugitive dust; from construction night lighting (on an occasional basis); and from increased vehicle traffic on roadways beyond the immediate Project area (indirect effect).

The aesthetic effects caused by the temporary presence of equipment, materials, and workforce would occur throughout the Project site (solar facilities and gen-tie line). Construction and decommissioning would involve the use of cranes and heavy equipment, temporary storage and office facilities, and temporary laydown/staging areas. Construction activities would include site clearing and grading, assembly of solar arrays, erection of transmission structures, conductor stringing and pulling, and site cleanup and restoration. These activities would be visible from I-10, SR-177, Desert Center, the Lake Tamarisk Desert Resort residential area, the few rural residences in the area, and the surrounding wilderness areas. Throughout the construction period, the industrial character of the activities would cause visual contrast and visual change, which would constitute adverse aesthetic effects when viewed by the general public. However, since the construction and decommissioning activities would be temporary in nature, they would not result in a substantial long-term visual effect, and no mitigation is recommended.

Areas of ground surface disturbance and vegetation removal (characterized by high color, line, and texture contrasts) could remain visible from various vantage points for an extended period after the conclusion of construction because revegetation in the desert region is difficult and generally of limited success. However, the vast majority of the areas of ground disturbance would be occupied by permanent facilities, and since most foreground/middleground views of the disturbed areas would be at similar elevations (at grade), much of the contrast associated with unnatural vegetative patterns and/or lines would be screened from view by intervening vegetation and the new facilities. However, this longer-term visual contrast could appear prominent from some viewing locations and cause moderate to high levels of visual change. Although this would still be consistent with the BLM's VRM Class IV Management Objective, it would result in a significant aesthetic/visual resources impact under CEQA if not successfully mitigated.

Grading activities for the construction of the solar facilities and access roads and vehicle travel on unpaved surfaces have the potential to generate short-term dust clouds, which can cause moderate levels of visual contrast and moderate overall visual change, as well as be visually distracting. Although this occurrence would be consistent with the VRM Class IV management objective, it would result in a significant aesthetic/visual resources impact if not controlled properly.

It is anticipated that some construction activity could occasionally take place at night, which could result in substantial adverse night lighting visual effects (contrast) given the general lack of any significant night lighting at the Project site. The resulting moderate visual contrast would be consistent with the VRM Class IV management objective but would result in a significant aesthetic/visual resources impact if not effectively controlled.

In addition to the direct aesthetics/visual resources effects, construction of the Project would also result in the indirect visual effect of increased vehicle traffic. Although there would be an increase in vehicle trips on regional roads (I-10 and SR-177) associated with construction-related vehicles, it is not expected that in the context of existing non-Project-related traffic, the increased traffic would be noticed by the casual observer, particularly in the major travel corridors (I-10 and SR-177) outside of the immediate construction area. To the extent that a casual observer or local resident perceives any increase in traffic, the duration of the effects would be short-term. Further, in that there are other solar projects under construction, any perceived increase in traffic would be incremental to an impact that is already occurring. Therefore, the resulting visual effect would be less than significant, and no mitigation is proposed.

Mitigation Measures for Construction and Decommissioning under Impact AES-1

The Project's visible contrast associated with temporary ground disturbance and vegetation removal can be reduced to levels that would be less than significant through the implementation of Biological Resources Mitigation Measure (MM) BIO-5:

MM BIO-5 Vegetation Resources Management Plan. See full text in Section 3.5 (Biological Resources).

The Project's visible contrast associated with temporary fugitive dust during construction can be reduced to levels that would be less than significant through the implementation of Air Quality MM AQ-1:

MM AQ-1 Fugitive Dust Control Plan. See full text in Section 3.4 (Air Quality).

The Project's visible contrast associated with temporary uncontrolled night lighting during construction can be reduced to levels that would be less than significant through the implementation of MM AES-3:

MM AES-3 Night Lighting Management Plan. See full text in Section 3.2.9 (Mitigation Measures).

Significance After Mitigation

Construction impacts would be less than significant with effective implementation of the identified mitigation measures.

SIGNIFICANT AND UNAVOIDABLE, OPERATIONS AND MAINTENANCE. As described in Section 3.2.1.4 and depicted in Figure 3.2-1B, six representative KOPs were selected from the identified sensitive viewpoints and corridors to assess the Project's O&M impacts on the existing visual character and scenic quality of the landscape. The O&M effects would typically be direct effects. Therefore, they are addressed as such for each KOP listed below unless otherwise noted.

KOP 1 – Eastbound I-10. Figure 3.2-2A presents the existing view from KOP 1 on eastbound I-10. The view illustrated in Figure 3.2-2B presents a visual simulation that illustrates the introduction of solar arrays and a gen-tie line into the valley landscape. Specifically, the simulation depicts a majority of the Project between Kaiser Road and just east of SR-177. Viewing distances to the various Project components range from approximately 2.5 miles to approximately 5.6 miles. In this view, the Battery Energy Storage System (BESS) and substation would be substantially obscured from view by vegetation. The gen-tie line (visible in the right-center of the image) would be perceptible as it parallels SR-177 to the south. As shown in the simulation, the Project would present as a visually significant built feature introduced into a desert valley landscape that is already characterized by the increasing presence of energy infrastructure. 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 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. The gen-tie line paralleling SR-177 would become increasingly prominent as the I-10 traveler approaches Desert Center.

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 various degrees of visual contrast. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays and gen-tie poles would cause moderate contrast with the horizontal to angular and irregular forms and lines of the existing landforms and the patchy and irregular forms and lines of the valley vegetation. However, the Project's form and line contrast would be consistent with the adjacent solar facilities and gen-tie lines already established in the landscape. The Project's dark array panels would result in strong contrast with the lighter earth tones of the valley's soils and rock but minimal contrast with the existing solar facilities. The gen-tie poles would cause moderate contrast with the lighter earth tones of the valley's soils and rock but no contrast with the existing and adjacent gen-tie lines. The Project's smooth, manufactured surfaces would cause weak contrast with adjacent solar facilities but moderate contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation. Therefore, the Project's overall visual contrast would be moderate to high.

The Project would constitute a foreground to middleground, visually co-dominant feature in the landscape and would attract the attention of the casual observer. View blockage of higher value landscape features (e.g., valley floor and vegetation) would be moderate to high. Combining the equally weighted moderate to high visual contrast, co-dominant project dominance, and moderate to high view blockage results in a moderate to high rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 1 and similar locations along eastbound I-10. Although the resulting visual effect would be adverse, the moderate to high level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 1 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the moderate to high visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation

of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant. Therefore, the resulting visual impact would remain significant and unavoidable.

KOP 2 – Westbound I-10. Figure 3.2-3A presents the existing view from KOP 2 on westbound I-10, approximately 1.9 miles east of the Desert Center/SR-177 exit. Figure 3.2-3B presents a visual simulation that illustrates the introduction of the Project's solar arrays and a gen-tie line into the valley landscape. Specifically, the simulation depicts a majority of the Project between Kaiser Road and just east of SR-177. Viewing distances to the various Project components would range from approximately 0.4 mile (foreground gen-tie line) to approximately five miles (most distant solar arrays). As shown in the simulation, the Project would present as a visually significant built feature introduced into a desert valley landscape with an increasing presence of energy infrastructure. 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. The BESS and substation would be substantially obscured from view by intervening vegetation. The gen-tie line paralleling SR-177, and then I-10, would be a visually prominent feature in the foreground views from this and similar locations along I-10 where the line parallels the freeway.

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 contrast. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays, BESS, and gen-tie poles would cause moderate contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains) and the patchy and irregular forms and lines of the valley vegetation. However, the Project's form and line contrast would be consistent with the adjacent solar facilities and gen-tie lines already established in the landscape. The Project's dark array panels would cause moderate contrast with the lighter earth tones of the valley's soils and rock but minimal contrast with the existing solar facilities. The dark-brown gen-tie poles would cause moderate contrast with the lighter earth tones of the valley's soils and rock, background landforms, and sky but no contrast with the existing and adjacent gen-tie lines. The resulting overall level of color contrast would be moderate. The Project's smooth, manufactured surfaces would cause weak contrast with adjacent solar facilities but moderate contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation. Therefore, the Project's overall visual contrast would be moderate.

The Project would constitute a foreground to middleground, visually co-dominant feature in the landscape and would attract the attention of the casual observer. View blockage of higher value landscape features (e.g., valley floor and vegetation) would be moderate. Combining the equally weighted moderate visual contrast, co-dominant project dominance, and moderate view blockage results in a moderate rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 2 and similar locations along westbound I-10. Although the resulting visual effect would be adverse, the moderate level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 2 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the moderate visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features

and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant. Therefore, the resulting visual impact would remain significant and unavoidable.

KOP 3 – Alligator Rock ACEC. Figure 3.2-4A presents the existing view from KOP 3 on the crest of Alligator Rock, approximately 0.5 mile southwest of Desert Center. As shown in the KOP 3 visual simulation presented in Figure 3.2-4B, the approximately 3- to 5.6-mile distant solar arrays would present as visually co-dominant, dark- to light-colored patches (depending on panel orientation and time of day) extending across the floor of Chuckwalla Valley, east and west of SR-177 and north of I-10. Inset within this dark mass would be the prominently white, linear area of the BESS adjacent to the cluster of gray, vertical, structural elements comprising the substation (only faintly visible in this view). The dark, rust-colored vertical poles of the gen-tie line would also be noticeable as the line parallels the east side of SR-177 before turning east to parallel other existing gen-tie lines. The panoramic view from this elevated vantage point on Alligator Rock would enable extended view durations of the solar fields, BESS, substation, and gen-tie.

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 contrast. Specifically, the Project's prominent linear form and horizontal to vertical lines of the solar arrays, BESS, and gen-tie line would cause moderate contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains) and the patchy and irregular forms and lines of the valley vegetation. The faintly visible substation and O&M building would contribute no meaningful contrast, and the Project's overall form and line contrast would be consistent with the adjacent solar facilities and gen-tie lines already established in the landscape, resulting in overall weak to moderate form and line contrast. The Project's dark array panels and white BESS would cause moderate to strong contrast with the lighter earth tones of the valley's soils and rock but no contrast with the existing solar facilities. At this viewing distance and angle of view, the dark brown color of the gen-tie poles would cause weak contrast with the lighter background sky and earth-tone colors of soils but would be consistent in color with the adjacent and nearby existing utility poles. The resulting overall level of color contrast would be moderate. At this viewing distance, the Project's smooth, manufactured surfaces would cause no contrast with adjacent solar facilities but weak contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation resulting in an overall weak level of texture contrast. Therefore, the Project's overall visual contrast would be low to moderate.

The Project would constitute a foreground to middleground, visually co-dominant feature in the landscape and would attract the attention of visitors to Alligator Rock. View blockage of higher value landscape features (e.g., valley floor and vegetation) would be moderate. Combining the equally weighted low to moderate visual contrast, co-dominant project dominance, and moderate view blockage results in a moderate rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 3 and similar elevated locations in the Alligator Rock ACEC. Although the resulting visual effect would be adverse, the moderate level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 3 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the moderate visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant. Therefore, the resulting visual impact would remain significant and unavoidable.

KOP 4 – Lake Tamarisk Desert Resort. Figure 3.2-5A presents the existing view from KOP 4 at the playground area near the eastern boundary of the Lake Tamarisk Desert Resort. The visual simulation presented as Figure 3.2-5B encompasses an approximate 105^0 viewing arc that extends from 26^0 northeast to approximately 135^0 southeast. Both of these figures are based on a setting image captured in December 2022 with a 5.5-foot camera elevation (above the ground). While much of the Project shown in Figure 3.2-5B would be screened from view by intervening vegetation, portions of the solar arrays along the valley floor would be visible to the northeast and east, with viewing distances ranging from approximately 0.3 to 1.5 miles. The arrays would present as a visually prominent dark- to light-colored horizontal band extending across the valley floor (depending on panel orientation and time of day). Portions of the white-colored BESS would be partially visible approximately 0.7 mile to the east. The visible portions of the BESS would present as a visually prominent but intermittent bright white horizontal band along the valley floor. While most of the Project's substation (approximately 0.7 mile to the east) and all of the O&M building would be screened from view by intervening vegetation, the proposed gen-tie line that would connect to the substation would present noticeable, dark, rust-colored, vertical structures (at viewing distances ranging from approximately 0.8 to 0.9 mile for the four structures shown) as the line extends to the south and then east to connect with the existing Red Bluff Substation. The open landscape would enable extended view durations of the Project from the resort.

In the context of an existing landscape that is predominantly natural appearing from this location, the Project would result in varying degrees of visual contrast. Specifically, the prominent linear form and horizontal to vertical lines associated with the Project's solar arrays, BESS, and gen-tie line would result in moderate contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains) and the patchy and irregular forms and lines of the valley vegetation. The substantially obscured substation and O&M building would contribute no meaningful contrast. The Project's dark array panels and white BESS, which are substantially screened by intervening vegetation when viewed from the eastern portion of the resort, would also result in moderate contrast with the lighter earth tones of the valley's soils and rock. At this viewing distance, the Project's smooth, manufactured surfaces would cause weak texture contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation. Therefore, the Project's overall visual contrast would be moderate.

The Project would constitute a foreground to middleground, visually co-dominant feature in the landscape and would attract the attention of residents of, and visitors to, the resort. View blockage of higher value landscape features (e.g., valley floor, background mountains, and sky) would be low to moderate given the low profile of the solar arrays and substantial screening by intervening vegetation. Combining the equally weighted moderate visual contrast, co-dominant project dominance, and low to moderate view blockage results in a moderate rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 4 and similar locations in the eastern portion of the resort. Although the resulting visual effect would be adverse, the moderate level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 4 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the Project's moderate visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant when viewed by the residents and visitors to Lake Tamarisk Desert Resort. Therefore, the resulting visual impact would remain significant and unavoidable.

In addition to the above two KOP 4 figures from December 2022 (Figures 3.2-5A and 5B), a second series of images (Figures 3.2-5D and 5E) was captured in October 2023 but with an 8-foot camera elevation (above the ground). This slightly elevated view was obtained and evaluated because it was thought to be

more representative of the "porch-height" views that some of the private residences along the eastern resort perimeter experience. The Existing View image presented in Figure 3.2-5D captures essentially the same landscape features that are shown in the same frame of view presented in the original existing view presented in Figure 3.2-5A at a 5.5-foot camera elevation. However, the new Figure 3.2-5D was captured almost a year later following substantial rain events. As a result, some vegetation is noticeably greener, and some vegetation growth has occurred providing a very slight increase in screening in some portions of the image. Also, additional solar facilities have been installed in the landscape since the December 2022 set of images.

Figure 3.2-5E presents a panoramic visual simulation of the proposed Project as viewed with a camera height of 8 feet (i.e., approximate porch-height view). As shown in the simulation, there is a very slight increase in visibility of some project features due to the ability to "see over" some of the intervening screening vegetation. However, in other cases, the increased camera (viewing) height has been offset somewhat by additional vegetation growth that has occurred over the past year. Regardless, the overall visual change captured by the two different camera (viewing) heights is similar and would not change the overall impact conclusion. Although the KOP 4 viewpoint is considered reasonably representative of publicly available project views from the eastern portion of the resort, it is acknowledged that some public views and private residential views within the resort may be more or less visually affected by the proposed Project due to the presence of lesser or greater vegetative screening.

KOP 5 – Northbound SR-177. Figure 3.2-6A presents the existing view of the central portion of Chuckwalla Valley from KOP 5 on northbound SR-177, approximately 1.5 miles northeast of Desert Center. Figure 3.2-6B presents a visual simulation that encompasses a portion of the Project in the vicinity of SR-177. While much of the Project would be screened from view by intervening vegetation (at this and similar viewing locations), portions of the solar arrays along the valley floor would be visible with viewing distances ranging from approximately 0.9 mile to approximately 3 miles. The arrays would present as a visually noticeable, dark- to light-colored horizontal band extending across the valley floor (depending on panel orientation and time of day). The Project substation (a termination point for the gen-tie line) and O&M building would be partially visible to the west of SR-177 (left in this image) at a viewing distance of approximately 0.7 mile. A portion of the BESS, which would be white in color, would be partially visible behind and beyond the substation and O&M building at a viewing distance ranging from approximately 0.7 to 0.9 mile. The proposed gen-tie line would present as dark, rust-colored, vertical structures at viewing distances (from this location) ranging from approximately 140 feet to approximately 0.7 mile (where it connects to the substation). The gen-tie line would be the most visually prominent Project feature from KOP 5 as it extends south from the substation before turning southwest to parallel the east side of SR-177, and it would exhibit visual characteristics similar to the existing pole line on the opposite side of the road.

In the context of an existing landscape that includes not only the natural landform, 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 contrast. Specifically, the Project's prominent linear form and horizontal to vertical lines associated with the solar arrays, BESS, substation, and gen-tie line would result in moderate contrast with the horizontal to angular and irregular forms and lines of the existing landforms (valley floor and background mountains) and the patchy and irregular forms and lines of the valley vegetation. However, the Project's form and line contrast would be consistent with the nearby solar facilities and utility lines already established in the landscape, including the wood-pole utility line that parallels the west side of SR-177. The Project's dark array panels would result in moderate contrast with the lighter earth tones of the valley's soils and rock and even vegetation but minimal contrast with the existing solar facilities and repaved roadway. The white color of the BESS would result in moderate contrast with the darker vegetation. The dark brown color of the gen-tie poles would result in moderate to strong contrast with the lighter background sky and earth-

tone colors of soils and background landforms but would be consistent in color with the adjacent and nearby existing utility poles. The resulting overall color contrast would be moderate to strong. At this viewing distance, the Project's smooth, manufactured surfaces would cause weak contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation and weak contrast with adjacent solar facilities. Therefore, the Project's overall visual contrast as experienced at KOP 5 and similar locations along SR-177 would be moderate.

The Project would constitute a foreground to middleground, visually co-dominant feature in the landscape and would attract the attention of travelers on SR-177. View blockage of higher value landscape features (e.g., valley floor, background mountains, and sky) would be moderate given the impairment of views to distant mountains caused by the gen-tie line. Combining the equally weighted moderate visual contrast, co-dominant project dominance, and moderate view blockage results in a moderate rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 5 and similar locations along SR-177. Although the resulting visual effect would be adverse, the moderate level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 5 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the Project's moderate visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant. Therefore, the resulting visual impact would remain significant and unavoidable.

KOP 6 – Southbound SR-177. Figure 3.2-7A presents the existing view to the southwest from KOP 6 on southbound SR-177, approximately five miles northeast of Desert Center. This view encompasses the western portion of the greater Chuckwalla Valley in the vicinity of SR-177. This viewpoint is representative of the immediate foreground views of the Project area located immediately adjacent to both sides of SR-177. As illustrated in the KOP 6 visual simulation presented in Figure 3.2-7B, the Project would present as a visually significant built feature introduced into a desert valley landscape with an increasing presence of energy infrastructure.

In the context of an existing landscape that includes not only the natural landform, vegetative patterns, and earth-tone colors and textures of a desert valley, the Project would result in varying degrees of visual contrast. Specifically, the prominent linear form, horizontal lines, and dark color of the solar arrays would all exhibit strong visual contrast compared to the angular and irregular forms and lines of the existing landforms (valley floor and background mountains), the patchy and irregular forms and lines of the valley vegetation, and lighter earth tones of the valley's soils, rock, and vegetation, though the dark array panels would cause minimal contrast with the existing repaved roadway. At this viewing distance, the arrays' smooth, manufactured surfaces would cause moderate contrast with the matte to coarse textures attributable to valley soils, rock, and vegetation. The gen-tie line would be barely discernible in the distance, and the BESS, substation, and other components would be substantially screened from view by the arrays and existing vegetation and would contribute no meaningful contrast. Therefore, the Project's overall visual contrast as experienced at KOP 5 and similar locations along SR-177 would be strong (high) and is primarily associated with the solar arrays.

The Project would appear as a visually dominant feature in the landscape and would attract the attention of the casual observer. View blockage of the valley floor and vegetation would be high, while view blockage of the Chuckwalla Mountains and sky would be moderate. Therefore, the overall view blockage would be moderate to high. Combining the equally weighted high visual contrast, dominant project

dominance, and moderate to high view blockage results in a high rating for overall visual change, which would degrade the existing visual character and quality of the landscape as viewed from KOP 6 and similar locations along SR-177. Although the resulting visual effect would be adverse, the high level of visual change would be allowed under the VRM Class IV management objective that applies to the portion of the Project that would be located on BLM-administered lands (see KOP 6 Contrast Rating Data Sheet in Appendix I).

In the context of the existing landscape's moderate to high visual sensitivity, the Project's high visual change would result in a significant aesthetics impact under significance criterion AES-1. Implementation of MMs AES-1 (Surface Treatment of Project Structures and Buildings) and AES-2 (Project Design) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character, though not sufficiently to reduce the aesthetic impact to a level that would be less than significant. Therefore, the resulting visual impact would remain significant and unavoidable.

Mitigation Measures for Operation and Maintenance under Impact AES-1

The Project's visible contrast associated with visually discordant structural features and industrial character can be reduced through the implementation of MMs AES-1 and AES-2:

MM AES-1 **Surface Treatment of Project Structures and Buildings.** See full text in Section 3.2.9 (Mitigation Measures).

MM AES-2 **Project Design.** See full text in Section 3.2.9 (Mitigation Measures).

Significance After Mitigation

The O&M impacts would remain significant and unavoidable even with implementation of mitigation when viewed from all KOPs.

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

Visible Night Lighting

LESS THAN SIGNIFICANT WITH MITIGATION. The Project would be located in an area with few existing structures, and the use of uncontrolled or excessive lighting would be noticeable to nearby motorists on I-10 and SR-177 and residents of Desert Center and the Lake Tamarisk Desert Resort. Nighttime lighting would also affect the nighttime experience for dispersed recreational users in the surrounding wilderness. Project operation would require on-site nighttime lighting for safety and security.

As described in MM AES-3, in order to reduce off-site lighting impacts, lighting at the facility would be restricted to areas required for safety, security, and operation. Security lights would be motion sensitive, and all lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Low-pressure sodium lamps and fixtures of a non-glare type would be specified. Switched lighting would be provided for areas where continuous lighting would not be required for normal operation, safety, or security. The implementation of these measures would minimize the amount of lighting potentially visible to viewers of the site at night.

However, adverse effects of solar facilities lighting are not necessarily limited to views of the site itself. Excessive lighting can also cause an adverse effect to viewers of the night sky via sky glow, which diminishes the visibility of the nighttime sky and stars. Prevention of off-site light spillage for ground observers does not necessarily prevent back-reflected light (i.e., light reflected off the ground and/or structures from down-directed lamps) from diminishing the visibility of the night sky. Normally, the contribution of

project-related lighting is negligible when in an environment with abundant light sources; however, the Project area is highly valued in terms of the quality of its nighttime skies. This is attributable to the scarce and scattered nature of existing light sources in the surrounding area and the prevalence of federally administered land in the region, which limits opportunities for development. While the level of use in the surrounding wilderness is considered to be low, the high visibility of the nighttime sky and stars is an important component of the wilderness experience for many backcountry users and is highly valued by residents of the area.

JTNP, which is located to the west and north of the Project, is known throughout the National Park System (NPS) for its significant Dark Sky resource. To serve a substantial public interest in Dark Sky observation, JTNP offers a variety of Night Sky Programs. In the immediate Project area, Dark Sky visitors access the east end of the Pinto Basin through a gate at the north end of Chuckwalla Valley. Although some dark sky viewing locations in the Pinto Basin do not have direct line-of-site to the Project due to intervening terrain, there are portions of the Pinto Basin, particularly in the northeast of the Basin, with slightly higher elevations that do have direct line-of-sight to the proposed Project site. Because any light source in the desert contributes to ambient light pollution, and all light sources are adversely cumulative in terms of the impact on human dark adaptation and the dwindling availability of Dark Sky observation areas, it is essential that substantial steps be taken to ensure that additional night sky light pollution does not occur from implementation of the Project.

It is estimated that the contribution of the Project's lighting to sky glow would be minor. Light sources in the Chuckwalla Valley currently include motorists on I-10; street lamps, residences, and other commercial/service land uses in the communities of Desert Center and Lake Tamarisk; lighting associated with the former Desert Center Airport (now a private, special-use airport); motorists on local roads; and widely scattered homesteads on private land in the region. Additionally, there are several solar projects that are either existing or under construction. Despite the presence of these existing and eminent light sources, the area remains highly valued for the quality of its night sky. Because permanent lighting would not be required for the arrays of photovoltaic panels, operational lighting would be confined to a small portion of the Project site that contains O&M facilities and the switchyard and is unlikely to be totally out of character with other existing lighting sources found scattered throughout the Chuckwalla Valley. Further, MM AES-3 includes standards that light intensity must be the minimum necessary to ensure worker safety and facility security, that direct lighting not illuminate the nighttime sky, and that Project night lighting does not adversely affect the dark sky viewing program at JTNP because it requires review and approval of the Project Lighting Mitigation Plan prepared under MM AES-3 by the NPS Night Sky Program Manager. This review would ensure that the Project meets the stricter night lighting specifications of the NPS Night Sky Viewing Program, and that lighting exposure levels (based on a Lumen Analysis) do not exceed the action threshold for NPS lands nor adversely affect JTNP's Night Sky Viewing Program. Because the impacts associated with nighttime lighting would be limited in nature and reduced by MM AES-3, the night lighting impact is considered significant but mitigable under the AES-2 impact criterion.

Daytime Glare

LESS THAN SIGNIFICANT WITH MITIGATION. The following paragraphs summarize the results of the Glare Assessment, which is presented in full (with all attachments) in Appendix I.

Modeled observation points included two route receptors along State Route (SR) 177/Rice Road and R2/Kaiser Road, and one flight path receptor at the Desert Center Runway Approach. Additionally, model runs were conducted for U.S. FAA 2013 and the 2021 Policy Adherence. There are no Air Traffic Control Towers (ATCTs) within two miles of the Project; therefore, there were no ATCT receptors assessed. According to the model results, no flight path receptors would be impacted by glare from the solar panels; however, some route receptors have a low potential of being impacted by any glare.

Green glare is predicted for the route receptors along SR-177/Rice Road from the Project PV arrays adjacent to the road for 313,668 minutes (5,227 hours) of the year. Any potential glare impacts for this route receptor would occur year-round approximately between 5:30 a.m. and 12:30 p.m. Additionally, mid-March through the end of September, there is a potential for glare between the hours of 2:00 p.m. and 7:00 p.m.

Similarly, green glare is predicted for the route receptor along R2/Kaiser Road from the Project PV arrays east of Kaiser Road for 45,249 minutes (754 hours) of the year. Any potential glare impacts for this route receptor would occur from January to mid-May and from mid-July to December, with an approximate maximum duration of 12:00 p.m. to 5:00 p.m. From May to August, potential glare impacts would occur from 6:00 p.m. to 7:00 p.m.

The Aviation Reports to analyze U.S. FAA policy adherence relative to the 2013 and 2021 policies concluded that there would be no glare of any kind for ATCTs, and that there would be no yellow glare for any flight path receptors within two miles.

In conclusion, green glare, having a low potential for temporary after-image, is predicted at various levels along area roadways as a result of the Project. There is no yellow glare predicted. It is expected that such glare impacts would be substantially less than that associated with other solar technologies because photovoltaic panels are less reflective, and it is anticipated that the resulting visual impact would be less than significant under significance criterion Impact AES-2**.** Actual impacts may vary from these representative model results depending on the final types of PV arrays selected and their configurations within the Project parcels.

Mitigation Measures under Impact AES-2

The Project's visible contrast associated with uncontrolled night lighting during construction, O&M, and decommissioning can be reduced through the effective implementation of MM AES-3:

MM AES-3 **Night Lighting Management.** See full text in Section 3.2.9 (Mitigation Measures).

The Project's visible contrast associated with daytime structural glare can be reduced through the implementation of MMs AES-1 and AES-2:

MM AES-1 **Surface Treatment of Project Structures and Buildings.** See full text in Section 3.2.9 (Mitigation Measures).

MM AES-2 **Project Design - Retention of Roadside Vegetation.** See full text in Section 3.2.9 (Mitigation Measures).

Significance After Mitigation

The night lighting and glare impacts would be reduced to levels that would be less than significant with implementation of mitigation when viewed from all KOPs.

Impact AES-3. Would the Project result in the creation of an aesthetically offensive site open to public view?

The aesthetic effects visible to the public are assessed from representative viewpoints and are discussed under Impact Criterion AES-1 above. The reader is referred to that discussion.

Impact AES-4. Would the Project expose residential property to unacceptable light levels?

LESS THAN SIGNIFICANT WITH MITIGATION. The Project's night lighting effects are discussed under Impact Criterion AES-2 above. The reader is referred to that discussion.

Impact AES-5. Would Project construction, operation, or decommissioning result in an inconsistency with regulatory plans, policies, and standards applicable to the protection of aesthetics?

LESS THAN SIGNIFICANT WITH MITIGATION. As presented in Section 3.2.1.2 (Local Laws, Regulations, and Policies), the Project would be subject to federal and local regulatory plans, policies, and standards applicable to the protection of aesthetics. Table 3.2-2 (Consistency with Regulatory Plans, Policies, and Standards) describes the Project's consistency with applicable regulatory requirements.

Table 3.2-2. Consistency with Regulatory Plans, Policies, and Standards

Plans/Policies/Standards Description		Consistency Analysis
Federal Land Policy and Management Act / CDCA Plan / BLM VRM System – Gen-Tie Line		
	Scenic values are to be considered in management actions and VRM objectives and Contrast Rating procedures are to be used to manage visual resources.	**Consistent**. Contrast Rating data sheets were prepared for the BLM for each KOP and used to evaluate the Project on BLM-administered public lands. In all cases, the levels of change were found to be consistent with the levels of change allowed by the applicable VRM Class IV management objective.
Riverside County General Plan Land Use Element (LU)		
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: a. Compliance with the design standards of the appropriate area plan land use category. b. Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations. o. 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.	**Consistent**. The Project would result in the conversion of a large land area in the Chuckwalla Valley to an industrial appearing energy facility resulting in an adverse aesthetic impact. However, this impact does not result in an inconsistency given the development context that is already in place in the immediate vicinity of the Project site. Specifically, there are no unique natural features or terrain at the Project site, and the overall visual quality is common to the broader Chuckwalla Valley. Furthermore, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
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 Desert Center Area Plan with regard to control of night lighting and scenic highways.
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**. The Project is not within an area with important scenic values.
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, and Clean Air Act, and Clean Water Act.	**Consistent**. The Project would be consistent with the Multipurpose Open Space Element of the General Plan with respect to the design of development within designated scenic highway corridors. The Project would also be consistent with federal regulations as discussed above, and this EIR documents the Project's adherence to the requirements of CEQA.

Plans/Policies/Standards Description		Consistency Analysis
LU 14.1	Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public	**Consistent**. There are no outstanding scenic vistas in the general Project area, and there are no outstanding visual features on the Project site. The relatively flat desert landscape of the Project site has a low level of visual variety and distinctiveness, and exhibits limited variation in form, line, color palette, and texture that is common to the broader Chuckwalla Valley. The adjacent landscape includes solar projects, solar projects under construction, and electric transmission facilities, both existing and under construction.
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 Highways corridors are compatible with the surrounding scenic setting or environment.	**Consistent**. The Project would be visible from I-10, which is a County Eligible Scenic Highway. However, the visual characteristics of the proposed solar facilities and gen-tie line would be consistent with other solar projects, both existing and under construction, that are located adjacent to, or in the immediate vicinity of, the Project.
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.	**Consistent**. At its closest point, the Project's gen-tie line would parallel I-10 at a distance of approximately 0.3 miles. It would then turn south and enter the Oberon Project Substation, just north of I-10. However, throughout this portion of the gen-tie route it would follow an established transmission line corridor with other transmission lines connecting to Oberon Project Substation on the north side of I-10 while the other (non-Project) transmission lines would continue across I-10 to connect into Red Bluff Substation.
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**. There are no designated Scenic Highways in the Project vicinity, but I-10 has been identified by the County of Riverside as eligible for designation as a scenic corridor. The Project's gen-tie line, connecting the Project to the Oberon Project Substation on the northern side of I-10 would be an overhead 500 kV line almost entirely on federal land. The Project is considered consistent with this policy, because the gen-tie line would be on federal land and because the visual characteristics of the gen-tie line would be consistent with the numerous overhead gen-tie, distribution, and bulk transmission lines in the Desert Center area, some of which follow the same transmission line corridor paralleling I-10 to the Oberon Project Substation that the Project would.
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.	**Consistent**. Given the level nature of the Project site, any necessary grading would be consistent with the existing natural contours. Drainage areas of the site would be unaltered. The solar facilities would exhibit a manufactured appearance when viewed from certain locations. However, because the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity, the Project is considered consistent with Policy LU 21.1.
LU 21.3	Ensure that development does not adversely impact the open space and rural character of the surrounding area.	**Consistent**. While the Project would exhibit an industrial, manufactured appearance and cause potentially adverse visual impacts to the existing open space and rural character of the surrounding area when viewed from certain locations, the Project would be located in an area that contains existing solar facilities of similar design and is receiving more solar facilities that are currently under construction.. The visual impacts of the project would not result in a policy

Plans/Policies/Standards Description		Consistency Analysis
		inconsistency given the renewable energy development and energy infrastructure trends already established in the Chuckwalla Valley. Also, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
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.	**Consistent**. Given the level nature of the Project site, any necessary grading would be consistent with the existing natural contours. With Project buildout, the solar facilities would exhibit a manufactured appearance when viewed from certain locations; however, because the Project features would be visually consistent with other existing solar generation and electric transmission facilities and facilities under construction in the immediate Project vicinity, the Project would be consistent with Policy LU 26.1.
LU 26.3	Ensure that development does not adversely impact the open space and rural character of the surrounding area.	**Consistent**. While the Project would exhibit an industrial, manufactured appearance and cause potentially adverse visual impacts to the existing open space and rural character of the surrounding area when viewed from certain locations, the Project would be located in an area that contains existing solar facilities of similar design and is receiving more solar facilities that are currently under construction.. The visual impacts of the project would not result in a policy inconsistency given the renewable energy development and energy infrastructure trends already established in the Chuckwalla Valley. Also, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
Circulation Element		
C 19.1	Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highway Plan.	**Consistent**. The Project would not be located within a designated scenic highway corridor. I-10 in the vicinity of the Project is an Eligible (but not Designated) County Scenic Highway, but the Project site does not contain exceptional or unique visual features. Also, the Project would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
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.	**Consistent**. The Project's gen-tie line, connecting the Project to Oberon Project Substation on the north side of I-10 would be an overhead line, and remaining utilities would not be screened from public view. However, underground construction of a 500 kV transmission line from the Easley Project Substation to the Oberon Project Substation would have marginal technical feasibility and would not be economically feasible. In addition, the visual characteristics of the Project would be consistent with the numerous overhead gen-tie, distribution, and bulk transmission lines in the immediate Project vicinity, some of which follow the same transmission line corridor to the Oberon Substation that the Project line would. The solar field and associated equipment and structures cannot be placed underground.
Multi-Purpose Open Space Element		
OS 21.1	Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County	**Consistent**. The relatively low height of the Project's solar arrays along the valley floor would not obstruct skylines, view corridors, or outstanding scenic vistas. The taller gen-

Plans/Policies/Standards Description		Consistency Analysis
		tie facilities also would not obstruct views of outstanding scenic vistas and would be visually consistent with other existing electric transmission facilities in the immediate Project vicinity, some of which follow the same transmission line corridor to Oberon Project Substation that the Project would.
OS 22.1	Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.	**Consistent**. The Project would not be located within a designated scenic highway corridor. I-10 in the vicinity of the Project is an Eligible (but not Designated) County Scenic Highway. Also, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
OS 22.4	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.	**Consistent**. The Project would not be located within a designated scenic highway corridor. I-10 in the vicinity of the Project is an Eligible (but not Designated) County Scenic Highway but the Project site does not contain unique or special visual features. Also, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
Desert Center Area Plan		
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.	**Consistent**. While the Project would exhibit an industrial, manufactured appearance and cause adverse visual impacts to the existing open space and rural desert character of the Desert Center Region when viewed from certain locations, the Project would be located in an area that contains existing solar facilities of similar design and is receiving more solar facilities that are currently under construction. The visual impacts of the project would not result in a policy inconsistency given the renewable energy development and energy infrastructure trends already established in the Chuckwalla Valley and Desert Center region. Also, the Project features would be visually consistent with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.
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**. Security lights around the substation, inverters, gates, and along the perimeter fencing would be motion sensitive and directional. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Further, with implementation of Mitigation Measures AES-1 and AES-3, night lighting and glare impacts would be kept to levels that would be less than significant.
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**. Although the Project would not be located within the viewshed of a designated scenic highway corridor, it would be visible from I-10, which is a County Eligible Scenic Highway Corridor. However, the Project features would be visually consistent with other existing solar generation and electric transmission facilities in the immediate Project vicinity.

Mitigation Measures for Impact AES-5

Effective implementation of MMs AES-1 and AES-3 would mitigate the Project's visible contrast associated with night lighting and glare during construction and operation and would help to ensure the Project's consistency with Riverside County General Plan Land Use Element Policy LU 4.1 and Desert Center Area Plan Policy DCAP 4.1.

MM AES-1 **Surface Treatment of Project Structures and Buildings.** See full text in Section 3.2.9 (Mitigation Measures).

MM AES-3 **Night Lighting Management.** See full text in Section 3.2.9 (Mitigation Measures).

Significance After Mitigation

The night lighting and glare impacts associated with Riverside County General Plan Land Use Element Policy LU 4.1 and Desert Center Area Plan Policy DCAP 4.1 would be less than significant with effective implementation of MMs AES-1 and AES-3.

The Project's inconsistences or partial inconsistencies with Riverside County General Plan Land Use Element (LU) Policies 4.1, 14.5, 21.1, 21.3, 26.1, and 26.3; Circulation Element (C) Policy 25.2; and DCAP Policy 2.3 are *not considered significant* given the absence of scenic resources on the Project site, the Project's consistency with the applicable BLM VRM Class IV management objective, the renewable energy development and energy infrastructure trends already established in the Chuckwalla Valley, and the visual consistency of the Project features with other existing (and under construction) solar generation and electric transmission facilities in the immediate Project vicinity.

3.2.6. Alternative 1: No Project Alternative

The No Project Alternative would not develop the solar facility and gen-tie line or require new construction and/or operational activities. It would not conflict with any existing or future land use plans or zoning, nor would it conflict with the applicable VRM Class IV management objective, which allows for a high level of visual change. The No Project Alternative would avoid the significant visual impacts that would occur along I-10 and SR-177, at Alligator Rock ACEC, and at Lake Tamarisk Desert Resort as documented in the analyses for KOPs 1 through 6. Therefore, the No Project Alternative would not cause impacts to aesthetics.

3.2.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would remove approximately 30 acres of solar panels closest to the Lake Tamarisk Desert Resort (LTDR) such that the nearest panels would be approximately 0.45 mile (2,350 feet) from the closest LTDR mobile home residence compared to approximately 750 feet under the proposed Project. In addition, the on-site substation and BESS would be moved approximately 0.7 mile to the northeast (farther away from the LTDR community). Also, with the relocation of the substation, the associated gen-tie line would extend approximately 0.8 mile farther northeast along the east side of SR-177 before spanning SR-177 to connect with the alternative substation location.

As a result of these changes in the Project layout under Alternative 2, the visual impacts on the resort would be reduced. Specifically, and as illustrated in the visual simulation presented in Figure 3.2-5C, the closest arrays (to the immediate northeast of the resort) would be removed, and the remaining more distant arrays would be less visually prominent. The absence of those arrays is illustrated in the far-left portion of the Figure 3.2-5C simulation. Also, the BESS, which previously appeared as a noticeable white, intermittent, linear feature along the valley floor to the east of the resort (see Figure 3.2-5B), but which was substantially screened by intervening vegetation, would now be relocated to the northeast away from

the resort and would no longer be visible from KOP 4 and would have minimal visibility from other viewing locations in the resort due to screening by intervening vegetation and array panels. The relocation of the substation to the northeast away from the resort would also reduce its visibility from the resort due to screening by intervening vegetation and solar panels as well as greater viewing distances (depending on viewing location within the resort). With the relocation of the substation, the gen-tie line would extend farther northeast along SR-177 resulting in the potential visibility of approximately seven additional structures that would not otherwise be visible with the proposed Project. However, the additional structures would: (a) be partially or completely screened from view by intervening vegetation; (b) be back-dropped by the distant mountains such that they would not extend above the horizon (and thus, be less visually prominent); or (c) be seen at greater distance in the context of other utility poles along SR-177. Therefore, the additional gen-tie poles would not constitute visually significant features in the landscape as viewed from the Lake Tamarisk Desert Resort.

Although the visual impact on the resort would be reduced under Alternative 2, the overall Project visual impact would not be reduced to level that would be less than significant. Further, the visual impacts experienced at the other five representative KOPs would also remain significant and unavoidable under Alternative 2.

In addition to the KOP 4 Figures 3.2-5A (Existing View) and 3.2-5C (Alternative 2 Simulation), both of which were based on imagery from December 2022 that was obtained with a 5.5-foot camera elevation (above the ground), an additional series of figures (Figures 3.2-5D and 3.2-5F in Appendix I) was captured in October 2023 but with an 8-foot camera elevation (above the ground). As for the proposed Project, this slightly elevated view was obtained and evaluated because it was thought to be more representative of the "porch-height" views that some of the private residences along the eastern resort perimeter experience. The Existing View image presented in Figure 3.2-5D captures essentially the same landscape features that are shown in the same frame of view presented in the original existing view presented in Figure 3.2-5A at a 5.5-foot camera elevation. However, the new Figure 3.2-5D was captured almost a year later following substantial rain events. As a result, some vegetation is noticeably greener, and some vegetation growth has occurred providing a very slight increase in screening in some portions of the image. Also, additional solar facilities have been installed in the landscape since the December 2022 set of images, which adds to the existing structural context.

Figure 3.2-5F presents a panoramic visual simulation of Alternative 2 as viewed with a camera height of 8 feet (i.e., approximate porch-height view). As with the proposed Project simulation, the Alternative 2 simulation illustrates a very slight increase in visibility of some project features due to the ability to "see over" some of the intervening screening vegetation with the elevated viewing perspective. However, in other cases, the increased camera (viewing) height has been offset somewhat by additional vegetation growth that has occurred over the past year. Similar to the proposed Project findings, the Alternative's overall visual change captured by the two different camera (viewing) heights is similar, and the 8-foot-high viewing perspective would not change the overall impact conclusion. Although the KOP 4 viewpoint is considered reasonably representative of publicly available project views from the eastern portion of the resort, it is acknowledged that some public views and private residential views within the resort may be more or less visually affected by Alternative 2 due to the presence of lesser or greater vegetative screening.

3.2.8. Cumulative Impacts

3.2.8.1. Geographic Scope

Impacts resulting from construction, operation, and decommissioning of the Project would result in a cumulative effect on aesthetics with other past, present, or probable future projects. The geographic

scope of the cumulative effects analysis for aesthetics consists of the I-10 corridor, the greater Chuckwalla Valley, and the Project-facing slopes and ridges of the surrounding mountains, including portions of JTNP, and is based primarily on the natural boundaries of the affected resource where direct effects would occur (i.e., shared viewsheds). Secondarily, the geographic scope also considers the indirect effect of the perceived industrialization of the I-10 corridor, which is associated with the proliferation of energy facilities across the landscape. Therefore, for the purposes of this analysis, the area of direct effect generally extends from the eastern portion of JTNP southeast to the easternmost boundary of the Palen Solar Project, east of the Project site. The area of indirect effect extends along I-10 from the intersection with Eagle Mountain Road, approximately three miles west of Desert Center, to Ford Dry Lake Road overpass, which is just under 12 miles east of the Palen Solar Project and approximately three miles south of the existing Genesis Solar Energy Project. Also visible from this location are the existing Devers-Palo Verde 1 and Devers-Colorado River transmission lines, the existing Blythe Energy Project Transmission Line, and the probable future Desert Southwest Transmission Line, all paralleling the south side of I-10.

Past, present, and probable future projects making up the cumulative scenario for aesthetics are listed below and in Tables 3.1-1 and 3.1.2, and shown on Figure 3.1-1 Cumulative Projects:

Past and Present Projects in the Project Area (Numbers correspond to Table 3.1-1):

1. West-wide Section 368 Energy Corridors
4. Genesis Solar Energy Project
6. Desert Sunlight Solar Project
7. SCE Red Bluff Substation
8. Devers-Palo Verde No. 1 Transmission Line
9. Devers-Colorado River Transmission Line
10. Blythe Energy Project Transmission Line
13. Desert Harvest Solar Project
14. Palen Solar Project
18. Athos Renewable Energy Project
19. Oberon Renewable Energy Project
21. Victory Pass Solar Project
22. Arica Solar Project

Probable Future Projects in the Project Area (Letters correspond to Table 3.1-2):

A. Desert Southwest Transmission Line
C. Eagle Mountain Pumped Storage Project
D. Sapphire Solar Project
E. Lycan Solar Project
H. Redonda Solar Project
I. Skybridge Eagle Mountain Hydrogen Project

These projects include 13 local, existing (past and present) energy projects and six local, probable future energy projects. These projects would all be within the field of view of at least portions of the proposed Project and are expected to result in cumulative visual impacts for travelers along I-10 and/or SR-177 as well as residents and dispersed recreational users in the surrounding areas.

If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would contribute to cumulative visual impacts. Such designations would afford additional protection to maintain the natural setting of the desert landscape.

3.2.8.2. Cumulative Impact Analysis

Although numerous existing cultural modifications are visible along the I-10 corridor and in the Desert Center area of the Chuckwalla Valley (transmission lines; substations; pipelines; solar projects; communication towers; 4-wheel drive tracks; widely scattered commercial buildings, dilapidated structures, and roadside signs; and a few agricultural operations), the grand scale of the open desert panoramas impart an overall general impression of a historically natural-appearing desert landscape that is now in transition to that of a developed energy zone characterized by numerous solar energy facilities, either existing or under construction. The cumulative scenario includes many large solar projects and transmission lines whose scale and pervasiveness are having adverse cumulative effects. If all the projects are implemented, they would substantially degrade the visual character and general scenic appeal of the existing landscape, resulting in the conversion of a relatively undeveloped desert landscape into a more industrialized appearance.

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

From various elevated locations within JTNP, the proposed Project would be visible along with one or more of the cumulative projects. For example, from the Buzzard Springs area and adjacent wilderness, the Project would be visible along with the existing (and under construction) Desert Sunlight, Desert Harvest, Oberon, Athos, Victory Pass, Arica, and Palen solar projects, and the probable future Sapphire, Lycan, and Redonda solar projects. Similarly, the proposed Project, along with multiple cumulative projects, would be visible from portions of the Eagle and Coxcomb mountains in JTNP, the Palen-McCoy Wilderness to the east, the Sheephole Valley Wilderness to the north, and the Chuckwalla Mountains Wilderness to the south. However, it should be noted that these cumulative impacts would be experienced at greater viewing distances ranging from seven to 25 miles.

As a result, the proposed Project, in combination with the 13 local energy projects, would contribute to significant cumulative visual impacts when viewed by sensitive viewing populations along I-10 and SR-177, from nearby residences, from portions of JTNP, and in the surrounding mountains and wilderness. The Project's contribution to the impacts would be from the introduction of substantial visual contrast associated with discordant geometric patterns in the landscape; the introduction of large-scale, built facilities with prominent industrial character; the creation of unnatural lines of demarcation in the valley floor landscape and inconsistent color contrasts; and from the addition of visible night lighting within the broader Chuckwalla Valley. For many travelers along I-10, the scenic experience would be substantially degraded due to the perceived "industrialization" of the landscape.

Mitigation Measures for Cumulative Impacts

Effective implementation of MM AES-1 (Surface Treatment of Project Structures and Buildings), MM AES-2 (Project Design), MM AES-3 (Night Lighting Management), and MM BIO-5 (Vegetation Resources Management Plan) would reduce the severity of the Project's contribution to the cumulative visual effects, though the Project's contribution would still be considerable.

Significance After Mitigation

Even with implementation of mitigation measures, there would be significant cumulative visual impacts when viewed by sensitive viewing populations along I-10 and SR-177, from nearby residences, from portions of JTNP, and in the surrounding mountains and wilderness. The Project would make a consideration contribution to these visual impacts,

3.2.9. Mitigation Measures and Applicant Proposed Measures

APM VIS-1 **Weathering Coating of Security Fencing.** To reduce operational visual impacts of the Project to the community of Lake Tamarisk, the Project owner will apply a weathering coating (Natina or substantially similar) to the Project security fencing located closest to the Community. The total length of fencing that will be coated is approximately one mile and may be contiguous or separate sections, depending on the final Project design and the location(s) of most visible security fencing.

MM AQ-1 **Fugitive Dust Control Plan**. See full text in Section 3.4, Air Quality.

MM BIO-5 **Vegetation Resources Management Plan**. See full text in Section 3.5, Biological Resources.

MM AES-1 **Surface Treatment of Project Structures and Buildings.** The Project owner shall treat the surfaces of all non-temporary, large Project structures and buildings (O&M building, inverters, electrical enclosures, gen-tie poles and conductors) visible to the public such that: (a) their colors minimize visual intrusion and contrast by blending with (matching) the existing characteristic landscape colors; (b) their colors and finishes do not create excessive glare from surface brightness; and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

Following a consultation with the Riverside County and BLM visual resources specialists, and other representatives as deemed necessary, the Project owner shall submit for the County's and BLM's review, a specific Surface Treatment Plan that will satisfy these requirements. The consultation shall be in-field at the agencies' election, or as a desktop review if preferred by the agencies. The treatment plan shall include:

(a) A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes based on the characteristic landscape. Colors shall be field tested using the actual distances from the KOPs to the proposed structures, using the proposed colors painted on representative surfaces;

(b) A list of each major Project structure and building, the transmission line towers and/or poles, and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and pantone number, or according to a universal designation system;

(c) One set of color brochures or color chips showing each proposed color and finish;

(d) A specific schedule for completion of the treatment; and

(e) A procedure to ensure proper treatment maintenance for the life of the Project. The Project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated in the field until the Project owner receives notification of approval of the treatment plan by Riverside County and the BLM. Subsequent modifications to the treatment plan are prohibited without the County's and BLM's

approval for components under their respective authorities; however, the Project owner may consider the agencies' failure to respond to a request for review within 60 days an acceptance of the proposal.

MM AES-2 **Project Design.** The Project owner shall use proper design fundamentals to reduce the visual contrast to the characteristic landscape. These include proper siting and location; reduction of visibility; repetition of form, line, color, and texture of the landscape; and reduction of unnecessary disturbance. Design strategies to address these fundamentals shall be based on the following factors:

(a) *Vegetation Manipulation:* Retain as much of the existing vegetation as possible including along roadsides. Use existing vegetation to screen the development from public viewing. Use scalloped, irregular cleared edges to reduce line contrast. Use irregular clearing shapes to reduce form contrast. Feather and thin the edges of cleared areas and retain a representative mix of plant species and sizes.

(b) *Structures:* Minimize the number of structures and combine different activities in one structure. Use natural, self-weathering materials and chemical treatments on surfaces to reduce color contrast. Bury all or part of structures to the extent practical. Use natural-appearing forms to complement the characteristic landscape. Screen the structure from view by using natural landforms and vegetation. Reduce the line contrast created by straight edges.

(c) *Linear Alignments:* Use existing topography to hide induced changes associated with roads, lines, and other linear features. Select alignments that follow landscape contours. Avoid fall-line cuts. Hug vegetation lines.

(d) *Reclamation and Restoration:* Reduce the amount of disturbed area and blend the disturbed areas into the characteristic landscape. Where feasible, replace soil, brush, rocks, and natural debris over disturbed area. Newly introduced plant species should be of a form, color, and texture that blends with the landscape.

MM AES-3 **Night Lighting Management.** To the extent feasible, consistent with safety and security considerations, the Project owner shall design and install all permanent exterior lighting and all temporary construction lighting such that: (a) lamps and reflectors are not visible from beyond the Project site, including any off-site security buffer areas; (b) lighting does not cause excessive reflected glare; (c) direct lighting does not illuminate the nighttime sky, except for required FAA aircraft safety lighting; (d) illumination of the Project and its immediate area is minimized; and (e) it complies with local policies and ordinances.

The Project owner shall also consult with the NPS Night Sky Program Manager in the development of the night lighting and comply with stricter standards for light intensity. All permanent light sources shall be below 3,500 Kelvin color temperature (warm white) and shall have cutoff angles not to exceed 45 degrees of nadir. The use of LED lighting with a Correlated Color Temperature (CCT) above 2,700 would introduce blue light into the environment that would have negative impacts on the night skies, wildlife, and visitors, and increase light pollution in that area. If LED light bulbs are used, they shall have a CCT of 2,700 or less. All lights, temporary and permanent, are to be fully shielded such that the emission of light above the horizontal is prevented. Prior to construction, the Project owner shall submit to BLM, Riverside County, and NPS JTNP for review a Night Lighting Management Plan that shall include the following:

(a) Location and direction of light fixtures that take the lighting mitigation requirements into account;

(b) Lighting that incorporates fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

(c) Light fixtures, which are visible from beyond the Project boundary, that have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the Project boundary, except where necessary for security;

(d) All lighting that is of minimum necessary brightness consistent with operational safety and security;

(e) Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) that have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied;

(f) Specification that LPS or amber LED lighting shall be emphasized, and that white lighting (metal halide) would: (a) only be used when necessitated by specific work tasks; (b) not be used for dusk-to-dawn lighting; and (c) would be less than 3500 Kelvin color temperature;

(g) Specifications and mapping for of all lamp locations, orientations, and intensities, including security, roadway, and task lighting;

(h) Specifications for each light fixture and each light shield;

(i) Total estimated outdoor lighting footprint expressed as lumens or lumens per acre;

(j) Specifications on the use of portable truck-mounted lighting;

(k) Specifications for motion sensors and other controls to be used, especially for security lighting;

(l) Surface treatment specifications that shall be employed to minimize glare and skyglow;

(m) Documentation that the necessary coordination with the NPS Night Sky Program Manager has occurred; and

(n) Exterior lighting that complies with current Title 24 regulations from the State of California and that shall be coordinated with the California Department of Transportation (Caltrans) to comply with exterior lighting regulations along I-10 and SR-177.

3.3. Agriculture and Forestry Resources

This section evaluates the impacts on agriculture and forestry resources resulting from implementation of the proposed Project. The discussion provides an overview of existing conditions that influence agriculture and forestry, describes the applicable regulations, identifies the criteria used for determining the significance of environmental impacts, and describes the potential agriculture and forestry impacts of the proposed Project.

3.3.1. Environmental Setting

The proposed Project is located on private and BLM-administered land in Riverside County north of Interstate 10 (I-10) and approximately 2 miles north of the town of Desert Center, California. Nearby land uses include previously developed or developing solar facilities, transmission lines, fallow and active agriculture, and rural residences. Agriculture use within the Project site primarily includes fallow/retired agriculture and developed areas. As far as can be determined, a tilapia farming facility is currently the only active agricultural use. There are no forestry resources on site or in the surrounding area.

Agriculture, including jojoba farming, has been part of life in the Desert Center area. The proposed Project area would be located within the Desert Center Area Plan located on land zoned as Agriculture; Commercial Retail, Rural Desert; Open Space, Rural; and Rural Desert. There are approximately 190 acres of agriculturally zoned land in the Project site. The nearest community is Lake Tamarisk, located less than 1 mile southwest of the Project site.

The Project would include an approximate 6.7-mile 500 kV gen-tie line starting at the onsite substation and switchyard located on private property that is under a Williamson Act contract and zoned as Light Agriculture (A-1) (APN 808-023-018). On this same parcel, north of the substation, would be a battery energy storage system (BESS). Just south of the substation, the 500 kV gen-tie line would enter the Oberon Renewable Energy Project site and would be located on BLM-administered land for the remainder of the route.

U.S. Bureau of Land Management

Approximately two-thirds of the Easley 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 the proposed Project is partially located on federal land under management of BLM, 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 area is part of the DRECP.

California Department of Conservation

The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify important agricultural lands and track the conversion of agricultural land to other uses (see Table 3.3-1 for the most recent Riverside County conversion data). FMMP data are used in elements of some county and city general plans, in regional studies on agricultural land conversion, and

in environmental documents as a way of assessing proposed Project-specific impacts on Prime Farmland. The extent of the important farmland coverage within California corresponds to the availability of Natural Resources Conservation Service (NRCS) "modern soil surveys."

In areas where no NRCS soil survey data exists, the DOC FMMP is not able to classify or map the land for important farmlands. The Project area is identified on the important farmland maps with the label "Not mapped for important farmland; no NRCS soil survey data available." The Project area in Riverside County does not have modern NRCS soil survey data available; therefore, the FMMP categories are not applicable to this Project.

Riverside County

Agriculture is an important part of Riverside County's economy. According to the Annual Riverside County Agricultural Production Report (2021), agriculture accounted for an estimated total gross value of $1,405,910,000. The primary agricultural products from Riverside County in 2021 were, in order, as follows: nursery stock, milk, table grapes, dates, avocados, alfalfa, eggs, lemons, bell peppers, and turf grass (Riverside County, 2021a).

The most recent agricultural land conversion data available for Riverside County is for the period between 2014 and 2016. Land converted in this period is show below in Table 3.3-1.

Table 3.3-1. Riverside County Agricultural Land Conversion 2014 to 2016

	Total Acreage Inventoried		2014 to 2016 Acreage Changes			
Land use category	2014	2016	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	118,077	117,484	2,414	1,821	4,235	−593
Farmland of Statewide Importance	44,002	43,757	991	746	1,737	−245
Unique Farmland	32,582	32,565	1,570	1,553	3,123	−17
Farmland of Local Importance	228,809	226,029	6,598	3,818	10,416	−2,780
Grazing Land	110,102	110,203	386	487	873	−101
AGRICULTURAL LAND SUBTOTAL	**553,572**	**530,038**	**11,959**	**8,425**	**20,384**	**−3,534**

Source: California Department of Conservation, 2016

As described in the table above, for the two-year period from 2014 to 2016, Riverside County had a decrease of 3,534 acres in the total amount of active agricultural land mapped by the Farmland Mapping and Monitoring Program (FMMP). For comparison, during the 2012 to 2014 period, Riverside County had a net decrease in agricultural land of approximately 3,047 acres (California Department of Conservation, 2014).

The decrease in acres between 2014 to 2016 included a decrease of 3,635 acres of Important Farmland (including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) and an increase of 101 acres of Grazing Land. The largest decrease was in Prime Farmland, with 593 acres converted to nonagricultural uses (California Department of Conservation, 2016).

The California Land Conservation Act of 1965 (referred to as the Williamson Act) allows counties such as Riverside to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use in return for a reduction in assessed property taxes

(California Department of Conservation, 2023). Table 3.3-2 shows the parcels on the Project site enrolled under Williamson Act Contracts (see also Figure 3.3-1).

Table 3.3-2. Easley Project Parcels with Williamson Act Contracts

Owner	APN	Size (acres)	Instrument No.	Preserve No.	Map No.	Contract Length (as of 2023)
JMP Inc., a Nevada Corporation	808-023-018	68.09	84-42184	1	588	39 years
Spindle Top Bayou Farm, Inc.	811-270-001	20.09	87-64243	3	629	36 years
	811-270-002	20.08	87-64243	3	629	36 years
	811-270-007	32.18	87-64243	3	629	36 years
	811-270-005	19.71	87-64243	3	629	36 years
	811-270-003	19.72	87-64243	3	629	36 years
	811-270-004	19.99	87-64243	3	629	36 years
Todd Culver Draskovich John Steven Draskovich *	808-240-007	20.02	87-64239	2	622	36 years

* A Williamson Act contract non-renewal was filed for APN 808-240-007 in 2013, which resulted in cancellation on January 1, 2023. The final step for contract cancellation will be to complete the County's diminishment/disestablishment process.

The co-owners of several private parcels within and surrounding the Project site entered into a private covenant in 1981 regarding an agreement to produce only jojoba uses on their properties, and to avoid any activities that would impair or restrict jojoba production. The new property owner, IP Easley, LLC, has proposed an amendment to the covenant which would allow solar photovoltaic facility development on the parcels. Like the original covenant, the amended covenant would not be subject to any permit approval or discretionary action by any public/government entity. Therefore, the provisions of CEQA are not applicable and there is not a related environmental impact.

3.3.2. Regulatory Framework

3.3.2.1. Federal Laws, Regulations, and Policies

Federal Farmland Protection Policy Act. The Farmland Protection Policy Act (7 U.S. Code [USC] Section 4201 et seq.; see also 7 Code of Federal Regulations [CFR] part 658) is overseen by the U.S. Department of Agriculture's (USDA) 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 in whole or in part by the federal government.

3.3.2.2. State Laws, Regulations, and Policies

Land Conservation Act of 1965 (Williamson Act). The Williamson Act is intended to help preserve farmland. In creating the Act, the legislature noted that "the preservation of the maximum amount of the limited supply of agricultural land is necessary to the conservation of the State's economic resources, and is necessary not only to the maintenance of the agricultural economy of the State, but also for the assurance of adequate, healthful and nutritious food for future residents of this State and nation" (Government Code Section 51220). The Act enables participating local governments, such as Riverside County, to enter land conservation contracts with private landowners. Williamson Act contracts restrict

specific parcels of land to agricultural and open space uses for a minimum term of ten years in return for reduced property tax assessments. The Williamson Act program is locally administered by counties (and some cities) to ensure compliance with the Williamson Act (Government Code Sections 51200–51207), local uniform rules, and individual contracts.

The DOC 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 subvention payments were suspended in 2009 due to State-level budget constraints.

3.3.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan. The intent of the Agricultural Resources section of the Land Use Element of the Riverside County General Plan is to identify and preserve areas where agricultural uses are the long-term desirable use and to minimize the conflicts between agricultural and urban/suburban uses. The following policies included in the Land Use Element generally relate to the proposed Project with respect to agricultural resources (Riverside County, 2021b).

- **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 LU 7.5.** Require buffering to the extent possible between urban uses and adjacent rural/ equestrian oriented land uses.
- **Policy 20.1.** 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 intent of the Agriculture section of the Multipurpose Open Space Element of the Riverside County General Plan regarding agricultural use is to protect agricultural lands and landscapes as historical, cultural, and scenic resources. The following policy included in the Multipurpose Open Space Element generally relates to the proposed Project with respect to agricultural resources (Riverside County, 2015).

- **Policy OS 7.3.** Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.

Desert Center Area Plan. The intent of the Land Use section of the Desert Center Area Plan is to enhance and/or preserve the identity, character, and features unique to the Desert Center area. The following policy included in the Desert Center Area Plan generally relates to the proposed Project with respect to agricultural resources (Riverside County, 2021c).

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

Riverside County Ordinance No. 348.4705. Zoning ordinance 348.4705 permits a solar power plant 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 the 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 proposed Project would install solar renewable energy facilities on some parcels that allow agriculture as well as renewable energy projects. The parcels are surrounded by federal land administered by BLM that have been designated for development of solar energy projects. Given that the land surrounding these parcels is designated for solar projects and that solar facilities are an allowed use on the County parcels, the proposed Project would not be inconsistent with the policies enumerated above.

3.3.3. Methodology for Analysis

The analysis focuses on the potential for implementation of the proposed Project to adversely affect agricultural resources through temporary disruption or disturbance of agricultural land uses and activities during construction, conversion of agricultural land to non-agricultural land uses during construction and operation, introduction of incompatible land uses or land use activities during operation, or through other changes to the physical environment that could result in loss or conversion of agricultural lands during construction and operation.

The approach is based largely on a comparison of the Project area, which is defined as the area within which all construction-related disturbance would occur, against Important Farmland as mapped in FMMP Important Farmland Series Maps, maps of Williamson Act contracts, and Riverside County General Plan Land Use designation and zoning maps. Existing agricultural uses within the Project area were also considered.

3.3.4. CEQA Significance Criteria

The criteria used to determine the significance of potential Agriculture and Forestry impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to Agriculture and Forestry if the Project would:

- *Conflict with existing zoning for agricultural use, or a Williamson Act contract (see Impact AG-1).*

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:

- *Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625, "Right-to-Farm") (see Impact AG-2).*
- *Conflict with land within a Riverside County Agricultural Preserve (see Impact AG-3).*

The following CEQA significance criteria from Appendix G were not included in the analysis and are not discussed beyond this summary:

- *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.*

  The Project area is not designated under the California Department of Conservation (DOC) FMMP due to the lack of modern soil survey data for the area. There are no lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) in the Project area; therefore, the proposed Project would not result in the conversion of the aforementioned Farmland to non-agricultural use.

- *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 area is not designated under the California Department of Conservation (DOC) FMMP. There are no lands designated as Farmland (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) in the Project area; therefore, the proposed Project would not result in the conversion of Farmland to non-agricultural use.

  As there are no forestry resources on site or in the surrounding area, there would be no conversion of forest land to non-forest use.

- *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 in the Project area; therefore, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

- *Result in the loss of forest land or conversion of forest land to non-forest use.*

  The proposed Project would not be located on land zoned specifically as either forest land or timberland. The Project would be located primarily on land zoned for agricultural production and as rural open space land. The Project would not be used for timber production, nor is the site forested. In addition, the Project area is not considered timberland because the land is not located in a Timberland

Production Zone. Overall, the Project does not meet the definition of "forest land"[6] and the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use.

3.3.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department did not reveal public concerns related to Agriculture and Forestry. Project decommissioning impacts would be the same as those described under Project construction and are, therefore, not addressed further.

Impact AG-1. The Project would conflict with existing zoning for agricultural use, a Williamson Act contract, or land within an agricultural preserve.

***SIGNIFICANT AND UNAVOIDABLE*.** The proposed Project would be constructed on approximately 220 acres of land zoned as Light Agriculture (A-1). Under Ordinance No. 348.4705, solar power plants are permitted in zone A-1 land on a lot 10 acres or larger, provided a conditional use permit is granted. All A-1 parcels that are part of the Project area are greater than 10 acres. Therefore, the Project would not conflict with existing zoning for agricultural use.

As shown on Figure 3.3-1, the parcels within the Project site that are subject to a Williamson Act contract and related agricultural preserve program total approximately 220 acres of land (8 parcels). After an agricultural preserve has been established, the land within the preserve is restricted to the agricultural and compatible uses specified in Riverside County Ordinance 509. Williamson Act contracts are in effect for 10 years from the anniversary date of the contract. The contracts are automatically renewed for another year each year until a non-renewal and/or cancellation notice is submitted to the County. After a Notice of Nonrenewal, the contract will continue to be in effect for the remaining nine years. Non-renewals for the parcels subject to Williamson Act contracts were submitted on September 9, 2022, and processed on October 4 and 5, 2022.

The proposed gen-tie line would start at a substation located on private land that is designated by Riverside County as Light Agriculture (A-1) and is currently subject to a Williamson Act contract. The BESS and switchyard would be located on the same parcel. During construction, the substation area would be graded and compacted to an approximately level surface, although the substation pad may be elevated a few feet pending detailed hydrological study of the area. Concrete pads would be constructed on site as foundations for substation equipment, and the remaining area would be graveled to a maximum depth of approximately 12 inches. The substation would be surrounded by an up to a 7-foot-high chain-link fence topped with one foot of barbed wire. Each of the dead-end structures would require foundations excavated to a depth of 20 feet or more. From the substation, the gen-tie would continue to traverse through BLM-administered land not zoned for agricultural uses. The energy storage facility 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 concrete foundations are in place for the BESS, the batteries, inverters, and other electrical equipment would be mounted and installed.

There is no feasible way to mitigate or modify the Project to avoid the conflict with the Williamson Act contracts and meet the Project objectives. Given the status of the contracts, the parcels are subject to Williamson Act restrictions for nine more years. The proposed Project is not an allowable use under the Williamson Act program and, therefore, its construction and operation on lands would be a significant and unavoidable impact with lands in an agricultural preserve and related Williamson Act contract.

[6] According to PRC § 12220 (g), Forest Land is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Cancellation of the Williamson Act contract must occur prior to approval of the conditional use permit for the Project.

To eliminate the conflict, the Williamson Act contracts will need to be cancelled per statutory findings the Riverside County Board of Supervisors makes,[7] or it must be determined that the Project is compatible under Ordinance 509. If the Wiliamson Act contracts are cancelled at the time of the EIR certification, this impact would be avoided.

Mitigation Measures for Impact AG-1

No feasible mitigation would reduce this impact to a less-than-significant level.

Significance After Mitigation

The impact would be significant and unavoidable; however, cancellation of the Williamson Act contracts would avoid this impact.

Impact AG-2. The Project would cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625, "Right-to-Farm").

LESS THAN SIGNIFICANT. The proposed Project is adjacent to several parcels that are zoned as Light Agriculture (A-1). One of these parcels is adjacent to parcel APN 808-023-018, where the substation, switching yard, BESS, and a portion of the gen-tie line would traverse. There is an additional parcel zoned as Open Space, Rural (OS-RUR).

The proposed Project would not result in the conversion of adjacent farmland properties to non-agricultural use during the Project's minimum 35-year existence. The proposed Project would not introduce a non-agricultural use that is incompatible with agricultural operations that would occur nearby.

Section 5 of Ordinance No. 625 states "*[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 can affect the health and survival of crops; however, increased vehicle emissions from Project construction and decommissioning would be temporary in duration and occur only during these activities (Please refer to Section 3.4, Air Quality, for a detailed discussion regarding vehicle emissions).

[7] The statutory findings required for a Williamson Act Contract cancellation are listed in California Government Code Section 51282. To cancel the contract, the Board of Supervisors must make one of two findings. First, the Board could conclude that the cancellation is consistent with the purposes of the Williamson Act based on the following findings:
(1) The cancellation is for land on which a notice of nonrenewal has been served;
(2) Cancellation is not likely to result in the removal of adjacent lands from agricultural use;
(3) Cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan;
(4) Cancellation will not result in discontiguous patterns of urban development; and
(5) There is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

Alternatively, the Board of Supervisors could find that the cancellation is in the public interest based on the following findings:
(1) Other public concerns substantially outweigh the objectives of the Williamson Act; and
(2) That there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

The Board may grant tentative approval for cancellation of a Williamson Act contract only if it makes either the Consistency or the Public Interest findings.

They would not be of significant duration, with no resulting significant impact on the life cycle of plants in the area.

Mass grading would not be conducted on the Project site. Several solar and storage facility locations would require specific ground treatments, but this represents a small percentage of the ground surface of the facility. The substation, storage container, O&M facility, laydown yards, pre-fabrication areas, and internal and external road locations would require mowing, grubbing, minor grading, and compaction. Best management practices identified in the Project's Fugitive Dust Control Plan would be implemented during all earthwork and vegetation removal activities to ensure that dust would not become a nuisance during construction or operation on the proposed site or at the surrounding sites.

The proposed Project would not interfere with neighboring agricultural operations by, for example, restricting aerial application of pesticides. Therefore, the proposed Project would result in less-than-significant impacts involving other changes in the existing environment.

The substation, BESS, switchyard, and gen-tie line would be located on parcel APN 808-023-018, which is 70 acres of land zoned as AG-1. This single private property would not be a nuisance to the single adjacent parcel zoned for Light Agriculture.

The potential for impacts to surrounding agricultural lands and the methods to reduce impacts to these lands with regards to dust and weed migration would be the similar for the substation, switchyard, BESS, and gen-tie line as for the solar facility. The effects on the neighboring agriculturally zoned property would be less than significant.

Mitigation Measures for Impact AG-2

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

Impact AG-3. The Project would conflict with land within a Riverside County Agricultural Preserve.

***SIGNIFICANT AND UNAVOIDABLE*.** When a Williamson Act contract is enacted, the land in the contract is established as an agricultural preserve or annexed into an existing preserve. The Williamson Act contract lands within the Project area comprise Riverside County agricultural preserves Chuckwalla No. 3 Map No. 629, Chuckwalla No. 3 Map No. 622, and Chuckwalla No. 3 Map No. 588. See Impact AG-1 for discussion of impacts from the Project on land within an agricultural preserve.

A portion of the Project area with solar facilities, substation, switchyard, BESS, and the gen-tie line occur within a Riverside County Agricultural Preserve under the Williamson Act, which is incompatible with the Project; therefore, this conflict with an agricultural preserve would be significant and unavoidable. There is no feasible way to mitigate or modify the Project to avoid the conflict with land within a Riverside County Agricultural Preserve and meet the Project objectives. However, if the Williamson Act contracts are canceled prior to EIR certification, this impact would be avoided.

Mitigation Measures for Impact AG-3

No feasible mitigation would reduce this impact to a less-than-significant level.

Significance After Mitigation

The impact would be significant and unavoidable; however, cancellation of the Williamson Act contracts would eliminate the significant impact.

3.3.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities. The No Project Alternative would not conflict with any agricultural activities or agricultural land. Therefore, the No Project Alternative would not have impacts on agriculture and forestry resources. Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project in the near or distant future. A different solar energy project would potentially result in similar impacts to those identified for the proposed Project. Under the No Project Alternative, the Williamson Act lands would no longer be under contract in 9 years due to recent filing of non-renewal notices. They could be available for solar development in the future, and they would be allowed within the current A-1 zoning for the subject parcels.

3.3.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative (Alternative 2) would be located within the proposed Project application area. This alternative would be similar to the proposed Project but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. Under this alternative, the substation and BESS would be moved farther from Lake Tamarisk on either BLM-administered land or private land adjacent to SR-177/Rice Road. The location of the substation, portion of gen-tie line, and BESS under Alternative 2 would no longer be on land zoned as Agriculture or a parcel under a Williamson Act contract. The remaining Williamson Act lands of the proposed Project remain as part of Alternative 2. Alternative 2 would have similar construction and operation activities as the proposed Project; therefore Alternative 2 would have similar impacts to agriculture and forestry, which would remain significant and unavoidable.

3.3.8. Cumulative Impacts

Geographic Scope

Agricultural cumulative impacts include the proposed Project's impacts as well as those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects. The geographic extent for the consideration of cumulative effects to agricultural and forestry resources is the Desert Center area. This geographic area was selected because most of the parcels in the Project area, and the Desert Center area as a whole, have been previously disturbed, are currently or were previously used for agriculture, and because the pressure that a change in use may exert on agricultural operations is likely to manifest as a localized compatibility issue.

Cumulative Impact Analysis

Tables 3.1-1 and 3.1-2 include the list of existing and reasonably foreseeable projects in the region. Figure 3.1-1 shows the locations of these projects. The Athos Renewable Energy Project and Sapphire Solar Project are partially located on private disturbed agricultural land near the proposed Project and could affect agricultural resources. The other listed solar projects are located on BLM-administered public land.

Continuing development within Riverside County has resulted in the conversion of land currently utilized for agricultural production to urban and other land uses. This agricultural conversion has been a continuing trend in the County and has resulted in a net loss of 3,534 acres of agricultural land between

2014 and 2016 (see Table 3.3-1). Impacts resulting from construction, operation, maintenance, and decommissioning of the proposed Project could contribute to a cumulative effect on agriculture with other past, present, or reasonably foreseeable future actions.

Implementation of the proposed Project, in combination with other projects in the Desert Center area, could include land zoned for agricultural uses that would be utilized for non-agricultural uses or would cause development of non-agricultural uses within 300 feet of agriculturally zoned property. However, with the issuance of a conditional use permit, developments under the cumulative scenario constitute allowed uses within Agricultural zones that have been found to be consistent with zoning.

The cancellation of the Williamson Act contracts would release these lands from the status of agricultural preserve. The proposed Project would not involve other changes in the existing environment that may result in the conversion of other agricultural lands to non-agricultural uses. In addition, there are no forest lands or timber resources in the Project area.

Neither the proposed Project nor the cumulative projects would convert any designated Farmland to non-agricultural uses. After the Project and surrounding cumulative projects are decommissioned, the sites would be available to be returned to agricultural uses.

As shown in Figure 3.1-1, many of the current and reasonably foreseeable projects are in land identified as Development Focus Areas (DFAs) under the DRECP. Acknowledging that the overall trend for development of solar projects in the Desert Center area could lead to cumulative impacts on agriculture, the region has been designated a DRECP DFA. The overall potential for DFA designation resulting in cumulative impacts to agriculture has been addressed in the DRECP Final EIS/EIR under *Impact AG-1: Renewable energy development on BLM lands and resulting transmission lines would impair agricultural use of adjacent agricultural operations* (BLM, 2015). As noted in the DRECP Final EIS, current agricultural uses would be impaired by new renewable energy developments with related transmission lines. However, the impairment or potential loss of farmland would not be a significant cumulative impact because the Desert Center region is not classified under recognized agricultural land evaluation approaches such as the DOC FMMP's Important Farmland Map series.

Overall, the proposed Project's impacts combined with those of nearby projects would not result in a new cumulatively significant impact on agricultural resources. The proposed Project would not make a considerable contribution to cumulative impacts on agricultural resources.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

The cumulative impact would be less than significant.

3.3.9. Mitigation Measures

No feasible mitigation is proposed. Impacts AG-1 and AG-3 would be significant and unavoidable; however, cancellation of the Williamson Act contracts would eliminate all significant impacts to agricultural resources.

3.4. Air Quality

This section describes the environmental setting and regulatory framework with respect to air quality for the proposed Project, including applicable plans, policies, and regulations. The analysis describes the Project's sources of air pollutant emissions during construction and operation and the localized effects of those emissions.

3.4.1. Environmental Setting

3.4.1.1. Ambient Air Quality Standards and Attainment

Criteria Air Pollutants. Air quality is determined by measuring ambient concentrations of certain criteria air pollutants. The criteria pollutants are ozone, respirable particulate matter (PM10), fine particulate matter (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe), but it is formed in the atmosphere by chemical and photochemical reactions. Reactive organic gases (ROG), including volatile organic compounds (VOC), are regulated as precursors to ozone formation.

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (U.S. EPA) have independent authority to develop and establish health-protective ambient air quality standards. The California air quality standards are set at levels to adequately protect the health of the public, including infants and children, with an adequate margin of safety (California Health and Safety Code Section 39606), and in general, the CAAQS are more stringent than the corresponding health-protective NAAQS.

Monitored levels of the pollutants are compared to the current National and California Ambient Air Quality Standards (NAAQS and CAAQS) to determine degree of existing air quality degradation. The standards currently in effect in California are shown in Table 3.4-1.

Table 3.4-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	1-hour	0.09 ppm	—
	8-hour	0.070 ppm	0.070 ppm
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3
	Annual Mean	20 µg/m^3	—
Fine Particulate Matter ($PM_{2.5}$)	24-hour	—	35 µg/m^3
	Annual Mean	12 µg/m^3	12 µg/m^3
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm	0.100 ppm
	Annual Mean	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	0.075 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual Mean	—	0.030 ppm

Notes: ppm=parts per million; µg/m3= micrograms per cubic meter; "—" =no standard
Source: ARB (https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards), May 2016.

Ambient Air Quality Attainment Status and Air Quality Plans. The U.S. EPA, ARB, and the local air district classify an area as attainment, unclassified, or nonattainment for each of the criteria air pollutants, and these designations dictate the air quality management planning activities needed to make future air pollutant reductions. The classification depends on whether the monitored ambient air quality data show

compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively.

Table 3.4-2 summarizes attainment status for criteria pollutants in comparison with both the state and federal standards, for the Mojave Desert Air Basin portion of eastern Riverside County.

Table 3.4-2. Attainment Status for Mojave Desert Air Basin Portion of Riverside County

Pollutant	California Designation	Federal Designation
Ozone	Nonattainment	Attainment
PM10	Nonattainment	Attainment
PM2.5	Attainment	Attainment
NO2	Attainment	Attainment
CO	Attainment	Attainment
SO2	Attainment	Attainment

Source: ARB, 2022; USEPA, 2022.

Toxic Air Contaminants. Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, or which may pose a present or potential hazard to human health (California Health and Safety Code Section 39655), even when present in relatively low concentrations.

Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another's. TACs do not have ambient air quality standards but are regulated by the local air districts using a risk-based approach.

The Project would not include new stationary sources that could be subject to risk assessment programs. Diesel particulate matter (DPM) is classified as a TAC, and statewide programs focus on managing this pollutant through motor vehicle fuels, engine, and tailpipe standards because many toxic compounds adhere to diesel exhaust particles. The local air districts support these programs by issuing permits and requiring controls for larger stationary sources of DPM, including diesel powered engines rated over 50 horsepower. Small diesel-powered backup generators (rated under 50 brake horsepower) would be exempt from obtaining an air permit and performing a source-specific risk assessment.

3.4.1.2. Surrounding Land Uses

Land uses that are sensitive to air pollution are: residences, schools, daycare centers, playgrounds, and medical facilities. Nearby sensitive land uses include the Lake Tamarisk community and occasional rural residences along Highway 177 (Rice Road), such as near Black Binder Road. The Lake Tamarisk community and homes along Kaiser Road would be adjacent to the southwestern-most parcels of the proposed Easley Project. The nearest home in Lake Tamarisk on Shasta Drive would be approximately 0.05 miles (260 feet) from the parcel boundaries of the Project, although construction activity and Project infrastructure would be set back substantially, at least 200 meters (656 feet), from this residential land use. The nearest school is the Eagle Mountain School, over 5 miles north of the Project site. For all construction activity, the distance between residences and the nearest Project site construction would be greater than 200 meters (656 feet).

3.4.2. Regulatory Framework

3.4.2.1. Federal Laws, Regulations, and Policies

Federal Clean Air Act (CAA). The Federal Clean Air Act was enacted in 1970, and the act established the NAAQS for criteria air pollutants. With SCAQMD and ARB, the U.S. EPA shares the responsibility to establish regulations, enforce air pollution control requirements, and develop the necessary air quality management to achieve the NAAQS. The U.S. EPA implements most aspects of the CAA, and reviews local and state air quality management plans and regulations to ensure attainment with the NAAQS.

Federal General Conformity Rule. General conformity regulations (40 CFR Part 93, Subpart B, et seq.) require each lead agency (BLM) to make a determination of whether approval of a project (i.e., a federal action) would cause or contribute to a violation of the NAAQS or interfere with attainment planning. Federal nonattainment designations are in place for portions of the Mojave Desert Air Basin in San Bernardino County and for portions of the SCAQMD including the Salton Sea Air Basin west of the Mojave Desert Air Basin, where the primary pollutants of concern are ozone and PM10. However, there are no federal nonattainment or maintenance designations at the Easley Project site in the Mojave Desert Air Basin portion of Riverside County. Federal agency actions in the Mojave Desert Air Basin portion of Riverside County are not subject to CAA general conformity review requirements.

Federal Class I Areas. Section 162(a) of the federal Clean Air Act grants special air quality protections to designated federal Class I areas. To protect Class I areas under U.S. EPA delegation the SCAQMD implements the Prevention of Significant Deterioration permitting program, which addresses visibility impairment from new or modified stationary sources in the region, such as power plants, mines or other industrial sources.

The boundary of the Joshua Tree National Park (JTNP) Class I area is 3 miles (4.8 kilometers) away from the nearest boundary of the Easley Project site. Visibility is considered an important air quality value to be protected within JTNP. There are no other Class I areas within 62 miles (100 km) of the Project. Data from the Federal Land Manager Environmental Database indicate that visibility in the JTNP Class I area improved between 2001 and 2010 then remained steady through 2020 for both the clearest days and the most impaired days (CIRA 2022a; CIRA 2022b). Visibility on both the clearest days and on the haziest days has improved from 2001 and has stayed relatively constant for a decade. For JTNP and other Class I areas in southern California, the Western Regional Air Partnership shows that the visual range has improved more than 20 percent (2010-2014) when compared to the baseline (2000-2004), and that this improvement is largely due to the local authorities having the ability to control anthropogenic emissions (WRAP 2016).

3.4.2.2. State Laws, Regulations, and Policies

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

U.S. EPA/ARB Off-Road Mobile Sources Emission Reduction Program. The California Clean Air Act mandates that ARB achieve the maximum degree of emission reductions from all off-road mobile sources to attain the state ambient air quality standards. Off-road mobile sources include construction equipment. The earliest (Tier 1) standards for large compression-ignition engines used in off-road mobile sources became effective in California in 1996. Since then, the Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California 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 and standards applicable to fleets that are already in-use provide comprehensive regulation and control to reduce NOx and toxic particulate matter emissions from diesel use throughout the State.

California ARB In-Use Off-Road Diesel Fueled Fleets Regulation. The regulations for in-use off-road diesel equipment are designed to reduce NOx and toxic diesel particulate matter (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 five-minute idling restriction in the rule (13 California Code of Regulations, Chapter 10, Section 2449).

California ARB 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.

California ARB Airborne Toxic Control Measures (ATCM). Diesel engines on portable equipment and vehicles are subject to various ATCM 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 generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour (13 California Code of Regulations, Chapter 10, Section 2485). Diesel engines used in portable equipment fleets are subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (17 California Code of Regulations, Section 93116).

3.4.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan

Riverside County adopted the Air Quality Element of the County General Plan in 2015 and amended it in 2018. The air quality element includes policies supporting regional cooperation with other jurisdictions to improve air quality; requiring compliance with federal, state, and regional air quality regulations; encouraging programs to reduce vehicle miles traveled; encouraging energy conservation in urban land uses; and encouraging development patterns that improve the County's jobs/housing balance.

The Air Quality Element of the General Plan includes one policy directly relevant to the Project:

- **Policy AQ 20.19**. Facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations (AI 147).

Development of the proposed Project on parcels that are zoned to allow development of renewable energy facilities, are surrounded by public lands designated for renewable energy development and are located nearby to a regional substation with available transmission capacity would be consistent with this policy.

South Coast Air Quality Management District

The Project site and activities are under local jurisdiction of the SCAQMD in the Mojave Desert Air Basin; the MDAB includes portions of Kern, Los Angeles, San Bernardino, and Riverside Counties. Standards for air quality across the SCAQMD jurisdiction are documented in the Air Quality Management Plan (AQMP). The AQMP describes and evaluates the air pollution control strategies to be taken by air quality management agencies in order to bring the area into compliance with the ambient air quality standards. SCAQMD's 2022 AQMP is based on regional growth forecasts for the Southern California Association of

Governments region, including population projections based on the regional growth forecast from the 2020 Regional Transportation Plan/Sustainable Communities Strategy. No State Implementation Plan is necessary for the Riverside County portion of the Mojave Desert Air Basin because it is classified as attainment for the ozone standard (SCAQMD 2022).

Most equipment used for construction is classified as mobile sources and are thus exempt from stationary source permit requirements. According to SCAQMD Rule 219, some other equipment used may be subject to permit requirements, such as generators, compressors, pumps, and concrete batch plants.

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

Table 3.4-3. SCAQMD Rules and Regulations

Applicable Rules	Description
Rules 201, 203, and 212 – Permit to Construct; Permit to Operate; and Standards for Approving Permits and Issuing Public Notice	Establishes the requirements to obtain a Permit to Construct and Permit to Operate for stationary sources of emissions. For exemption categories, see Rule 219: Equipment Not Requiring a Written Permit Pursuant to Regulation II.
Rule 401 – Visible Emissions	Limits visible emissions.
Rule 402 – Nuisance	Prohibits the discharge of 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.
Rule 403 – Fugitive Dust	Requires submitting a Large Operation Notification form to the SCAQMD and requires compliance with best available control measures listed in 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 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 national ambient air quality standards.

Notification Requirements under SCAQMD Rule 403. Rule 403 (Fugitive Dust) prohibits creation of dust plumes that are visible beyond the property line of the emission source and requires all active operations to implement applicable best available control measures. Enhanced dust control and notification requirements apply if the project is considered a “large operation” under this rule, which is any active operations on property that contains 50 or more acres of disturbed surface area.

3.4.3. Methodology for Analysis

All construction- and operation-related emissions are quantified based on the best available forecast of activities. This analysis uses the California Emissions Estimator Model (CalEEMod; version 2020.4.0) soft-

ware developed by the California Air Pollution Control Officers Association (CAPCOA).[8] This is the most recent desktop version of the CalEEMod software, and it relies upon mobile source emission factors from the Air Resources Board (ARB) OFFROAD2011 inventory and EMFAC2017 models. Where project-specific design features are not yet defined, default and typical settings from CalEEMod are used, as published in the CalEEMod User's Guide and supporting appendices (CAPCOA 2021). The Easley Renewable Energy Project EIR Appendix J, Greenhouse Gas Emissions Analysis, September 2023, provides details on the construction and operational assumptions for the proposed Project and resulting emissions estimates used in this analysis.

3.4.4. CEQA Significance Criteria

The criteria used to determine the significance of potential air quality impacts are based on Appendix G of the CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to air quality if the Project would:

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

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?*

SCAQMD Emissions Thresholds. To characterize the potential impact of criteria air pollutant emissions in the CEQA process, SCAQMD recommends use of regional significance thresholds for construction and for project-related operation emissions that are subject to CEQA review. The emissions from the activities of construction and operation of the project are compared to these SCAQMD regional significance thresholds to determine whether the project would result in adverse air quality impacts.

The project-level SCAQMD regional significance emissions thresholds for construction phase and operation emissions are shown in Table 3.4-4:

Table 3.4-4. SCAQMD Regional Significance Emissions Thresholds

Pollutant	Construction (lb/day)	Operation (lb/day)
Nitrogen Oxides (NOx)	100	55
Volatile Organic Compounds (VOC)	75	55
PM10	150	150
PM2.5	55	55
Carbon Monoxide (CO)	550	550
Sulfur Oxides (SOx)	150	150

Source: SCAQMD 2023.

[8] Use of desktop version 2020.4.0 of CalEEMod is allowed based on the project 2022 application filing date; the initial online version of the CalEEMod software was launched in December 2022 (2022.1.1.3).

For emissions exceeding the regional significance thresholds, the SCAQMD also provides air quality significance thresholds for ambient air quality impact assessments, which may be used to calculate the downwind concentrations caused by the on-site portions of project emissions.

For emissions from sites that are near sensitive receptors and are five acres or less, SCAQMD developed the Localized Significance Thresholds (LSTs) to evaluate whether a mass emission rate from a project may generate significant adverse localized air quality impacts. The LSTs may be used by lead agencies as a way of indicating whether a project could locally exceed the ambient air quality standards at a given distance from the site boundary (SCAQMD 2009). The LSTs vary depending on the meteorological conditions for each Source Receptor Area within the SCAQMD jurisdiction.

Table 3.4-5 shows the LSTs recommended by SCAQMD for the Desert Center area (East Riverside County).

Table 3.4-5. SCAQMD Localized Significance Emissions Thresholds

Pollutant	Construction (lb/day)			Operation (lb/day)		
Distance from Sources:	100 meters	200 meters	500 meters	100 meters	200 meters	500 meters
Nitrogen Oxides (NOx)	425	547	875	425	547	875
PM10	67	112	248	16	27	60
PM2.5	19	37	128	5	9	31
Carbon Monoxide (CO)	5,331	10,178	31,115	5,331	10,178	31,115

Note: These LSTs are for sites of 5 acres. East Riverside County is SCAQMD "Source Receptor Area" zone 31.
Source: SCAQMD 2009.

3.4.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to air quality. Public concerns related in the scoping process involved:

- Increased risk of Valley Fever.
- Increased airborne dust created from solar projects due to the ground disturbance and removal of vegetation and the potential transport of airborne silica and herbicides.
- Potential for airborne dust settling and accumulating on items in the community and on water in Lake Tamarisk.
- Standards for regulating silica and using ground matting to reduce exposure to dust.

To be responsive to scoping comments and to avoid these potential effects, the need for aggressive dust control strategies is addressed in this analysis. The use and control of herbicides for vegetation management are addressed in EIR Section 3.5, Biological Resources.

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

LESS THAN SIGNIFICANT. For the Project area, the SCAQMD and ARB ensure implementation of California's air quality management plans, known collectively as the State Implementation Plan. State-level air quality planning strategies to attain CAAQS are implemented through rules, regulations, and programs adopted by SCAQMD and ARB to control ozone precursors, PM10, and PM2.5. All construction and Project development-related activities, including operation and maintenance and eventual decommissioning, would comply with the applicable rules, regulations, and programs. Strategies and control measures identified within the SCAQMD 2022 Air Quality Management Plan (AQMP) apply directly to Project activities as promulgated through SCAQMD's rules and regulations.

All construction and operational activities and eventual decommissioning would comply with SCAQMD's Rule 402 and 403, which prevent nuisances and regulate fugitive dust emissions. The Project would also

conform to the federal and state Clean Air Act requirements by complying with the rules and regulations that are contained in the air quality plan. Equipment used during decommissioning activities and dust control efforts would need to comply with all local, State, and federal laws and regulations in effect at the time of decommissioning.

A project could be inconsistent with the applicable air quality management plan or attainment plan if it causes population and/or employment growth or growth in vehicle-miles traveled in excess of the growth forecasts included in the attainment plan. The Project would employ up to 10 permanent staff on site for regularly providing ongoing maintenance and repairs, including panel washing and security.

The construction workforce would involve short-term employment. Upon commencing routine operation, the construction workforce would no longer be employed, and only the limited workforce of permanent employees would remain in the area. Accordingly, Project construction and operation would not result in activities that could conflict with or obstruct implementation of the applicable air quality plan, and this impact would not be significant.

Mitigation Measures for Impact AQ-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact AQ-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?

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. The Project site is in an area designated as non-attainment for State-level ozone and PM10 standards. Emissions during the temporary 20-month duration of construction would include criteria air pollutants that could exceed quantitative thresholds for regional ozone precursors or PM10. Emissions exceeding the thresholds would represent a cumulatively considerable net increase of nonattainment pollutants that could contribute to existing or projected violations of the ambient air quality standards.

Construction and the eventual decommissioning would generate emissions at the Project site and off-site along the roadways traveled by construction traffic. Construction emissions would be caused by exhaust from vehicles and equipment. Exhaust emissions include ozone precursors (VOC or ROG and NOx), CO, and particulate matter (including PM10 and PM2.5). Fugitive dust includes particulate matter from soil eroded by ground-disturbing activities and by travel on unpaved surfaces and on paved road surfaces. 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 30 to 50 years, per an agency-approved Closure and Decommissioning Plan.

To minimize the amount of fugitive dust from unpaved surfaces and emissions from other ground-disturbing activities during the site preparation period, 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 equipment would be classified as portable or as mobile sources (off-road equipment, trucks, and helicopters during installation of the gen-tie). These sources are subject to statewide registration and fleet requirements. On-road motor vehicle emissions would occur primarily off-site. The on-road sources include the 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.

The nature of construction-phase emissions is to be intermittent and variable due to the need for construction tasks to occur in sequences and adapt to changing site conditions. Additionally, emission sources would be dispersed across the site and not always used continuously or at the same time. Substantial or adverse levels of localized ground-level concentrations would be unlikely during construction because pollutants would be emitted from several pieces of equipment dispersed over large areas. Dust control and engine exhaust would be subject to SCAQMD rules and regulations to avoid adverse levels of air pollutant concentrations.

The exact timing of development activities would be determined after Project approval. Construction would occur over approximately 20 months and may be phased.

This analysis considers construction across the parcels of the Project site would follow a sequence of four types of activities that could potentially overlap, as follows:

- Site preparation, including grading and vegetation management.
- Solar PV panel system installation.
- Inverters, transformers, substation and electrical collector system, and BESS installation.
- Construction of 500 kV gen-tie.

Table 3.4-6 summarizes the annual emissions within each of the calendar years of anticipated construction, without potential mitigation.

Table 3.4-6. Easley Project: Construction, Annual Emissions without Mitigation (ton/year)

Construction Year	VOC	NOx	CO	SOx	PM10	PM2.5
Year 1, Vehicles, Equipment, Fugitive Dust	1.51	10.53	15.12	0.04	13.90	2.74
Year 2, Vehicles, Equipment, Fugitive Dust	2.50	17.71	26.72	0.08	25.14	3.94
Year 2, Helicopter Activity	0.37	0.13	0.47	N/A	< 0.01	< 0.01
Maximum Annual Emissions, without Mitigation	**2.87**	**17.84**	**27.19**	**0.08**	**25.15**	**3.95**

Source: EIR Appendix J.

This analysis recommends implementing mitigation to reduce construction-related NOx and PM10 due to the designation of the area as non-attainment for the State-level ozone and PM10 standards. Available mitigation includes specific dust control practices (Mitigation Measure AQ-1) and standards to require controls for off-road equipment engines (Mitigation Measure AQ-2); the measures appear under the heading “Recommended Mitigation.”

Including dust control (MM AQ-1) and off-road equipment emissions controls (MM AQ-2) as mitigation would substantially reduce the construction emissions of NOx and PM10. To conserve water while controlling dust, mitigation (MM AQ-1) would allow use of soil stabilizers or soil weighting agents on unpaved roads and disturbed areas. Because some commercially available chemical dust suppression products may cause odors or may contain compounds that are air pollutants, the mitigation (MM AQ-1) specifies using non-toxic soil stabilizers that avoid increasing another impact such as adverse odors or additional emissions of ozone precursors ROG or VOC. In the effort to mitigate construction off-road equipment emissions of NOx, emissions of CO would increase somewhat. However, CO is a pollutant that causes no existing violations of ambient air quality standards in the Project area, and Project-related CO emissions would not be likely to cause a new violation of standards.

Table 3.4-7 summarizes the annual emissions within each of the calendar years of anticipated construction, including mitigation for dust control practices (MM AQ-1) and off-road equipment engine standards (MM AQ-2).

Table 3.4-7. Easley Project: Construction, Mitigated Annual Emissions (ton/year)

Construction Year	VOC	NOx	CO	SOx	PM10	PM2.5
Year 1, Vehicles, Equipment, Fugitive Dust	0.81	4.37	16.21	0.04	4.47	1.22
Year 2, Vehicles, Equipment, Fugitive Dust	1.36	9.12	27.96	0.08	6.98	1.65
Year 2, Helicopter Activity	0.37	0.13	0.47	N/A	< 0.01	< 0.01
Maximum Annual Emissions, with Mitigation	**1.73**	**9.25**	**28.43**	**0.08**	**6.99**	**1.65**

Source: EIR Appendix J.

The highest rate of emissions would occur during the first anticipated calendar year of construction. Because construction activity can vary from day to day within a given calendar year, SCAQMD recommends quantifying daily peak rates of construction emissions.

Table 3.4-8 summarizes the maximum daily emissions rates anticipated within the different calendar years of construction, prior to considering mitigation.

Table 3.4-8. Easley Project: Construction, Daily Emissions without Mitigation (lb/day)

Construction Year	VOC	NOx	CO	SOx	PM10	PM2.5
Year 1, Vehicles, Equipment, Fugitive Dust	27.33	175.40	303.85	0.85	279.60	43.14
Year 2, Vehicles, Equipment, Fugitive Dust	26.67	174.25	294.55	0.83	279.59	43.13
Year 2, Helicopter Activity	24.29	7.92	30.98	N/A	0.27	0.27
Maximum Daily Emissions, without Mitigation	**50.96**	**182.17**	**325.53**	**0.85**	**279.86**	**43.40**
SCAQMD Daily Thresholds (Construction) for CEQA Purposes	**75**	**100**	**550**	**150**	**150**	**55**

Source: EIR Appendix J.

As seen in Table 3.4-8, maximum daily construction emissions without controls could exceed the SCAQMD significance thresholds for NOx and PM10. This analysis identifies two feasible mitigation measures that could be implemented to substantially reduce these emissions.

Table 3.4-9 summarizes the daily emissions including mitigation for dust control practices (MM AQ-1) and off-road equipment engine standards (MM AQ-2) to reduce the total emissions of NOx and PM10.

Table 3.4-9. Easley Project: Construction, Mitigated Daily Emissions (lb/day)

Construction Year	VOC	NOx	CO	SOx	PM10	PM2.5
Year 1, Vehicles, Equipment, Fugitive Dust	16.19	92.65	315.29	0.85	77.80	18.25
Year 2, Vehicles, Equipment, Fugitive Dust	15.53	91.49	306.00	0.83	77.79	18.24
Year 2, Helicopter Activity	24.29	7.92	30.98	N/A	0.27	0.27
Maximum Daily Emissions, with Mitigation	**39.82**	**99.42**	**336.98**	**0.85**	**78.06**	**18.51**
SCAQMD Daily Thresholds (Construction) for CEQA Purposes	**75**	**100**	**550**	**150**	**150**	**55**

Source: EIR Appendix J.

Table 3.4-9 shows that with implementation of mitigation for dust control practices (MM AQ-1) and off-road equipment engine standards (MM AQ-2) the maximum daily emissions of all pollutants during construction would be reduced to levels below the SCAQMD thresholds. The impact of increased criteria air pollutant emissions during construction would not be significant with mitigation.

LESS THAN SIGNIFICANT, OPERATIONS AND MAINTENANCE. Operations-related emissions would be caused by upkeep, maintenance, inspections, security, and panel washing. These activities necessary for routine upkeep of the solar facility and gen-tie lines would involve up to 10 permanent staff on the site. Mobile source emissions include those from vehicles used by staff and for occasional deliveries during O&M, and area sources reflect default assumptions for landscaping as a proxy for routine vegetation management. Occasional testing of the backup generator would cause stationary source emissions. The Project would be required by general air district provisions to implement controls such as the use of water or chemical dust suppressants to minimize particulate matter emissions, to prevent visible emissions, and to avoid nuisances.

Table 3.4-10 summarizes the emissions estimated during routine O&M of the Project.

Table 3.4-10. Easley Project: Operation, Daily Emissions (lb/day)

Source Type	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources	1.52	0.15	16.53	0.00	0.06	0.06
Mobile Sources	0.89	1.87	13.30	0.03	56.66	6.23
Stationary, Backup Generator Testing	0.05	0.16	0.18	0.00	0.01	0.01
Maximum Daily Emissions	**2.47**	**2.19**	**30.02**	**0.03**	**56.72**	**6.30**
SCAQMD Daily Thresholds (Operation) for CEQA Purposes	**55**	**55**	**550**	**150**	**150**	**55**

Source: EIR Appendix J.

Emissions during O&M would be minor due to the limited number of crews and workers using equipment and vehicles around the site. (Refer to EIR Appendix J, Easley Renewable Energy Project, Greenhouse Gas Emissions Report, September 2023, Attachment A, AQ/GHG Emissions Inventory for details on quantification.)

The routine O&M emissions would not exceed the SCAQMD thresholds. With minimal direct emissions during operation, operation of the Project would not result in a cumulatively considerable net increase of any criteria pollutant, and this impact of criteria air pollutant emissions would be less than significant with mitigation. No operational-phase mitigation would be required.

Mitigation Measures for Impact AQ-2

MM AQ-1 **Fugitive Dust Control Plan.** See full text in Section 3.4.9 (Mitigation Measures).

MM AQ-2 **Control On-Site Off-Road Equipment Emissions.** See full text in Section 3.4.9 (Mitigation Measures).

Significance After Mitigation

The increased air pollutant emissions that would occur with the proposed Project construction activities would be adverse after mitigation but not at significant levels. This impact would be less than significant during operation.

Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. This criterion assesses whether the Project would expose sensitive receptors to substantial pollutant concentrations. Construction activities would result in locally increased concentrations of construction-related emissions, including criteria air pollutants, diesel particulate matter (DPM) and other toxic air contaminants, which would cause increased health risk and hazards near the site. Decommissioning activities would create similar emissions that could also result in temporary, locally increased concentrations of these pollutants after the end of the Project's useful life.

Criteria Air Pollutants. The SCAQMD recommends using Localized Significance Thresholds for determining near-field impacts resulting from criteria air pollutant emissions from a small development site (up to 5 acres). In contrast, the Easley Project would cover approximately 3,735 acres of private and BLM land. Because of the large site, the LSTs do not directly apply; however, this discussion uses the LSTs as a proxy for describing near-field impacts.

Construction-related emissions sources would be spread across the site and off-site. This analysis identifies mitigation to reduce construction-related emissions under Impact AQ-2. The mitigation focuses on implementing dust control practices (MM AQ-1) and off-road equipment engine standards (MM AQ-2) to reduce the overall emissions, which also reduces the potential near-field impacts of on-site construction emissions. Particles of airborne fugitive dust may pose a health risk if inhaled because minerals such as silica or organic components present in the soils. Controlling fugitive dust during construction reduces the potential for wind erosion of soils and limits the ability for soils to become airborne and inhaled. Emissions from off-site sources, including on-road vehicles and vehicles on the regional roadways, are included in the emissions inventories for construction and operation although the effects of off-site sources would be diminished by distance when compared with the on-site sources that predominately contribute to near-field effects.

Sensitive receptors include the residences in and around the Lake Tamarisk community. All nearby residences would be more than 200 meters (656 feet) away from the nearest construction on the site. Most sources of construction emissions on the site and virtually all off-site sources would be more than 500 meters (1,641 feet) from residential land uses.

Maximum daily construction emissions with mitigation (shown in Table 3.4-9) would not exceed the recommended LSTs for any pollutant for receptors that are located 200 meters or more from sources of construction air pollutants. The mitigation focuses on the types of sources that occur on-site, and dust control requirements ensure that the mitigated PM10 and PM2.5 emissions would not exceed their respective LSTs. (Refer to EIR Appendix J, Easley Renewable Energy Project, Greenhouse Gas Emissions Report, September 2023, Attachment A for emissions inventory results and Attachment B for CalEEMod Output.)

Because on-site construction emissions of criteria air pollutants would be below all applicable LSTs, Project construction would not be likely to locally exceed the ambient air quality standards. Daily emissions during operation would mostly be caused by mobile source activity occurring off-site and less likely than construction to contribute to substantial pollutant concentrations.

With mitigation to reduce construction dust (MM AQ-1) and reduce engine exhaust emissions (MM AQ-2), construction and operation emissions would not expose sensitive receptors to substantial pollutant concentrations of criteria air pollutants, and the incremental health effects of criteria pollutants would be less than significant.

Toxic Air Contaminants. The primary health risks to nearby sensitive receptors would be driven by carcinogenic DPM emissions from on-site equipment and vehicles during construction. Noncancer effects

of DPM are normally less of a concern than cancer risks. The construction duration creates the potential to deliver a dose over a short time period, spanning two calendar years in this case. However, the recommended exposure duration for estimating cancer risk to residents or off-site workers would be 30 years or 25 years, respectively, according to the Office of Environmental Health Hazard Assessment (OEHHA), Guidance Manual for the Preparation of Health Risk Assessments (OEHHA 2015).

Health effects from carcinogenic TACs are usually described in terms of individual cancer risk over a 30-year exposure duration. This introduces uncertainty in the quantification of cancer risk, because the risk from construction emissions would occur only during a small fraction of a lifetime, and construction would cease following completion of the Project. Therefore, the total exposure period for construction activities would be approximately six percent of the total exposure period used for typical residential health risk evaluation (30 years). Further, construction emissions would occur at variable rates during the short term and across a site of approximately 3,735 acres, rather than as a steady rate of emissions. Concentrations of mobile source DPM emissions are greatly reduced by distance, such that a separation of 1,000 feet (305 meters) normally allows sensitive land uses to avoid high levels of DPM concentrations (ARB 2005).

Proposed construction sources of DPM would be set back from the nearest occupied residences by more than 200 meters (656 feet), and most construction emissions would occur more than 1,000 feet away from all sensitive receptors. Accordingly, there would be little potential to expose sensitive receptors to substantial pollutant concentrations of carcinogenic DPM. The impact of localized ground level concentrations and incremental health effects of toxic air contaminants would not be significant with mitigation to reduce construction dust (MM AQ-1) and reduce engine exhaust emissions (MM AQ-2).

Valley Fever. Soils in some areas of California host the microscopic fungus that causes Valley Fever, known as *Coccidioides immitis*, 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. Workers in Riverside County are at a relatively lower risk than in other areas of California. In addition, employers have a legal responsibility to provide workers with protection from health risks, including any risks due to Valley Fever (DIR 2022). 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 (DIR 2022). Project construction activities would be subject to stringent dust control requirements (including SCAQMD Rule 403). These mandatory controls would avoid exposing construction workers and the off-site population to substantial concentrations of dust, to ensure that the impact of potential exposure to Valley Fever would be less than significant.

Visibility and Federal Class I Areas. Under the federal CAA, Class I areas are provided the greatest protections. The nearest boundary of the JTNP Class I area is located 3 miles (4.8 kilometers) from the Project boundary. Ambient air quality impacts of the Project including increased concentrations of airborne dust, including PM10 and PM2.5, and NOx emissions could impact visibility. However, the sources of emissions during construction 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 JTNP would be much lower than the localized effects near the Project activities. 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 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, and the impact to visibility would be less than significant.

LESS THAN SIGNIFICANT, OPERATIONS AND MAINTENANCE. Site activities and the operations-related emissions from upkeep, maintenance, inspections, security, and panel washing would occur more than 200 meters (656 feet) away from the closest residence or inhabitable dwellings. Therefore, there would be no potential to expose sensitive receptors to substantial pollutant concentrations, and this impact would not be significant.

Mitigation Measures for Impact AQ-3

MM AQ-1 **Fugitive Dust Control Plan.** See full text in Section 3.4.9 (Mitigation Measures).

MM AQ-2 **Control On-Site Off-Road Equipment Emissions.** See full text in Section 3.4.9 (Mitigation Measures).

Significance After Mitigation

The localized air pollutant concentrations in the vicinity of proposed Project construction activities would be adverse but not at significant levels. This impact would be less than significant during operation.

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

LESS THAN SIGNIFICANT. During construction and decommissioning after the end of the Project's useful life, there would be no other emissions or odors that would adversely affect a substantial number of people. The closest residential use to the Project site would be more than 200 meters (656 feet) away from all onsite activity. The Project site is also relatively remote, and there is not a substantial number of people near the site.

Operation of the Project would involve no potential sources of emissions that could lead to odors, that would adversely affect a substantial number of people. The closest residence or inhabitable dwelling to the Project site would be more than 200 meters (656 feet) away from on-site activities. Therefore, the potential impact related to odors or other adverse emissions would be less than significant.

Mitigation Measures for Impact AQ-4

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.4.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities (solar panel installation, substation and O&M building, and construction of access roads and gen-tie line). The No Project Alternative would cause no sources of air pollutant emissions from development activities. Accordingly, the No Project Alternative would represent no change to the environmental setting. Because no new air pollutant emissions would occur with the No Project Alternative, this alternative would have no impact related to air quality.

Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project. A different solar energy project would potentially result in similar air quality impacts as those identified for the proposed Project.

3.4.7. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. The reduction in acreage would increase the distances to sensitive receptors from the proposed Project sources of air pollutant emissions The decrease in solar panel area would result in a slight decrease in the potential for sensitive receptors to be exposed to emissions and pollutant concentrations near the existing community of LTDR when compared with the impacts of the proposed Project.

Alternative 2 would reduce the emissions and pollutant concentrations levels experienced by sensitive receptors and reduce air quality impacts when compared to the proposed Project. Overall, the effects of Alternative 2 would be slightly reduced from the proposed Project, and mitigation identified for the proposed Project would be the same for under this alternative.

3.4.8. Cumulative Impacts

Geographic Scope

The geographic area affected by the proposed Project and the potential to contribute to cumulative impacts is based on the topography of the 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 Mojave Desert Air Basin.

Cumulative Impact Analysis

The construction-phase emissions related to the proposed Project would likely occur concurrently with other cumulative projects in the Mojave Desert Air Basin and would contribute to the adverse effects of other cumulative projects to result in a cumulative impact to air quality that is significant.

The incremental contribution of the proposed Project to the cumulative impact would be reduced by implementing MM AQ-1 (Fugitive Dust Control Plan) and MM AQ-2 (Control On-Site Off-Road Equipment Emissions), as mitigation for the project-specific effects described in Impact AQ-2 and Impact AQ-3. Because construction-related air pollutant emissions would be mitigated and would entirely cease after construction, within approximately 20 months, the construction emissions would not cause substantial long-term cumulative impacts. The incremental contribution of the proposed Project to the cumulative air quality impact would be reduced to the extent feasible during construction and would not be cumulatively considerable.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM AQ-1 and MM AQ-2 would be implemented to address potential air quality impacts for the proposed Project. No additional mitigation is required.

Significance After Mitigation

The Project's incremental contribution to air quality impacts would not be cumulatively considerable.

3.4.9. Mitigation Measures

MM AQ-1 **Fugitive Dust Control Plan.** The Project owner, 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 Project owner. During construction, the Project owner, 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 plan:

- 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 ARB-approved soil stabilizers and shall not increase any other environmental impacts, including loss of vegetation, adverse odors, or emissions of ozone precursor reactive organic gases (ROG) or volatile organic compounds (VOC). The proposed soil stabilizing products shall be listed in the Plan and are subject to review and approval by Riverside County, BLM, and 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 either paved or stabilized using soil binders, 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 area 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.

MM AQ-2 **Control On-Site Off-Road Equipment Emissions.** The Project owner, when entering into construction contracts or when procuring off-road equipment or vehicles for on-site construction or O&M activities, shall ensure that only new model year equipment or vehicles are obtained. The following measures shall be included with contract or procurement specifications:

- All construction diesel engines not registered under California Air Resources Board'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. In the event that 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 nitrogen oxides (NOx) and diesel particulate matter (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 showing that the engine meets the standards of this measure.
- All equipment and trucks used in the construction or O&M of the facility 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.

3.5. Biological Resources

This section describes the biological resources of the proposed Project site and vicinity, including vegetation and habitat, common and special-status plants and wildlife, and jurisdictional waters. In addition, this section identifies applicable federal, local, and state laws and regulations regarding biological resources. It identifies the criteria used to evaluate the significance of potential impacts on biological resources, the methods used in evaluating these potential impacts, and an analysis of potential impacts. Where impacts may be significant according to the criteria identified, this section identifies mitigation measures to reduce those impacts to less than significant.

The Project is located on both private and public lands (Figures 3.5-1 and 3.5-2 in EIR Appendix A). Public lands within the Project solar application area are managed by the U.S. Bureau of Land Management (BLM) and include lands designated as Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD) (BLM, 2016a). Lands within DFAs have been targeted for renewable energy development. The Project site is situated between Desert Harvest Solar Facility (operational), Oberon Renewable Energy Project (operational), and Sapphire Solar Project (proposed).

3.5.1. Environmental Setting

The description of the biological resources on the proposed Easley Renewable Energy Project site is based on the Biological Resources Technical Report (BRTR) and the Jurisdictional Waters Report prepared by Ironwood Consulting Inc. (Ironwood, 2023a and 2023b). The full BRTR and Jurisdictional Waters Report are attached to this EIR as EIR Appendices C and F, respectively. The description also references biological resources found on the Oberon Project site, where the proposed Easley gen-tie line is located (Ironwood, 2021a and 2021b).

The BRTR includes a literature review of special-status biological resources reported by the CNDDB, USFWS, and CNPS, and a description of plant and wildlife surveys performed for the Project. Wildlife surveys were conducted between October 2019 and June 2022. Wildlife surveys conformed to full coverage desert tortoise protocol surveys with 10-meter transects on the Project site (USFWS, 2019). The Jurisdictional Waters Report is discussed further in Section 3.5.1.2.

The Project site is located in the central portion of Chuckwalla Valley, east of Palm Springs in the Colorado Desert. The Project site is within the Chuckwalla Valley ecoregion subsection of the DRECP area. The elevation of Chuckwalla Valley ranges from less than 400 feet (122 meters) above mean sea level (amsl) at Ford Dry Lake to approximately 1,800 feet (549 meters) amsl west of Desert Center and along the upper portions of the alluvial fans that surround the valley perimeter. The surrounding mountains rise to over 3,000 feet (92 meters) amsl. The topography of the Project site generally slopes downward toward the northeast at a gradient of less than 1 percent. Ground surface elevations at the Project site range from approximately 800 feet (244 meters) amsl in the southwest and 550 feet (168 meters) amsl in the northeast.

The Chuckwalla Valley is a region of active aeolian (wind-blown) sand migration and deposition. Aeolian processes play a major role in the creation and establishment of sand dune formations and habitat in the Chuckwalla Valley and those within the Project vicinity. Aeolian sands (dunes, sand fields, and similar habitats) are important habitats for certain plants and animals, including Mojave fringe-toed lizard, a special-status species. The areas of sand transport corridors are not fixed in time or space, as they can expand, contract, or migrate with changing weather and climate.

The eastern half of the Project site is characterized as modern alluvial fan deposits consisting of unconsolidated to slightly consolidated sand and gravel that is considered an active aeolian source (Ironwood,

2023a). In the northernmost Project site, a small portion of the site is an active aeolian source. No aeolian sand deposits are mapped on the Project site. The western portion of the Project site was not characterized as an active aeolian area (Ironwood, 2023a). Project areas may be parts of sand transport corridors, where habitat for sensitive wildlife and plant species may be present.

The Project site overlaps the Pinto Wash Linkage area as defined in the DRECP Land Use Plan Amendment (LUPA). The Project site is outside of but adjacent to desert tortoise critical habitat (in a Tortoise Conservation Area (TCA)), which is located approximately 0.8 mile west of Kaiser Road, extending to the west into Joshua Tree National Park and to the south, south of the Interstate 10 (I-10) freeway into the Chuckwalla Mountains (Figure 3.5-1). The gen-tie line would cross desert tortoise critical habitat that overlaps the Oberon Project site, south of BLM Open Route DC 379, to interconnect to the Oberon Substation. Impacts on critical habitat are evaluated in Impact BIO-1 and the Final EIR for the Oberon Project (RWQCB, 2021).

The Alligator Rock Area of Critical Environmental Concern (ACEC) is approximately 3 miles south of the Project site and the Desert Lily Preserve ACEC is approximately 4 miles east of the Project site. The closest Joshua Tree National Park boundary is located approximately 4 miles northeast of the Project site (Figure 3.5-1).

Anthropogenic features and land use near the Project site include fallow and active agricultural, aquaculture farms, trash dumping, rural residential, renewable energy, energy transmission, historical military operations, recreational development.

Ironwood Biologists performed biological resources surveys between October 2019 and June 2022, including all proposed solar facility sites and gen-tie routes (see BRTR, EIR Appendix C).

3.5.1.1. Vegetation and Habitat

The term habitat refers to the environmental and ecological conditions where a species is found. Wildlife habitat is generally described in terms of vegetation, though a more thorough explanation includes availability or proximity to water; suitable nesting or denning sites; shade; foraging perches; cover sites to escape from predators; soils that are suitable for burrowing or hiding; limited noise and disturbance; or other factors that are unique to each species. Vegetation reflects many aspects of habitat, including regional climate, physical structure, biological productivity, and food resources (for many wildlife species). Thus, vegetation is a useful overarching description for habitat, and it is one of the primary factors in the assessments of habitat suitability presented in this section, as well as the analysis of potential impacts to wildlife habitat presented in Section 3.5.5. Where additional details of habitat suitability are necessary, they are provided in the discussion of special-status wildlife species below.

One vegetation community, desert dry wash woodland, is identified by BLM and as sensitive due to the association with alluvial processes (Ironwood, 2023a). Vegetation communities on the Project site are shown in Figure 3.5-2.

Public Parcels

The public parcels on the Project site mostly consist of creosote bush scrub with desert pavement or desert dry wash woodland communities intermixed.

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 (Ironwood, 2023a). Sonoran creosote bush scrub covers most of the Project site and intergrades with desert dry wash woodland along desert washes. Within the Project site, this community occurs on sandy soils with a shallow clay pan.

Desert Dry Wash Woodland. Desert dry wash woodland (DDWW) is a sensitive vegetation community recognized with a rarity rank of S4 (CDFW, 2022). Desert dry wash woodland is a xeric riparian community characteristic of desert washes and is likely to be regulated by the California Department of Fish and Wildlife (CDFW) as jurisdictional State waters. The DRECP includes it as one of the microphyll woodland communities. The terms DDWW and microphyll woodland are used interchangeably throughout this EIR. DDWW is open to relatively densely covered, drought-deciduous, microphyll (small compound leaves) riparian scrub woodland, often supported by braided wash channels that change following every surface flow event and dominated by an open tree layer. Within the Project site, this vegetation community is dominated by an open tree layer of ironwood, with occasional blue palo verde. This habitat provides greater opportunities for food, nesting, and cover, and its wildlife diversity is generally greater than in the surrounding desert. Many of the species occupying the surrounding upland desert shrublands are found in greater numbers in microphyll woodlands. Within the Project site, DDWW occurs on mostly the western portion of the site, with several ribbons of desert dry wash woodland interspersed between creosote bush scrub.

Desert Pavement. Desert pavement is not descriptive of vegetation, but rather a geomorphic condition that results in tightly interlocking gravel and pebbles which develop over time on fluvially inactive upland areas within stabilized alluvial fans (Ironwood, 2023a). It has a state rarity rank of S4 (CDFW, 2022). It is typically sparsely vegetated with an intermittent layer of cryptogamic crust. The ground surface is sandy and gravelly mixed alluvium with various rocks and gravel. Desert pavement is often interwoven between areas of creosote bush scrub and desert dry wash woodland where it occurs on the Project site, and primarily occurs on the western portion of the Project site.

Wetland and Riparian Vegetation. Two wetlands were identified on the Easley Project site (Figure 3.5-3). One wetland, created from drainage from the aquaculture farm, is generally in the center of the Project site, on a private parcel. Most of the wetland is outside the Project area boundary. The second wetland is created from drainage from adjacent agricultural activity that allows water to drain through the wetland area into a pond area with no outlet. Two areas of invasive tamarisk (*Tamarix ramomissima*) were also identified (Figure 3.5-3). The drainage from the aquaculture farm and agricultural activity provides supportive soil conditions for the establishment of tamarisk. See Impact BIO-5 in Section 3.5.5 for a discussion of wetlands and jurisdictional waters on the Project site.

Private Parcels

The private parcels consist of primarily man-made features that include deciduous orchard/fallow agriculture or developed areas. Private parcels in 2 locations support native vegetation communities, including creosote bush scrub and/or desert dry wash woodland.

Gen-tie Line

The gen-tie line crosses the adjacent Oberon Project site, which became operational in fall 2023. The Oberon Project site consists of similar vegetation communities, including creosote bush scrub with interspersed desert pavement and desert dry wash woodland.

3.5.1.2. Jurisdictional Waters

Ironwood delineated jurisdictional waters on the proposed Easley Project site, using desktop GIS analysis and field investigations in April, May, and June 2022. Jurisdictional waters on the Oberon site, where the Easley gen-tie line would be located, were surveyed in May 2020 (Ironwood, 2021b).

Prior to conducting delineation fieldwork, preliminary investigations consisted of identifying aquatic land surface features within the Project site. Areas with potential aquatic resource landform features were

identified for follow-up detailed field investigations. Surveys were conducted between April 5 and April 27, 2022. Data for ephemeral washes and vegetation mapping were collected between May 23 and June 18, 2022. Surveys on the Oberon site were conducted between May 22-30, 2020. Field investigations evaluated all linear water features for OHWM (Ordinary High-Water Mark) indicators to assist with delineation of the lateral extents of waters. Surveyors recorded OHWM indicators associated with the primary low-flow channel and floodplain at representative cross-sections.

Desert washes within this region are almost always dry but contract and expand dramatically in size due to extreme 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 Coxcomb Mountains to the north. Alluvial processes across the Project site generally flow from southwest to northeast. Agricultural practices and developments such as the I-10 freeway and CA-177, have greatly modified natural hydrology.

The Easley Project site is situated on a low-gradient alluvial plain and is intersected by numerous unnamed ephemeral drainages that flow northeast toward Big Wash, near the confluence with Pinto Wash. Big Wash is shown as an intermittent blueline stream on USGS topographic maps and is identified as an intermittently flooded riverine system by USFWS NWI (Ironwood, 2023b). Potential jurisdictional aquatic resources are discussed below and shown in Figure 3.5-3. The detailed Jurisdictional Waters Report is attached to this EIR as Appendix F (Ironwood, 2023b).

Waters of the United States

Jurisdictional waters of the U.S. defined in the Clean Water Act (CWA) include interstate waters such as lakes, rivers, streams (including intermittent streams) and their tributaries, but exclude ephemeral channels. In the case of intrastate waters (i.e., the ephemeral or intermittent drainage channels on the site), federal jurisdiction as waters of the U.S. applies only where degradation or destruction could affect interstate or foreign commerce.

The Project site is located within the Colorado River Hydrologic Region (HR), in the Big Wash and Hayfield Lake-Lake Tamarisk HUC 10 Hydrologic Areas, which flow to closed basins, not connected with the Colorado River or other traditional navigable waters (TNW). Palen Dry Lake and Ford Dry Lake represent the lowest elevations within the basin.

The U.S. Army Corps of Engineers (USACE) has determined that no jurisdictional waters of the U.S. were found within other projects in the same basin (Desert Sunlight, Desert Harvest, and Palen Solar Projects). Given the absence of a nexus to waters of the U.S., the aquatic resources in the Project site are potentially not subject to federal jurisdiction under CWA Section 404 and Section 401.

Public & Private Parcels. Aquatic resources delineated within the Easley Project site mostly lack indicators of surface connections to Pinto Wash, an ephemeral riverine feature situated northeast of the Project site. Pinto Wash conveys flows to Palen Lake, an isolated ephemeral lake that lacks a direct or subsurface connection to a known TNW. Palen Lake and the aquatic resources within the Project site do not meet the criteria described for waters of the U.S.

Gen-tie Line. The gen-tie line through the Oberon Project site is within a closed surface hydrology basin that drains to Ford Dry Lake that is not connected to the Colorado River or other traditional navigable waters. It does not meet the criteria described for waters of the U.S.

Waters of the State

Jurisdictional waters of the State are defined more broadly than waters of the U.S., to include “any surface water or groundwater, including saline waters, within the boundaries of the state” (Cal. Water Code § 13050(e)). No surface connection to larger water bodies is required under the State definition. The

CDFW regulates alterations to state-jurisdictional waters under Section 1600 et seq. of the California Fish and Game Code. Jurisdictional acreage is interpreted as the bed and banks of channels and adjacent riparian vegetation.

The aquatic resources in the Project site are subject to state jurisdiction under regulations administered by Regional Water Quality Control Boards (RWQCBs) and CDFW.

Public & Private Parcels. State jurisdictional streambeds and adjacent riparian habitat within the proposed Project site include Unvegetated Ephemeral Dry Wash and Desert Dry Wash Woodland. Active channels within the lower alluvial fan, where the Project is situated, showed signs of frequent avulsion (changes in flow direction following surface water flow events) due to patterns of brief, intense surface water flow. In the Chuckwalla Valley area, Desert Dry Wash Woodland is the regional riparian vegetation type and is characterized by braided wash channels that experience regular avulsion. Within the Project site, this vegetation community is dominated by an open tree layer of ironwood, with occasional blue palo verde. Due to the abundance and close spacing of braided channels throughout the area, all mapped Desert Dry Wash Woodland is adjacent to one or more channels.

Two wetland areas were identified as anthropogenic wetlands created by adjacent agricultural activities, from artificial water sources and berms. These areas met all three criteria for a wetland and are categorized as palustrine, emergent wetlands.

Gen-tie Line. State jurisdictional streambeds and adjacent riparian habitat along the gen-tie line through the Oberon Project site include Unvegetated Ephemeral Dry Wash and Desert Dry Wash Woodland.

3.5.1.3. Special-status Plants

Ironwood Consulting conducted focused special status plant surveys in the Easley Project site between fall 2019 and spring 2022. Surveys along the gen-tie line in the Oberon Project site were conducted between fall 2019 and Spring 2020. The field methods were consistent with protocols recommended by USFWS, CDFW, and California Native Plant Society (CNPS). The BRTR provides a compilation of special-status plants with potential to occur on the Project site, and evaluates probability of occurrence for each species based on habitat, elevational and geographic ranges, and field survey results. The complete methods and results of the surveys are provided in the BRTR (EIR Appendix C).

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 candidates for listing under the California Endangered Species Act (CESA), or listed as rare under the California Native Plant Protection Act;
- Designated by BLM as Sensitive Plants: “all plant species that are currently on List 1B of the CNPS Inventory of Rare and Endangered Plants of California, are BLM Sensitive Species, along with others that have been designated by the California State Director” (note that the CNPS Lists are now known as California Rare Plant Ranks, or CRPR);
- Meet the definition of rare or endangered under CEQA Section 15380 subdivisions (b) and (d). For this report, this is generally interpreted as all plants ranked as California Rare Plant Rank (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 here; and
- Considered special-status species in local or regional plans, policies, or regulations, such as the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan/EIS.

Special status species detected within the Project site or having moderate to high potential to occur based on the presence of suitable habitat are discussed below (Figure 3.5-4). For complete lists and discussion of all special-status plants analyzed for the Project, please refer to the BRTR (EIR Appendix C).

No listed threatened or endangered plant species were observed or have the potential to occur on the Project site or in the vicinity.

Public & Private Parcels

Emory's crucifixion thorn (*Castela emoryi*); CRPR 2B.2. Emory's crucifixion thorn is uncommon but widespread in broad sandy wash habitat in the area. In Riverside County, several records are near or within Desert Center, including Desert Sunlight Solar Farm north of the Project site, Athos Solar Project, Oberon Renewable Energy Project, and Arica Solar Project (Ironwood, 2023a). There is suitable habitat for crucifixion thorn within wash areas of the Project site. One individual was observed along the northern boundary of the Project site on public lands. No additional occurrences on the Project site are expected because it is a large conspicuous shrub and can be identified at any time of year, even in a year of poor rainfall, and is not easily overlooked.

Desert unicorn-plant (*Proboscidea althaeifolia*); CRPR 4. Desert unicorn plant has limited distribution but is not very threatened in California. It is a low-growing, perennial species that occurs in sandy washes within Sonoran Desert scrub vegetation in San Bernardino, Imperial, Riverside, and San Diego counties of California. It is a late-season bloomer (May to August) but has large and distinctive seed pods that can be detected during the spring season and fleshy root structure that can remain dormant in dry years (Ironwood, 2023a). Suitable habitat occurs within the Project site; it was observed in 224 locations, primarily in desert dry wash woodland in the southern half of the site.

California Ditaxis (*Ditaxis serrata var. californica*); CRPR 3.2. California ditaxis occupies Sonoran Desert scrub vegetation and prefers sandy washes and alluvial fans of the foothills and lower desert slopes, from 100 feet (31 meters) to 3,000 feet (915 meters) amsl. It is known to occur in San Bernardino, Riverside, Imperial, and San Diego counties of California and in Sonora, Mexico (Ironwood, 2023a). It occurs in the Project site and was recorded at 43 locations, primarily in the central portion of the Project site along Project boundaries.

Utah Milkvine (*Cynanchum utahense* [=*Funastrum utahense*]); CRPR 4.2. Utah milkvine occurs in sandy, gravelly Mojavean desert scrub. Utah milkvine has records primarily from San Bernardino and San Diego counties, but there are also several records in Riverside County. There is one record of this species north of Desert Center and another record southwest of Palen Lake. Suitable habitat exists throughout the Project site and one individual was observed on the east side of the Project along the CA-177.

Glandular Ditaxis (*Ditaxis claryana*); CRPR 2B.2. Glandular ditaxis occurs in Sonoran Desert scrub and blooms in the fall following the start of the rainy season. Among 49 occurrences, there is one record within Desert Center and another near Corn Spring, south of I-10 (Ironwood, 2023a). Suitable habitat occurs within the Project site, but it was not observed.

Spiny Abrojo (*Condalia globose var. pubescens*); CRPR 4.3. Spiny abrojo has limited distribution but is not very threatened in California and can also be found in Arizona and Mexico. It occurs in desert scrub primarily in the Sonoran Desert. It occurs only in Imperial and Riverside counties, with the closest record within the Oberon Renewable Energy Project (Ironwood, 2023a). Suitable habitat occurs within the Project site, but it was not observed.

Gen-tie Line

Along the gen-tie line through the Oberon Project site, desert unicorn plant was observed. Other species previously discussed have suitable habitat along the gen-tie line, but were not observed. Emory's crucifixion thorn was not observed near the gen-tie line (Ironwood, 2021a).

3.5.1.4. Special-status Wildlife

Ironwood Consulting conducted full-coverage wildlife surveys in the Project area between fall 2019 and summer 2022. Surveys of the Oberon Project site, where the gen-tie line is located, were performed between fall 2019 and summer 2020. Surveys were performed focusing on protocols for desert tortoise and burrowing owl. Wildlife surveys conducted in 2019-2022 conformed to full coverage desert tortoise protocol surveys with 10-meter transects on the Project site (Ironwood, 2023a; Ironwood, 2021a). Wildlife surveys were repeated for each site at 20-meter belt transects, consistent with 2012 CDFW burrowing owl protocol surveys. The surveys identified all burrows and all evidence of wildlife use, including use by desert tortoise, burrowing owl, and desert kit fox. During all wildlife surveys, biologists recorded all wildlife species observed, regardless of status. The BRTR provides a compilation of special-status wildlife with potential to occur in the Project vicinity and evaluates probability of occurrence for each species based on habitat, elevational and geographic ranges, and field survey results. The complete methods and results of the surveys are provided in the BRTR (EIR Appendix C).

Special-status species detected within the Project site or having moderate to high potential to occur based on the presence of suitable habitat are discussed below. These species are considered to have potential to occur on public and private parcels and along the gen-tie line.

Insects

Crotch bumble bee (*Bombus crotchii*); SC. Crotch bumble bee is proposed as a candidate for State listing under CESA. It primarily occurs in southwestern California, with only a few records from Nevada and Mexico. In California it occurs along the coast and in western deserts and foothills between San Diego and Redding. It inhabits grasslands and shrublands with preferred foraging plants. They are generalist foragers and have been associated with plants in the Fabaceae, Apocynaceae, Lamiaceae, Hydophyllaceae, Asclepiadoideae, and Asteraceae families (Ironwood, 2023a). They have also been observed using plants Asclepias, Chaenactis, Lupinus, Meicago, Phacelia, and Salvia, as food (Ironwood, 2023a). Nests are often located in underground burrows in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees.

Nearest records to the Project site include a record near Corn Springs in 1993 and Palm Springs in 1954 (Ironwood, 2023a). There are more recent records on the western side of Riverside County, west of Palm Springs (Ironwood, 2023a). Suitable habitat occurs for Crotch's bumble bee on the Project site since some of the plant families and genera associated with them also occur. However, the active agriculture and developments adjacent to the Project site could lower the habitat suitability with their potential use of pesticides. No Crotch's bumble bees were observed during surveys.

Amphibians and Reptiles

Couch's spadefoot toad (*Scaphiopus couchii*); SSC, BLMS. Couch's spadefoot uses late season monsoonal rain pools for breeding, development and hatching of eggs into tadpoles and then juvenile toads. Its geographic range is the eastern part of the California desert, where monsoon rains and lowland topography provide suitable breeding pools. It requires rain pools that hold water long enough for the eggs and tadpoles to develop, and then disperse into surrounding habitat.

The Project site is located east of the current range of Crotch bumblebee (CDFW, 2023). Documented records of this species, nearest to the Project, occur within approximately two miles of the Project site. Couch's spadefoot toad was not observed, but potential suitable breeding habitat is present within the Project site in areas where water accumulates, generally along the margins of public and private parcels. Nineteen data points were documented on the Easley Project site throughout all survey periods as potential breeding habitat where water may accumulate after rainfall or where human activities create perennial water sources (Figure 3.5-5). Several data points are along a channel with wetlands and areas of open water created on private lands from drainage from the aquaculture farm.

There is no suitable Couch's spadefoot toad habitat along the gen-tie line.

The potential for Couch's spadefoot toad to occur on the Project is expected to be low. Future surveys will occur opportunistically during summer months of May through September when sufficient rainfall in warmer temperatures allow for breeding to determine occupancy (Ironwood, 2023a).

Desert tortoise (*Gopherus agassizii*); ST, FT. Mojave desert tortoises 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 a diversity of perennial plants is relatively high, to a variety of habitats in higher elevations. Soils must be appropriately soft for digging burrows, but firm enough so that burrows do not collapse. Tortoises typically prefer habitats with abundant annual forbs, grasses, and cactus, which constitute its primary food sources (Ironwood, 2023a).

Trends in regional and range-wide adult Mojave desert tortoise densities show large, ongoing population declines since 2004. Only one in five critical habitat recovery units exhibited population increases between 2004 and 2014 (USFWS, 2014; USFWS, 2015). In the Colorado Desert recovery unit, abundance declined 36% between 2004 and 2014 (USFWS, 2015, 2017, 2021), while in the Chuckwalla CHU, abundance declined 37% (USFWS, 2015). Allison and McLuckie (2018) note that the proportion of juveniles has not increased in any recovery units since 2007. As of 2014, small desert tortoises were not moving into the large cohort at a rate that was sufficient to reverse declines (USFWS, 2021).

Nussear et al. 2009 includes a model for the statistical probability of desert tortoise occurrence, and since publication it has continued to be a reliable tool in determining the likelihood for tortoise occupancy across the historical range of the species. The model provides a geographic representation of predicted occupancy ranging from very low (0.0) to very high (1.0). Various analyses of desert tortoise have used a model value of ≥ 0.5 as denoting the threshold for suitable habitat for desert tortoise (Ironwood, 2023a). Conversely, lands that score < 0.5 have a low to moderate probability of desert tortoise occupancy.

Desert tortoise habitat has lower predicted occupancy levels in the northernmost portion of the Easley Project site (0 to 0.2) and increases toward the south, with the highest occupancy levels of 0.5-0.6 in the southwest portion of the Project site (Nussear et al., 2009) (Figure 3.5-5). The areas with higher occupancy levels are also closest to desert tortoise conservation areas. These predicted occupancy values do not account for habitat degradation resulting from existing anthropogenic features (Nussear et al., 2009), which would further reduce the occurrence probability in disturbed areas.

Desert tortoise sign observed during field surveys were consistent with the predicted occupancy model, with all the observed sign occurring in areas with occupancy values of 0.3 or higher. Most of the desert tortoise sign was concentrated within the southwest portion of the Easley Project site. No live desert tortoises or active sign were documented. Nine locations of tortoise carcasses were observed, most of which were characterized by shell bones falling apart and growth rings on scutes peeling (class 4) or disarticulated bones or scutes more than 4 years old (class 5) (Ironwood, 2023a).

Along the gen-tie line, in the eastern portion of the Oberon Project site, desert tortoise tracks, burrows, and carcasses have been observed in desert dry wash woodland (Ironwood, 2021a).

The solar facilities on the Easley Project site do not overlap with critical habitat for desert tortoise. Critical habitat within the Chuckwalla Desert Tortoise CHU, which is encompassed under Tortoise Conservation Areas (TCAs), is located adjacent to the Project site across Kaiser Road to the west (Figure 3.5-1). The gen-tie line would cross desert tortoise critical habitat in the southeastern portion of the adjacent Oberon Project site (RWQCB, 2021; Ironwood, 2021a).

Birds

Western burrowing owl (*Athene cunicularia hypugaea*); SSC, BCC, BLMS. Burrowing owls are unique among the North American owls in that they nest and roost in abandoned burrows, especially those created by ground squirrels, kit fox, desert tortoise, and other wildlife. The southern California breeding season (defined as the time from pair bonding of adults to fledging of the offspring) generally occurs from February to August, with peak breeding activity from April through July, although in deserts this seasonality is likely to vary from year to year, depending on rainfall and prey availability. In the Project region, burrowing owls generally occur at low densities in scattered locations, but they can be found in much higher densities near agricultural lands where rodent and insect prey tend to be more abundant. Two live individuals, both in flight, were observed during survey periods. Eight burrows with either whitewash, feathers, and/or pellets were documented (Figure 3.5-6). One burrowing owl burrow with whitewash was observed along the northern portion of the gen-tie line on the Oberon Project site (Ironwood, 2021a).

Golden eagle (*Aquila chrysaetos*): CFP, WL, BCC, BLMS. Golden eagles generally nest in rugged, open habitats with canyons and escarpments, often with overhanging ledges and cliffs or large trees used as cover. They forage widely over open terrain, and prey primarily on rabbits and rodents but will also take other mammals, birds, reptiles, and some carrion. They breed from late January through August with peak activity March through July. The nearest potential nesting habitat for golden eagles is located several miles to the north, northwest, and northeast of the Project site in the Coxcomb and Eagle mountains. The Project site lacks suitable nesting habitat for golden eagles. The nearest known cliff nest sites that have some potential for golden eagle use are approximately 3.5 miles from the Project site (Figure 3.5-7). The Project site supports suitable foraging habitat for golden eagles, but no golden eagles were observed during surveys of the Easley Project site. One golden eagle was observed in flight along the gen-tie line during surveys of the Oberon Project site (Ironwood, 2021a). Golden eagles could forage at the site at any time of year (e.g., locally nesting eagles could forage there during breeding season; non-nesting eagles could forage there year-round, including wintering and migratory seasons).

Prairie falcon (*Falco mexicanus*); WL, BCC. Prairie falcon nesting and foraging habitats are similar to those of the golden eagle (above), although their principal prey differ (they tend to be ground squirrels and other small mammals, birds, and lizards). There were four observations of prairie falcon, either flying through the Project site or perched within the Project site (Figure 3.5-6). Prairie falcons were also observed along the gen-tie line. The entire Project site contains suitable foraging habitat for this species but does not have suitable nesting habitat.

American peregrine falcon (*Falco peregrinus anatum*); CFP, BCC. The American peregrine falcon was formerly listed under CESA and ESA but has been delisted under both Acts. In California, its range is primarily central to northern California, with wintering habitat located in southern California. Migrants occur along the coast and in the western Sierra Nevada in spring and fall. It is found irregularly in the southern desert region, generally during migratory and winter seasons. It nested historically in desert mountain ranges near the Colorado River and may be re-occupying this historical part of its nesting range as its populations recover. Suitable migratory or foraging habitat is present throughout the Project site,

but no suitable nesting habitat is present. No American peregrine falcons were observed on the Project site during surveys or avian counts.

Elf owl (*Micrathene whitneyi*); CE, BLMS, BCC. Elf owl breeds in lowland habitats that provide cover and good nesting cavities, and winters in Mexico and southward. The Project site is near the western margin of its geographic range. Elf owls are more common and widely distributed outside of California and probably have never been common in California due to limited geographic range and generally marginal habitat. The elf owl is a secondary cavity nester (it nests in cavities of trees and cacti, generally in disused woodpecker nests). Its nesting habitat is closely correlated with nesting habitat of woodpeckers, including Gila woodpecker (below). Trees within the desert dry wash woodland habitat could provide suitable marginal habitat for nesting. Two tree cavities were observed during surveys and could be potential nesting cavities. No elf owls were observed during the survey.

Gila Woodpecker (*Melanerpes uropygialis*); CE, BLMS, BCC. Gila woodpecker is a year-around resident across its range. It can be fairly common in Southern California along the Colorado River, and occasionally ranges west to the Desert Center or Corn Springs areas. Gila woodpeckers prefer large patches of woody riparian vegetation for nesting, but they have also been documented in various habitat types, such as desert washes and residential areas. They excavate cavity nests in large riparian trees such as cotton-woods or other species that area available, including large palo verdes, ornamental trees, or palms. Potentially suitable habitat within the Project site is found in desert washes in palo verde or ironwood trees large enough for cavity nests. The probability of this species nesting on the Project site is low since only a few palo verde trees on the site are large enough for tree cavities, and the site is near the western margin of the Gila woodpecker's range. Only two tree cavities were observed in surveys, but no live Gila woodpeckers were observed (Figure 3.5-6).

Loggerhead shrike (*Lanius ludovicianus*); SSC, BCC. Loggerhead shrikes are uncommon year-round residents throughout much of southern California. They initiate their breeding season in February and may continue with raising a second brood as late as July. Suitable foraging and nesting habitat for loggerhead shrike is found throughout the Project site. Twenty observations of live individuals were documented during all surveys and avian counts (Figure 3.5-6). Loggerhead shrikes were also observed in several locations along the gen-tie line.

Le Conte's thrasher (*Toxostoma lecontei*); SSC. Le Conte's thrasher is a year-round resident in the Colorado Desert, occurring in desert flats, washes, and alluvial fans with sandy or alkaline soil and scattered shrubs. Its preferred nest sites are thorny shrubs and small desert trees, and nesting rarely occurs in monotypic creosote scrub habitat or Sonoran Desert woodlands. 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. Le Conte's thrasher was not observed during surveys of the Easley Project site. One Le Conte's thrasher was observed in the vicinity of the gen-tie line during surveys of the Oberon Project site (Ironwood, 2021a).

Crissal Thrasher (*Toxostoma crissale*); SSC. Crissal thrasher is a year-round resident of southeastern deserts, occupying dense shrubs in desert riparian and desert wash habitats, including mesquite, iron-wood, and acacia. The Project site provides limited but suitable nesting and foraging habitat primarily associated with dry wash woodlands. No crissal thrashers were observed within the Project site during surveys.

California horned lark (*Eremophila alpestris actia*); WL. The California horned lark is found throughout California except the north coast and is less common in mountainous areas. It nests in open areas. There are numerous records in Riverside County. Suitable foraging and nesting habitat occur throughout the Project site and California horned larks were observed frequently during surveys.

Black-tailed gnatcatcher (*Polioptila melanura*); WL. Black-tailed gnatcatchers are year-round residents in southeastern California and east through Arizona to southern Texas and northern Mexico. They are found in arid scrublands, desert brush, and dry washes. The Project site contains suitable foraging and potential nesting habitat for this species throughout the Project site and there was one observation during surveys and avian counts (Figure 3.5-6).

Special-status seasonal migrant birds. The following special-status bird species may migrate through the Project region during spring or fall migration or may spend winters in the vicinity but would not nest on or near the Project site due to absence of suitable wetland or riparian nesting habitat or due to geographic range. Potential for occurrence on the Project site is minimal, except for brief overflight or migratory stopovers. Four of them are listed as threatened or endangered so additional detail provided.

- Ferruginous hawk (*Buteo regalis*); WL, BCC. Potential foraging habitat during winter or migratory seasons; no potential nesting, site is outside the Ferruginous hawk's breeding range.
- Swainson's hawk (*Buteo swainsoni*); ST, BBC. Potential migration season foraging habitat; no potential nesting, well outside the nesting range.
- Northern harrier (*Circus cyaneus*); SSC. Suitable foraging habitat; no suitable nesting habitat.
- Short-eared owl (*Asio flammeus*); SSC. May be found incidentally during migration while foraging; no suitable nesting habitat.
- Vaux's swift (*Chaetura vauxi*); SSC. Suitable migration and foraging habitat; no suitable nesting habitat.
- Mountain plover (*Charadrius montanus*); SSC. Suitable habitat during migration; no potential nesting, outside breeding range.
- Sonora yellow warbler (*Setophaga petechia sonorana*); SSC, BCC. Suitable foraging habitat during migration in desert dry wash woodlands; no suitable nesting habitat.
- Yellow-breasted chat (*Icteria virens*); SSC. Potential stopover foraging occurrence during migration in desert dry wash woodlands; no suitable nesting habitat.

Other listed Bird Species. No suitable breeding or wintering habitat for the avian species below occur within or near the Project site. These state or federal listed bird species have been recorded at other utility-scale solar energy facilities. There is a moderate potential for them to be in the Project vicinity during migration periods, but there is no suitable nesting or foraging habitat on the site for these species. None of these species were observed during field surveys.

- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*); ST, CFP, FE. Yuma Ridgway's rail, formerly known as Yuma clapper rail, nests in freshwater marshes. In the low desert region, it is found along the lower Colorado River and the Salton Sea and Imperial Valley areas of California. Ridgway's rails do not appear to migrate in the traditional sense; however, occasional occurrences across the desert show some level of movement. Outlier observations have been documented at Harper Dry Lake, East Cronese Dry Lake, and Desert Center, all at a great distance from known breeding areas.
- Southwestern willow flycatcher (*Empidonax traillii extimus*); SE, FE. Southwestern willow flycatcher breeds in dense riparian habitats in the southwestern United States, and winters in southern Mexico, Central America, and northern South America. The willow flycatcher species is comprised of several recognized subspecies, including the southwestern willow flycatcher, which is the only subspecies that nests in the region. The closest known breeding locations to the Project site are approximately 35 miles away along the Colorado River and adjacent to the Salton Sea. Recent studies indicate that south-western willow flycatchers do not migrate over the area of the desert where the Project site is located (Ironwood, 2023a). However, other willow flycatcher subspecies (not listed as threatened or

endangered) may pass through the area during migration. No suitable breeding habitat occurs on the Project site and it is outside the southwestern willow flycatcher's migratory routes.

- Yellow-billed cuckoo (*Coccyzus americanus occidentalis*); SE, FT, BCC, BLMS. Western yellow-billed cuckoo breeds in expansive riparian areas in portions of California, Nevada, Arizona, and New Mexico. The closest known breeding habitat is approximately 35 miles away along the Colorado River. During migration, western yellow-billed cuckoos migrate across the desert and use shrubland habitats, but there have been no documented sightings of western yellow-billed cuckoo near the Project site. No suitable nesting habitat is present on the Project site, although it is possible that western yellow-billed cuckoo could occur on the site briefly during migration season.
- Least Bell's vireo (*Vireo bellii pusillus*); SE, FE. Least Bell's vireo breeds in riparian habitats in southern California and portions of northern Baja California, Mexico and winters in southern Baja California. The closest known breeding habitat to the Athos site is to the northwest in the Big Morongo Canyon. The subspecies Arizona Bell's vireo (*V. b. arizonae*) is not ESA-listed, but is State-listed in California as endangered, and occurs along the lower Colorado River, approximately 35 miles east of the Project site.

Mammals

American badger (*Taxidea taxus*); SSC. The American badger is associated with dry open forest, shrub, and grassland communities with an adequate burrowing rodent population and friable soils. Badgers generally are associated with treeless regions, prairies, parklands, and cold desert areas (Ironwood, 2023a). Suitable habitat exists for American badgers throughout the Easley Project site. Two active badger burrows with dig marks and recent tracks were identified during the fall 2021 survey, and four burrows with dig marks were identified as inactive badger burrows (Figure 3.5-8). A badger skull or skull fragments (identified as carcass in the data) were observed at two locations. There are several canid burrows and complexes observed that could be used by the species, but no live individuals were observed.

Desert kit fox (*Vulpes macrotis arsipus*); CPF. Desert kit fox is not recognized as rare but it is a protected fur-bearing mammal. Title 14 of the California Code of Regulations, Section 460, stipulates that desert kit fox may not be taken at any time. Desert kit fox is a fossorial mammal that occurs in arid open areas, shrub grassland, and desert ecosystems within the Mojave and Sonoran Deserts. Desert kit fox typically occurs in association with its prey base, which includes small rodents, primarily kangaroo rats, rabbits, lizards, insects, and in some cases, immature desert tortoises (CDFW 2022a). Burrow complexes that have multiple entrances provide shelter, escape, cover, and reproduction, but desert kit fox may utilize single burrows for temporary shelter.

Many desert kit fox burrows observed within the Project site are part of a complex with multiple entrances. During surveys, twenty-one active desert kit fox burrows or complexes with dig marks, tracks, and/or scat were observed within the Easley Project site (Figure 3.5-8). Seventy-seven burrows or complexes, some with older scat, were identified as inactive desert kit fox burrows. Two carcasses (likely a skull or bone fragments) were observed at two separate locations. The number of burrows will likely change over time since kit fox distribution is dynamic and changes under natural conditions due to prey availability and other environmental factors such as the presence of coyotes that prey on kit fox pups.

Kit fox complexes, active burrows, and inactive burrows are also scattered along the gen-tie line (Ironwood, 2021a).

Desert bighorn sheep (*Ovis canadensis nelsoni*); BLMS. The desert bighorn sheep is found from the Peninsular and Transverse Ranges through most of the desert mountain ranges of California, Nevada, and northern Arizona to Utah. Essential habitat for bighorn sheep includes steep, rocky mountain slopes, and areas where surface water is available during dry seasons. Habitat in the desert mountain ranges surrounding the upper Chuckwalla Valley is occupied by Nelson's bighorn sheep, and they occasionally

use the valley floor habitat either for foraging (near the lower mountain slopes) or as movement routes among mountain ranges. No sign or evidence of desert bighorn sheep was found during field surveys, but scat is often difficult to distinguish from burro deer.

Burro deer (*Odocoileus hemionus eremicus*); CPGS. Burro deer is a subspecies of mule deer (O. hemionus) that inhabits desert dry wash woodland communities in the Colorado region of the Sonoran Desert near the Colorado River. During hot summers, burro deer concentrate along the Colorado River, natural springs, near anthropogenic water sources such as the Coachella Canal, or agricultural areas, where water infrastructure has been installed and where microphyll woodland is dense and provides good forage and cover. With late summer thundershowers and cooler temperatures, burro deer move away from the Colorado River and Coachella Canal into larger washes or wash complexes in the foothills and nearby mountains (Ironwood, 2023a).

Burro deer scat and tracks were observed throughout the Project site and along the gen-tie line (Figure 3.5-8). Burro deer likely move through the Project site and its vicinity to access artificial water sources from nearby agriculture and aquaculture farms.

Special status bats. Seven special-status bat species may forage on or near the Project site and are discussed further in the BRTR (EIR Appendix C).

Potential foraging habitat is located on the Project site in desert dry wash woodlands. Many bats, including special-status species, forage primarily on large insects such as moths, and tend to concentrate foraging activity around water sources, such as the irrigation sources around the active agricultural areas. Desert dry wash woodlands provide suitable roosting habitat for two special-status bat species, western yellow bat and big free-tailed bat, as described below.

- *Townsend's big-eared bat (Corynorhinus townsendii); SSC, BLMS.* The Project site does not provide roosting areas for Townsend's big eared bat. Foraging habitat occurs along the desert dry wash woodlands and within riparian habitat along artificial water sources near the aquaculture farm adjacent to the Project.
- *California leaf-nosed bat (Macrotus californicus); SSC, BLMS.* California leaf-nosed bat may forage within the Project site, but it is not expected to roost due to absence of suitable caves and mines.
- *Pallid bat (Antrozous pallidus); SSC, BLMS.* The Project site may provide suitable foraging habitat for pallid bats within the dry wash woodland but does not provide suitable roosting habitat. Acoustic bat surveys for Palen Solar Power Project (about 4 miles east of the Project site) detected pallid bat within the Project vicinity.
- *Western mastiff bat (Eumops perotis californicus); SSC, BLMS.* Suitable habitat for foraging occurs throughout the Project site, but roosting habitat is lacking. Western mastiff bat was detected within the vicinity on acoustic bat surveys for Palen Solar Power Project.
- *Western yellow bat (Lasiurus xanthinus); SSC.* Potential roosting habitat exists within the Project site in desert dry wash woodlands and riparian habitat. Suitable habitat for foraging also occurs in those same areas. Western yellow bat was detected within the vicinity during acoustic bat surveys for the Palen Solar Power Project.
- *Big free-tailed bat (Nyctinomops macrotis); SSC.* Foraging and potential roosting habitat for the big free-tailed bats occurs within the Project in desert dry wash woodland. Big free-tailed bat was detected within the Project vicinity through acoustic surveys conducted for the Palen Solar Energy Project.
- *Pocketed free-tailed bat (Nyctinomops femorosaccus); SSC.* Suitable habitat for foraging exists on the Project site, but roosting habitat is lacking.

3.5.1.5. Wildlife Movement

Wildlife migration corridors and movement routes are areas that connect suitable habitat in a region that may otherwise be fragmented by human disturbance, difficult terrain, or unsuitable vegetation. Natural features, including drainages, ridgelines, or contiguous natural habitat may provide routes or corridors for wildlife movement. Wildlife movement routes are critical to survival and reproduction for wildlife populations, as they provide expanded access to mates, food, and water across broad geographic areas; allow for dispersal from high-density areas; and facilitate gene flow among populations.

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 be important to individual animals' ability to occupy their home ranges, if their ranges extend across a potential movement barrier. These considerations apply 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 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 tend to exist in lower population densities.

Movement opportunity varies for each species, depending on motility and behavioral constraints, as well as the presence of native habitats and landscape impediments.

In the Chuckwalla Valley, the biologically important functions of large mammal movement are (1) the long-term demographic and genetic effects of occasional animal movement among mountain ranges and other large habitat areas, and (2) regular movement to access local habitat resources, particularly water. 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.

In largely undeveloped areas, including the Chuckwalla Valley, wildlife habitat is available in extensive open space areas throughout much of the region, but anthropogenic barriers and land uses may impede or prevent movement for many terrestrial wildlife species. In these landscapes, wildlife movement planning focuses on specific sites where animals can cross linear barriers (e.g., wash crossings beneath I-10), and on broader linkage areas that may support stable, long-term populations of target species and allow demographic movement and genetic exchange among populations in distant habitats (e.g., surrounding mountains).

The Project site is located in the Chuckwalla Valley north of Desert Center. It is surrounded by the Chuckwalla Mountains to the south, the Palen Mountains to the east, the Coxcomb Mountains and Palen Valley to the north, and the Eagle Mountains to the west. Joshua Tree National Park is located to the west within 6 miles. Anthropogenic uses in the Project's vicinity that present barriers to movement include other solar development projects (either operational or in construction), the I-10 freeway to the south, the Desert Center Airport, and other roads and fences.

Multi-species linkages maintain habitat for wildlife movement between landscape blocks. The location of linkages in the Project vicinity (BLM, 2015) are based on several studies including the California Desert Connectivity Project (Penrod, 2012) and the California Essential Habitat Connectivity (CEHC) Project (Spencer et al., 2010). The CEHC identified areas surrounding the Project site as Natural Landscape Blocks (i.e., large, relatively natural habitat areas that support native diversity), including the Coxcomb Mountains to the north, the Eagle Mountains to the west, Palen Mountains to the east, and Chocolate Mountains to the south (BLM, 2015; Spencer et al., 2010). Broad habitat linkages connect these landscape

blocks, and are primarily located along the desert valleys, providing connectivity between these isolated mountain ranges in the region.

The northern portion of the Project site overlaps with the southern portion of the BLM designated Pinto Wash linkage; however, since the Project site is within a BLM DRECP DFA, development for renewable energy was targeted for this area (Figure 3.5-9, 3.5-10). The Pinto Wash linkage area also overlaps the adjacent Desert Sunlight and Desert Harvest Solar Projects. Other solar projects to the south, including Oberon, Athos, Arica, and Victory Pass Solar Projects overlap with a different BLM DRECP multi-species linkage area just north of the I-10 freeway. Like the proposed Project, these projects are located on both private lands administered by Riverside County, subject to mitigation measures through CEQA, and on BLM lands, subject to Conservation and Management Actions (CMAs) through the DRECP.

The Colorado River Aqueduct and the I-10 freeway, located north and south of the Project site, respectively, are significant obstructions to movement by terrestrial wildlife in the Project vicinity (Figure 3.5-9, 3.5-10). There are a few short below-ground segments of the aqueduct, but it is impassable to terrestrial wildlife except at those points. Some species, such as coyote, may learn to cross the freeway safely; however, the freeway presents an impassable or high-risk barrier to north-south movement for most terrestrial species, except at the I-10 freeway underpasses at wash crossings. On the 32-mile stretch of I-10 between the Desert Center and Wiley Wells Road exits there are 24 underpass crossings, ranging in from 10 feet to 75 feet wide, that provide connectivity and safe movement corridors between habitat to the north and south of the I-10 (Figure 3.5-10). Two of these crossings are located within 2 miles south of the Project area. Wildlife species and sign detected at the underpass crossings included lizards, rodents, rabbit, roadrunner, ground squirrel, fox, coyote, bobcat, and burro deer. Other linear features such as smaller paved and unpaved roads, and transmission lines have only minimal effects on wildlife movement.

3.5.2. Regulatory Framework

3.5.2.1. Federal Laws, Regulations, and Policies

Federal Land Policy and Management Act (FLPMA; 43 U.S.C. §§ 1701 1787). Directs management of public lands managed by the U.S. Forest Service, National Park Service, and BLM, addresses land use planning, rights-of-way, wilderness, and multiple use policies.

Endangered Species Act (ESA; 16 USC §§ 1531 1543). Establishes legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. The ESA is administered by the USFWS for terrestrial species. Under the ESA, the USFWS may designate critical habitat for listed species. Section 7 of the ESA requires federal agencies to consult with the USFWS to ensure that their actions are not likely to jeopardize listed threatened or endangered species, or 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" and "harm" is further defined to include significant habitat modification or degradation that actually kills or injures listed wildlife by significantly impairing essential behavioral patterns.

Migratory Bird Treaty Act (MBTA; 16 USC §§ 703 711). 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 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 (BGEPA; 16 USC § 668). The Bald and Golden Eagle Protection Act (BGEPA) prohibits the take, possession, and commerce of bald eagles and golden eagles. Under the BGEPA and subsequent rules published by the 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 §§ 2801 et seq.). Provides for the "management of undesirable plants on Federal lands."

Executive Order 13112, Invasive Species. 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. Directs federal agencies to review the effects of actions and agency plans on migratory birds according to the National Environmental Policy Act (NEPA) or other established environmental review processes, with emphasis on species of concern (Section 6 of the order) and 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).

California Desert Conservation Area Plan, As Amended (CDCA Plan). The CDCA Plan guides the management of approximately 12 million acres of BLM-administered lands in the California Desert District, including the Mojave, Sonoran, and a small portion of the Great Basin Deserts. The Project 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, amendment to the CDCA Plan. Provides more specific management direction for BLM lands in the Colorado Desert, including the BLM lands located within the area. Many of the specific management actions in NECO were superseded by the DRECP LUPA.

Desert Renewable Energy Conservation Plan (DRECP), Land Use Plan Amendment (LUPA) to the CDCA Plan. The purpose of the BLM DRECP is to conserve and manage plant and wildlife communities in the desert regions of California while facilitating the timely permitting of compatible renewable energy projects. The DRECP LUPA covers over 10 million acres of BLM land. The DRECP LUPA includes plan decisions necessary to adopt a conservation strategy and a streamlined process for the permitting of renewable energy and transmission development on BLM-managed lands, while integrating other uses and resources. This is achieved through the designation of land use allocations for Ecological and Cultural Conservation, Recreation, and Development, and adopting CMAs for resources on public BLM lands throughout the LUPA Decision Area. At the broadest level, the LUPA includes the following components: Development Focus Areas (DFAs), Variance Process Lands (VPLs), General Public Lands, BLM Conservation Areas, and BLM Recreation Areas (BLM, 2016). The DRECP was developed as an interagency plan in 2016, and DFAs, where renewable energy development should be concentrated, were designated by the BLM, in coordination with the U.S. Fish and Wildlife Service (USFWS), California Energy Commission (CEC), and California Department of Fish and Wildlife (CDFW). The BLM ROD for the DRECP was issued in September 2016.

3.5.2.2. State Laws, Regulations, and Policies

California Endangered Species Act (CESA; Fish and Game Code § 2050 et seq.). Prohibits take of state-listed threatened or endangered species, or candidates for listing, except as authorized by the CDFW. Under the California Fish and Game Code and CESA, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" but does not include "harm" as defined under the federal ESA. Authorization may be issued as an Incidental Take Permit or, for species listed under both CESA and the federal ESA, through a Consistency Determination with the federal incidental take authorization.

Fully Protected Designations (Fish and Game Code §§ 3511, 4700, 5050, and 5515). The California Fish and Game Code designates 36 fish and wildlife species as "fully protected" from take, including hunting, harvesting, and other activities. The CDFW may only authorize take of designated fully protected species through a Natural Community Conservation Plan (NCCP) or for necessary scientific research.

Birds (Fish and Game Code § 3503 and 3513). The California Fish and Game Code prohibits take, possession, or needless destruction of bird nests or eggs except as otherwise provided by the code. Section 3513 prohibits take or possession of any migratory nongame bird, as designated in the federal MBTA; it does adopt the federal exemption of incidental take.

Protected Furbearers (Cal. Code Regs. tit. 14, § 460). Specifies that several furbearing mammals, including desert kit fox, may not be taken at any time. The CDFW may permit capture or handing of these species for scientific research but does not issue Incidental Take Permits for other purposes.

Native Plant Protection Act (Fish and Game Code §§ 1900 1913). Prior to enactment of CESA and the federal ESA, California adopted the Native Plant Protection Act (NPPA). CESA (above) generally replaces the NPPA for plants originally listed as endangered under the NPPA. However, plants originally listed as rare retain that designation, and take is regulated under provisions of the NPPA. The California Fish and Game Commission adopted revisions to the NPPA allowing CDFW to issue incidental take authorization for listed rare plants, effective January 1, 2015.

Lake and Streambed Alteration (Fish and Game Code §§ 1600 1616). The CDFW regulates activities that would 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 § 13000 et seq.). RWQCBs regulate Waters of the State, including State coordination with the Clean Water Act where federally jurisdictional waters are present. The Project is within the Colorado River Basin RWQCB area.

3.5.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan (2015). Includes policies addressing biological resources within the Land Use (LU) and Open Space (OS) elements, 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 (AI 10).
- **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 CDFW, USFWS, and any other appropriate agencies in establishing programs for the voluntary protection, and where feasible, voluntary restoration of significant environmental habitats (AI 10).
- **Policy OS 18.1**: Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs and through implementing related Riverside County policies. (The Project site is not within an MSHCP area).

3.5.3. Methodology for Analysis

The impact assessment presented in this EIR was conducted to identify and disclose potential direct, indirect, and cumulative impacts of the proposed Project and alternatives. Examples of potential direct impacts to biological resources include mortality, injury, or displacement of special-status plants or animals; loss or degradation of native habitat; interference with wildlife movement or migration; and

disturbance to plants, animals, and habitat from noise, light, or dust. Examples of potential indirect impacts that occur later in time or farther removed in distance, include erosion, sedimentation, introduction of invasive species, or increased predation on native wildlife due to habitat alterations (e.g., perch sites or "subsidies" for predators).

The analysis presented in Section 3.5.5 (Proposed Project Impact Analysis) is based on the biological resources on the Project site, described in Section 3.5.1 (Environmental Setting) and in Appendix C (Biological Resources Technical Report), and on the Description of the Proposed Project and Alternatives (Section 2 of this EIR). Several meetings were held among the Applicant, wildlife agencies, and BLM biologists to discuss potential impacts and applicable regulation. In addition, written and oral comments regarding the Project's potential impacts to biological resources during the scoping process (EIR Appendix B, Scoping Report) were reviewed to inform the analysis.

The analysis identifies and describes the proposed Project's expected impacts on biological resources and identifies mitigation measures to reduce those impacts to less than significant. Sections 3.5.6 and 3.5.7 provide similar analyses of Project alternatives. Potential impacts on biological resources that may be individually limited, but cumulatively considerable are addressed in Section 3.5.8.

3.5.4. CEQA Significance Criteria

The criteria used to determine the significance of potential biological resources impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to biological resources if the Project would:

- *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Impact BIO-3).*
- *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 (Impact BIO-4).*
- *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-5).*
- *Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Impact BIO-6).*

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:

- *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-1).*
- *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 (Impact BIO-2).*

The following CEQA significance criterion from Appendix G was not included in the analysis and is not discussed further beyond this summary:

- *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 site is not within an area covered by an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan. Therefore, no impacts would occur. Public lands within and surrounding the Project site are within the area managed by BLM under the DRECP, which is applicable only on federal lands. The BLM is responsible for environmental review, including DRECP compliance, under NEPA.

3.5.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department resulted in several public comments and concerns related to Biological Resources. Public concerns communicated in the scoping process related to biological resources include:

- Impacts to vegetation communities, desert dry wash woodlands, ironwood trees, and desert wildflowers.
- Impacts to displaced wildlife (including desert tortoise, deer, coyote, cougar, lizards, and migrating birds), loss of habitat, and new barriers to movement routes. Concerns that fewer wildlife are seen in the community since solar development started.
- Impacts to desert tortoise habitat connectivity between designated critical habitat units and loss of gene flow.
- Potential "lake effect" that may attract birds, resulting in collisions with facilities. Impacts of power lines on birds, resulting in electrocution. Impact of solar development on health and presence of migratory birds.
- Ground disturbance and grading resulting in modifications to washes, stormwater runoff, and potential for floods in the community. Impacts of vegetation management on erosional patterns during flash flooding.
- Success of post-construction revegetation, considering climate change in an arid climate.
- Concerns regarding an increase in termite swarms and rattlesnake encounters (see Section 4.5, Other Public Concerns).
- Need to consider acreage already lost to solar development in the DFA, and what is likely to be developed in the future.
- Potential for increased local temperatures due to "PV heat island effect".

Acreages of impacts to sensitive resources in the proposed solar facility footprint are outlined in Tables 3.5-1a and 3.5-1b. Impacts on desert dry wash woodland are described in Impact BIO-1. Impacts to desert tortoise critical habitat are described in Impact BIO-2. Impacts to the DRECP desert tortoise and multi-species linkages are described in Impact BIO-3.

Impacts would be less than significant with the incorporated mitigation. This section of the EIR describes biological resources at the Project site and evaluates the Project's potential impacts to biological resources, including special-status species, wildlife movement, and jurisdictional waters. With implementation of mitigation measures (Section 3.5.9), none of the Project's potential impacts to biological resources would be significant.

The analysis is based on the Biological Resources Technical Report (BRTR) and Jurisdictional Waters Report, prepared by Ironwood Consulting (Ironwood, 2023a; 2023b) (see Appendices C and F, respectively). Impacts along the gen-tie line were evaluated based on descriptions and mapping of biological resources on the Oberon Renewable Energy Project site (Ironwood, 2021a; 2021b).

Impact BIO-1. 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. Wildlife Service.

LESS THAN SIGNIFICANT WITH MITIGATION. Potential effects on special-status plants and wildlife could result from construction or operation and maintenance (O&M) of the proposed Project. Construction activities would minimize grubbing and grading, except for specific facilities. Substation, storage container, O&M facilities, and roads would require mowing, grubbing, grading, and compaction. The solar array areas would require trimming of woody vegetation. Certain areas of the site with highly irregular topography that provide important hydrologic functions to the site would be avoided by Project design. Other irregular areas would be leveled or smoothed to provide for construction access and installation.

During O&M, impacts would be reduced compared to construction, and would be limited to repair and maintenance of facilities and fencing, requiring minimal staff on site. Vegetation under solar panels would continue to be trimmed, and panels would be washed infrequently if natural rains do not sufficiently remove dust and debris. Vehicles would be used to access Project facilities, which may create a hazard for wildlife in the vicinity of access roads.

Potential direct and indirect impacts on special-status plants and wildlife are outlined below for the solar facilities and the gen-tie line. These direct and indirect impacts to special-status species and their habitat would be significant. Impacts can be avoided, minimized, and mitigated with implementation of mitigation measures specified in Section 3.5.9 and as detailed below for vegetation and habitat, special-status plants, and special-status wildlife. Compliance with applicable CMAs and any Project-specific mitigation measures developed during the NEPA process would further minimize impacts of the proposed Project on special-status species on BLM lands. With mitigation, impacts to special-status plants and wildlife would be less than significant.

Solar and BESS Facility

Vegetation and Habitat

The Project would permanently impact native habitats as shown in Figure 3.5-2 and Tables 3.5-1a and 3.5-1b. Impacts to desert dry wash woodland, a sensitive community, are detailed further in the discussion of Impact BIO-4 and would primarily occur on public lands (BLM). All affected habitats may support special-status plant and wildlife species (described below).

Table 3.5-1a. Impacts to Vegetation Communities

Vegetation Type	Solar & BESS Facility (Acres)	500kV Gen-tie Line ROW (175-ft wide)*	Exterior Components (Roads & MVAC Lines)	TOTAL
Native Habitats				
Creosote Bush Scrub	1,545.9	107.0	28.0	1,680.9
Desert Pavement	44.0	8.0	-	52.0
Dry Desert Wash Woodland	3.8	22.5	5.3	31.6

Vegetation Type	Solar & BESS Facility (Acres)	500kV Gen-tie Line ROW (175-ft wide)*	Exterior Components (Roads & MVAC Lines)	TOTAL
Non-Native Habitats				
Annual grasses	31.7	-	-	31.7
Deciduous Orchard/Fallow Agriculture	406.0	0.4	5.9	412.3
Developed Water Feature	10.1	-	-	10.1
Invasive Tamarisk/Riparian	0.4	-	-	0.4
Urban/Developed	8.6	0.4	1.5	10.5
TOTAL	**2,050.5 acres**	**138.3 acres***	**40.7 acres**	**2,229.5 acres**

*Final gen-tie line impact acreages will be less than the 175-foot-wide ROW shown in the table, as impacts would occur only at structures and spur roads. Disturbance assumptions at each structure location are included in EIR Section 2.4.6. Furthermore, structures would be micro-sited to minimize impacts to sensitive habitats and resources to the maximum extent feasible.

Table 3.5-1b. Impacts to Native Habitats by Land Ownership

Vegetation Type	Solar/BESS Facility (all components excluding gen-tie line)	500 kV Gen-tie Line ROW (within Oberon Project)	TOTAL	Undeveloped Land within Project Area (acres avoided)
PUBLIC LANDS (BLM)				
Sonoran Creosote Bush Scrub	1,374.4	107.0	1,481.4	614.7
Desert Dry Wash Woodland	8.9	22.5	31.4	648.5
Desert Pavement	44.0	8.0	52.0	22.1
TOTAL (Public Lands)	**1,427.3 acres**	**137.5 acres***	**1,564.8 acres**	**1,285.3 acres**
PRIVATE LANDS				
Sonoran Creosote Bush Scrub	196.5	0.0	196.5	135.3
Desert Dry Wash Woodland	0.2	0.0	0.2	83.7
TOTAL (Private Lands)	**196.7 acres**	**0.0 acres**	**196.7**	**219.0 acres**
TOTAL	**1,624 acres**	**137.5 acres***	**1,761.5 acres**	**1,504.3 acres**

*Final gen-tie line impact acreages will be less than the 175-foot-wide ROW shown in the table, as impacts would occur only at structures and spur roads. Disturbance assumptions at each structure location are included in EIR Section 2.4.6. Furthermore, structures would be micro-sited to minimize impacts to sensitive habitats and resources to the maximum extent feasible.

Vegetation, including native vegetation, habitat, and special-status plants would be trimmed, cut, or removed. Soils throughout the solar fields would be affected by some form of ground disturbance, which may result in erosion or compaction of soils. Construction activities could accumulate dust on vegetation, which could diminish gas exchange or photosynthesis. Altered hydrology from site preparation could directly or indirectly affect native habitats by increasing stormwater runoff, increasing erosion, and degrading habitat conditions. Effects to soils and vegetation, in turn, would affect special-status wildlife that may be present due to the collapse of burrows and removal of vegetation used as nesting and foraging habitat.

During construction, the Project would temporarily affect surrounding habitat by introducing heavy equipment, vibrations, noise, lighting, dust, and increased human presence, resulting in disturbances that would affect wildlife behavior. Temporary noise and disturbances would occur at various parts of the Project areas at various times during construction. These impacts cannot be quantified as each species or individual animal would react differently to the various disturbances.

Construction would indirectly affect native vegetation communities through the potential introduction and spread of invasive weeds, which could degrade plant and wildlife habitat on the Project site and beyond the site boundaries.

While chemical control with herbicides may be necessary to minimize the spread of non-native invasive species following construction, their use may affect adjacent non-target vegetation and wildlife in treatment areas. Accidental spills and herbicide drift from treatment areas could be particularly damaging to non-target vegetation.

As described for O&M and decommissioning, washing of solar panels would introduce additional water to the site, which would supplement natural sources and may affect vegetation composition or persistence. However, panel washing would be performed infrequently (up to four times each year) if natural rains do not sufficiently clear dust and debris. No chemical agents would be used for module washing. It is not expected that panel washing and the supplemental water would be enough to affect vegetation community composition or persistence.

Photovoltaic Heat Island Effect

A photovoltaic (PV) "heat island" effect refers to the temperatures in and around PV solar power plants increasing from ambient temperature due to replacement of native land cover with solar panels that absorb heat. This is similar to the "urban heat island" effect, where native cover is replaced with pavement and concrete buildings. Solar panels convert solar radiation into heat, which can alter the air flow, energy flux dynamics, and temperatures near the panels (Fthenakis and Yu, 2013; Barron-Gafford et al, 2016). Soils, vegetation, and wildlife may be affected by such changes and increases in temperature in and around the solar farms.

Fthenakis and Yu (2013) found that annual average air temperature in the center of a solar project at heights approximately 2.5 meters (8 feet) above the ground can reach up to 1.9°C (3.5°F) above ambient temperature. This thermal energy dissipates and reaches ambient temperature at 5-18 meters (16-60 feet) above the ground. This same study found a prompt dissipation of thermal energy and decrease to ambient temperatures around the PV panels at 300 meters (984 feet) away from the perimeter of the solar farm and that access roads between solar fields allow for substantial cooling. Over 18 months of data showed that the solar array was cooled to ambient temperatures overnight. This study suggests that increases in temperatures surrounding solar farms are localized during the day.

Similarly, Broadbent (2019) found increased temperatures during the day, with an average 1.3°C increase in air temperature in the solar field at a height of 1.5 meters (5 feet). During the night, their results also showed no significant difference in the air temperatures between the solar facility and a reference site. This study also showed that the average soil temperature at 2 to 6 centimeters (0.75 to 2.4 inches) depth at the solar site was approximately 10°C cooler than at the exposed reference site. By contrast, the nighttime soil temperatures at the solar site were warmer than the reference site. The study demonstrated that shading from solar panels causes cooler soil temperature during the day and slightly warmer soil temperature at night.

Barron-Gafford et al (2016) monitored three study sites (natural desert ecosystem, traditional built environment (parking lot with commercial buildings), and PV power plant), measuring air temperature at 2.5 meters (8 feet) off the ground. The average annual air temperature was greater at the PV power plant, increasing 2.5°C during the day. Contrary to other studies, a delayed cooling of ambient temperatures was detected in the evenings, with average annual midnight temperatures increasing 3.5°C, compared with the natural desert ecosystem. This study asserted that by removing vegetation, heat-dissipating transpiration from vegetation is decreased, and compared to natural systems, the greater amount of exposed ground surfaces absorbs more solar radiation during the

day, which may increase soil temperatures (Barron-Gafford et al, 2016). During the night, stored heat is reradiated, where warming under the panels may be due to the heat trapping of reradiated heat flux (Barron-Gafford et al, 2016). Broadbent (2019) suggests that these considerable nighttime temperature increases detected were partially caused by advection from urban surfaces near the study site.

Devitt (2022) evaluated a large solar facility in the Mojave Desert and the effect it had on adjacent down gradient creosote communities. The study monitored changes in soil and plant water status over a 900-meter transect where a built service road resulted in decoupling of up-gradient washes from down-gradient locations leading to a decline in soil water in storage. Similar to other studies, air temperatures were significantly warmer near the solar facility compared to a reference point. Consistent with Barron-Gafford (2016), night temperatures were found to be higher closest to the solar facility.

Beatty (2017) studied revegetation of a solar facility with varying treatments (varying seed mixes (shade tolerant vs. sun tolerant), varying cultural treatments (protection of seeds), and varying amounts of shade (based on orientation of collector panels)). The highest total vegetation cover was associated with seeding warm-season native grasses in the absence of any seed protection. Renewable Energies Agency looked at revegetation under modules for various case studies and recommended using a seed mixture appropriate for local site fauna to promote re-establishment of vegetation (Beatty et al, 2017). Although the study did not address whether successful revegetation fostered reestablishment of wildlife use, incidental observations suggested that it had to some extent.

Notably, these studies were performed on solar sites that were graded and unvegetated. Barron-Gafford concluded, in part, that mitigation of the PV heat island effect would be achieved through targeted revegetation, which could ease ecosystem degradation associated with development of utility scale solar projects (Barron-Gafford et al, 2016). Further, the study performed by Devitt (2022) was located at a solar facility with a fixed panel system. Regarding nighttime temperatures, the study suggested that if the panels are mounted as a tracking system, the panels could be situated in a perpendicular position relative to the ground at night, allowing longwave radiation and trapped heat to escape to the sky, reducing the heat displacement into adjacent plant communities during the early morning hours.

Based on studies to date, impacts to vegetation and wildlife at solar facilities related to the PV heat island effect include increased air temperatures in the vicinity of the solar field and changes in soil temperatures. Increased temperatures could impact the species composition of vegetation and wildlife in the vicinity of the solar facility, where temperatures could be too high for certain species to persist. Mobile species may be displaced as they are forced to vacate the area of increased temperatures. Changes in hydrology could reduce water availability for vegetation communities and increases or decreases in soil temperatures could affect persistence of vegetation and habitat suitability for burrowing wildlife.

However, unlike the solar farms in these studies, the proposed Project would maintain vegetation under the solar panels, which would be mowed and rolled to a height of 12 inches to preserve vegetation and facilitate more effective post-construction site revegetation (see Section 2.6.3). Woody vegetation, such as palo verde trees, that are in areas adjacent to infrastructure where it does not affect solar panel performance would be partially cut, leaving the lower trunk intact to allow regrowth of branches and leaves. Certain areas of the site with highly irregular topography that provide important hydrologic functions to the site would be avoided by Project design. It is anticipated that many species will regenerate post-construction due to preservation of desert vegetation during the construction phase. After construction, a Vegetation Resources Management Plan (MM

BIO-5) would be implemented to direct revegetation of temporarily disturbed areas and monitor the success of revegetation efforts. Revegetation would also be the primary strategy to control dust across the solar facility site. Onsite vegetation may be trimmed approximately once every three years, as needed. Further, the proposed panel mounting system is expected to be single-axis trackers with a portrait module orientation (see Section 2.5.1), that could be oriented throughout the night to release stored heat.

The studies suggest that many factors interact in complex ways to influence the movement of heat away from solar facilities, including topography, wind direction, flows of cold air, seasonal changes in climate, shading from solar panels, presence of native vegetation and hydrology, and structural features of the solar panels (ability to tilt and height from the ground). Further research is needed to evaluate the PV heat island effect at solar facilities where vegetation is maintained in the solar field and where solar panels are mobile on a tracking system. However, existing studies suggest that by maintaining vegetation under the solar panels, and adjusting the nighttime tilt of solar panels, the PV heat island effect can be mitigated and impacts would not be significant.

Without mitigation, the loss of native vegetation and habitat on the Project site would significantly affect special-status species on the site or in the vicinity. Impacts would be avoided, minimized, and mitigated by implementing mitigation measures (MMs), listed below.

MM BIO-1 (Biological Monitoring) would require monitoring and reporting by qualified biologists to ensure compliance with all biological resource measures, including avoidance and minimization of habitat impacts. MM BIO-2 (Worker Environmental Awareness Training) would require training of on-site workers to identify sensitive biological resources and to avoid and minimize impacts to special-status species and their habitat. MM BIO-3 (Minimization of Vegetation and Habitat Impacts) would require clear demarcation of work areas and limitation of activities within those areas, to minimize significant effects to habitat. Native vegetation would be allowed to recover from rootstocks where permanent facilities are not required, improving post-construction habitat values in the Project area. MM BIO-4 (Integrated Weed Management Plan) requires that the Integrated Weed Management Plan (IWMP) specify weed species occurring or potentially occurring in the Project area, the 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-4 requires the IWMP to identify herbicides that may be used for control or eradication, and avoid herbicide use in or around any environmentally sensitive areas. MM BIO-5 (Vegetation Resources Management Plan) requires revegetation of temporarily disturbed areas to minimize dust and erosion and to improve post-construction habitat values.

Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Impacts to desert dry wash woodland would be avoided on private lands, as on BLM lands in accordance with the DREPC CMAs. Habitat impacts on BLM lands would also be mitigated in accordance with the DRECP and mitigation measures in the final NEPA document.

MMs BIO-1 through BIO-5 would minimize significant impacts to native habitat.

Special-status Plants

Construction activities may result in direct impacts to special-status plants, including loss of individuals. Four special-status plants were observed on the Project site (Figure 3.5-4). One Emory's crucifixion thorn was observed along the northern boundary of the site and would be avoided outside the development footprint. California ditaxis was observed primarily along or outside Project boundaries, and impacts would be minimal. Desert unicorn-plant is located primarily in desert dry wash woodland habitat that would be avoided outside the development footprint, and impacts would be minimal. Utah milkvine was observed in one location. As CRPR 4 (watch list) species without additional reasons for conservation concern (e.g., geographic range, unusual morphology, or unusual habitat/substrate), potential impacts to

desert unicorn-plant and Utah milkvine are not significant. Suitable habitat for glandular ditaxis and spiny abrojo is located within the Project area, but they were not observed. No other special-status plant species were observed.

Impacts to special-status plants would be similar to those previously described for Vegetation and Habitat. Without mitigation, the loss of vegetation and natural habitat on the Project site would significantly affect special-status plants on the site. Impacts would be avoided and minimized by implementing MMs BIO-1 through BIO-5.

Special-status Wildlife

Construction may result in direct impacts to special-status wildlife including injury or mortality. Construction activities would cause most mobile vertebrate wildlife to leave or attempt to leave the site. Wildlife 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 wildlife may be unable to find suitable food or cover in new, unfamiliar areas. Displacement effects would apply to common and special-status wildlife species.

Construction could cause mortality of small mammals and reptiles 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 and some reptiles, if present during construction, would tend to shelter inside burrows where they could be vulnerable to crushing. Land use conversion could exclude reptiles, birds, and mammals from portions of their territories. Facilities could present hazards to wildlife. For example, vertical structures 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. Open, uncovered water tanks may attract wildlife that subsequently drown without a means of exit.

Noise and lighting during construction could affect wildlife in adjacent habitats by disrupting foraging, breeding, sheltering, and other activities; or may cause wildlife to avoid otherwise suitable habitat surrounding the site. Lighting during construction may affect nocturnal wildlife species, by causing alterations to forage 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 wildlife, either as direct hazards (vehicle strikes) or as attractants such as food or water that may put wildlife in harm's way. Facilities and equipment may become nest or perch sites for certain birds (common raven, loggerhead shrike) which may prey on special-status species (desert tortoise).

Herbicides used to treat invasive weeds may also pose risks to terrestrial or aquatic wildlife species. Herbicides that persist on site could injure wildlife that ingest target plants or come into contact with herbicides (e.g., by digging or rolling in treated soil).

Impacts to special-status wildlife are discussed by species in detail below. Without mitigation, impacts to special-status wildlife would be significant, as described for each species.

MM BIO-6 (Wildlife Protection) identifies numerous requirements to avoid, minimize, and mitigate wildlife injury and mortality, such as site inspections, ramps to ensure escape from excavations, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits.

Additionally, BLM with Cornell University, USGS, and UC Davis would conduct a three-year BACI scientific research study on wildlife responses to solar energy development (e.g., site preparation, management actions, and conservation measures) on federal lands in the Project vicinity. The Easley site would be surveyed during construction and O&M to better understand wildlife movement in desert wash corridors in relation to solar facilities, post-construction wildlife responses relative to pre-construction baselines,

and effective conservation measures and adaptive management. While the study will not focus on federally listed species, the responses of other sensitive and common species would inform management approaches.

With implementation of MM BIO-6 and other wildlife mitigation measures described for each species, impacts to special-status wildlife would be less than significant.

Couch's spadefoot toad. Couch's spadefoot toad uses late season monsoonal rain pools for breeding, development and hatching of eggs into tadpoles and then juvenile toads. It requires rain pools that hold water long enough for the eggs and tadpoles to develop, and then disperse into surrounding habitat (approximately 1 week). Couch's spadefoot toad was not observed, but potential suitable breeding habitat is present within the Project site in areas where water accumulates, primarily along Project boundaries where water from agricultural uses accumulates (Figure 3.5-5).

Impacts to Couch's spadefoot toad, if present, may include direct loss of habitat, mortality from crushing or vehicle collision, or increased predation by opportunistic predators. MMs BIO-1 to BIO-5, previously discussed, would minimize significant impacts to native vegetation and habitat. MM BIO-6 (Wildlife Protection) would minimize mortality and injury with implementation of pre-construction surveys, vehicle speed limits, and measures to prevent entrapment and release entrapped wildlife. MM BIO-12 (Streambed and Watershed Protection) would require Best Management Practices (BMPs) to protect water resources on the Project site, where Couch's spadefoot toad may occur. Construction would require a Lake and Streambed Alteration Agreement (LSAA) from CDFW and Waste Discharge Requirements (WDR) from RWQCB, which would have additional permit requirements to protect jurisdictional wetlands and waters, including Couch's spadefoot toad habitat (see Impact BIO-5). With implementation of mitigation measures, impacts to Couch's spadefoot toad would be less than significant.

Native Birds. Native birds are protected under the California Fish and Game Code and federal MBTA (see Section 3.5.2, Regulatory Framework). Special-status birds are discussed in the paragraphs below. The Project site and surrounding area provides suitable nesting habitat for numerous resident and migratory bird species. Bird nests, including eggs and nestlings, are vulnerable to construction activities that may disrupt nesting behavior or damage nests, birds, or eggs.

Direct removal of vegetation and habitat on the Project site would reduce availability of nesting and foraging habitat. Indirect impacts would include increased noise, dust, light, and activity, which may affect migratory or foraging behavior. After completion of construction and throughout the life of the Project, the solar facilities and other Project components may present a collision or electrocution risk to birds. Impacts due to collision and electrocution are detailed below.

Impacts to native birds, including special-status birds, would be significant. Impacts would be avoided and minimized with implementation of mitigation measures. Implementation of MMs BIO-1 through BIO-6, which require habitat compensation, revegetation of short-term impact areas, pre-construction surveys and marking of sensitive resources, management plans, and construction crew training, would minimize and offset adverse impacts to native vegetation, thereby minimizing impacts to bird and bat habitat.

MM BIO-6 (Wildlife Protection) would minimize Project impacts to birds through a series of requirements to minimize or avoid wildlife injury, such as site inspections, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits.

MM BIO-8 requires a Bird and Bat Conservation Strategy (BBCS) that would identify potential hazards to birds and bats during construction and O&M, implement nesting bird surveys per a Nesting Bird Management Plan (NBMP), include monitoring and avoidance of nesting seasons, and specify measures to recognize, minimize, and avoid hazards. With mitigation, impacts to native birds would be less than significant.

Bird Collision

After completion of construction and throughout the life of the Project, the solar facilities and other components may present a collision or electrocution risk to birds. Collisions typically occur when the structures are not visible (e.g., power lines or guy wires at night), or are deceptive (e.g., glazing and reflective glare) or confusing (e.g., light refraction or reflection from mist). In the case of solar panels, some have hypothesized that the collision risk may be linked to a "false-lake effect," wherein birds may mistake PV panels for water bodies, and consequently be attracted to them. This effect may be the cause of water-associated and water-obligate species mortalities, including federally listed Yuma Ridgway's rail, which has been found at another solar facility.

Solar structures found in large solar generation facilities may mimic water bodies (i.e., "lake effect") and create solar flux that could potentially result in collision. The highest anticipated collision risk is in the Cadiz Valley and Chocolate Mountain area where the Project is located (BLM, 2015).

A collection of 13 fatality monitoring studies at PV solar facilities in three bird conservation regions (BCRs) in California and Nevada have shown the highest percentage of fatalities across all studies were common species, including mourning dove, horned lark, house finch, and western meadowlark.

Passerines (55.0 percent) and doves/pigeons (17.0 percent), on average, are the most common detections (Kosciuch et al., 2020). Carcasses of water-associated birds (e.g., herons and egrets) and water-obligate birds (e.g., loons and grebes) have been found at PV solar facilities in the Sonoran and Mojave Deserts, primarily found at sites within 60 miles of the Salton Sea. Water-associated (6.3 percent) and water-obligate species (7.8 percent) each compose less than 10 percent of the detections. Raptors are very uncommon detections (less than 1.0 percent) (Kosciuch et al., 2020). Sensitive species that could occur at the Easley Project site that have been detected as fatalities in the arrays at desert sites include loggerhead shrike (four) and yellow-breasted chat (two). No large mortality events have been documented at PV solar facilities.

The structures that have been empirically demonstrated to result in elevated collision risk at various types of facilities (e.g., tall buildings, communication towers, wind turbines, or concentrating solar thermal towers) would not be required at the solar facility for the Project, which consists of low-height PV arrays.

MM BIO-8 (Bird and Bat Conservation Strategy) would require the Applicant to prepare a BBCS with provisions for adaptive management to monitor the death and injury of birds, based on the results of similar monitoring at other solar project sites in the vicinity. Resulting data would be used to inform adaptive measures needed to mitigate or minimize Project-related avian impacts. Adaptive management during O&M would minimize adverse impacts to birds flying over the Project site.

Impacts to birds due to electrocution are discussed below for gen-tie lines.

With implementation of the mitigation measures described above, impacts to native birds would be less than significant.

Western Burrowing Owl. Two burrowing owls, eight burrows, and sign were observed at the Project site and suitable habitat is present. Potential direct Project impacts to burrowing owls include mechanical crushing of individuals or burrows by vehicles and construction equipment, habitat loss, and noise and disturbance to surrounding habitat.

MMs BIO-1 through BIO-5, as previously described, would minimize adverse impacts to native vegetation. MMs BIO-6 (Wildlife Protection), BIO-8 (Bird and Bat Conservation Strategy), and BIO-10 (Burrowing Owl Avoidance and Relocation) would prevent or minimize potential injury to burrowing owl by requiring site inspections, species avoidance, pre-construction nest surveys, identification of occupied burrows, and safe exclusion of owls through passive relocation. These measures are expected to effectively avoid lethal

take of burrowing owls by excluding them from the Project area or if active nests are present, by avoiding disturbance in surrounding buffer areas.

Golden eagle. Golden eagles are protected under the federal BGEPA as well as the MBTA and California Fish and Game Code. The site does not provide suitable golden eagle nesting habitat. However, the site provides suitable foraging habitat, and is within potential foraging distance of known golden eagle nesting territories located in the Eagle Mountains, Coxcomb Mountains, and Chuckwalla Mountains. Golden eagles may be at risk of collision with gen-tie lines due to their large size.

Loss of foraging habitat may affect golden eagles during nesting, winter, or migratory seasons. MMs BIO-1 through BIO-5, as previously described, would minimize adverse impacts to native vegetation. Additionally, MM BIO-8 (Bird and Bat Conservation Strategy) would require the Applicant to prepare and implement an overall strategy to avoid, minimize, or mitigate the Project's impacts to birds and bats, including golden eagles, through gen-tie design, and, if necessary, operations monitoring and implementation of adaptive measures, to further reduce effects. The proposed mitigation measures are expected to effectively minimize any take of golden eagles and to offset habitat loss.

Other Special-Status Raptors. Several other special-status raptors have been reported on or near the Project site or are likely to occur in the area seasonally. Migratory raptors, including ferruginous hawk, Swainson's hawk (see Impact BIO-2), northern harrier, and short-eared owl migrate through the region during spring or fall migration or may spend winters in the vicinity but would not nest on or near the Project site due to absence of suitable habitat. American peregrine falcon and elf owl (see Impact BIO-2) may forage on the Project site, and marginal nesting habitat for elf owl is present. Prairie falcon would be expected to nest in the surrounding mountains and to forage over the site at any time of year. The Project's potential impacts to prairie falcon nesting and foraging habitat would be similar to those described for golden eagle.

MMs BIO-1 through BIO-5, as previously described, would minimize adverse impacts to native vegetation.

Special-Status Passerine Birds. The desert vegetation and adjacent mountains provide foraging, cover, or breeding habitat for resident and migratory special-status birds, as described in Section 3.5.1. Potential impacts to these species would be the same as those previously described for other nesting or migratory birds. MMs BIO-1 through BIO-5, as previously described, would minimize adverse impacts to native vegetation. Impacts to special-status birds would be further minimized with MM BIO-9 (Bird and Bat Conservation Strategy), which would require pre-construction nest surveys, and protection of active nests throughout the nesting season. These measures are expected to effectively minimize adverse impacts to special-status birds on the site and to offset habitat loss through the acquisition and management of off-site lands.

Desert kit fox and American badger. Active and inactive desert kit fox burrows and dig marks, tracks, and/or scat were observed within the Project site, and active and inactive American badger burrows and dig marks/tracks were identified (Figure 3.5-8).

Both species could use native habitats, wherever prey animals may be present, and soils are suitable for burrows. Potential direct impacts to American badger and desert kit fox include mechanical crushing of individuals or burrows by vehicles and construction equipment, habitat loss, and noise and disturbance to surrounding habitat. Exclusion or security fencing could entrap desert kit foxes or badgers in the construction area. Without mitigation, impacts to desert kit fox and American badger could be locally significant.

MM BIO-1 through MM BIO-5, listed above, would minimize adverse impacts to native vegetation. MM BIO-6 (Wildlife Protection) and MM BIO-11 (Desert Kit Fox and American Badger Relocation) would prevent or minimize potential injury and mortality to desert kit fox and American badger. MM BIO-6 identifies practices and requirements to prevent or minimize wildlife injury and mortality, and MM BIO-11

specifies details for desert kit fox and American badger relocation, including pre-construction surveys, exclusion of animals from dens, passive relocation from the site, and avoidance of natal dens, in coordination with CDFW.

Burro deer. Nearby active agricultural areas provide a dependable water source for burro deer. Additionally, desert dry wash woodland habitat may provide seasonal foraging or cover habitat for burro deer. Burro deer scat and tracks were observed throughout the Project site. Potential impacts of the Project could include loss of habitat and restriction of movement to water sources, which would be significant. Burro deer are expected to avoid Project-related disturbance during construction and O&M, and continue to use the desert dry wash woodland habitat that is avoided by the Project to access water sources. No special measures are necessary to exclude them from work areas. Due to the Project's location on the valley floor near sites with comparable land uses and human activity patterns, the Project is not likely to impact bighorn sheep behavior or habitat use to any large extent. MMs BIO-1 through BIO-5, listed above, would minimize adverse impacts to native vegetation, including burro deer habitat. Potential impacts to movement of burro deer are addressed under Impact BIO-3, below.

Special-Status bats. Several special-status bats could use the Project site for foraging, but only minimal suitable roosting habitat is available. Project construction could have a significant affect special-status bats through the elimination of desert shrubland foraging habitat. Common bats and special-status bats may roost in desert dry wash woodland habitat on the site.

Solar energy development is a relatively new anthropogenic feature for bats to encounter, and responses are not well studied. Thus far, ongoing studies have shown that bats are susceptible to collisions with moving structures such as wind turbines, but infrequently collide with stationary structures (WEST, 2020). Bat mortality could also occur if individuals became trapped in other infrastructure. Bat carcasses were rarely detected at utility-scale PV solar energy facilities that have been monitored thus far (WEST, 2020). It is anticipated very few bat fatalities would occur during the life of the Project based on the absent to very low bat fatalities discovered at regional projects.

As mentioned for burro deer, after construction, bats may continue to use desert dry wash woodland habitat that is avoided by the Project. MM BIO-1 through MM BIO-5 would minimize adverse impacts to native vegetation and habitat and offset the permanent habitat loss through off-site habitat compensation. MM BIO-6 (Wildlife Protection) includes a condition to inspect structures prior to demolition and remove wildlife or allow wildlife to escape. MM BIO-8 (Bird and Bat Conservation Strategy) would require additional pre-construction surveys and wildlife exclusion or scheduling of tree removal outside the bat maternal roosting season. These measures are expected to effectively minimize potential impacts on special-status bats, and to offset habitat loss.

500 kV Gen-Tie, Collector, and Distribution Lines

Construction of the gen-tie line would occur through the adjacent Oberon Project site, which is located on BLM-administered lands and was previously analyzed in the Final EIR and Final EA for the Oberon Renewable Energy Project (RWQCB, 2021; BLM, 2022; Ironwood, 2021a). Impacts due to construction of the Easley gen-tie line are described below.

Vegetation & Habitat

Overhead gen-tie line construction would affect vegetation and habitat at discrete disturbance sites where towers or other work activities would be located. If the 34.5 kV or 12 kV lines are installed overhead, similar types of impacts would occur at the pole sites located outside of the solar facility fence line. Construction would not affect most of the vegetation and habitat within the gen-tie routes. For portions of the collector lines that are buried underground, trenches would be dug through vegetated areas or desert pavement. Trenches would be backfilled with native soils and disturbance areas would be

reseeded. The gen-tie line would cross desert dry wash woodland habitat in the eastern portion of the Oberon Project site but impacts to habitat would be avoided except for minor incursion in compliance with DRECP CMAs.

Impacts to vegetation and habitat would be similar to those described for the solar facility. Vegetation would be cleared or trimmed, and soils would be disturbed. After construction, soils would be compacted due to use of heavy equipment, making vegetation difficult to regrow in those areas. Spread of invasive weeds may degrade habitat.

Impacts to natural habitat along the gen-tie line on the Oberon Project site can be avoided and minimized by implementing MMs BIO-1 through BIO-5, which require revegetation of short-term impact areas, pre-construction surveys and marking of sensitive resources, management plans, and construction crew training, thereby minimizing impacts to vegetation and habitat. Additionally, similar mitigation measures required to be implemented for the Oberon Project are included in its Final EIR (RWQCB, 2021) and Final EA (BLM, 2022). Conservation Management Actions (CMAs) would also be implemented on BLM lands per the DRECP, as described in the Final EA for the Oberon Project.

Special-status Plants

Emory's crucifixion thorn was observed on the Oberon Project site in the vicinity of the Easley gen-tie line, but the gen-tie line would not cross near the plant. Mitigation measures for the Oberon Project would avoid and minimize impacts to Emory's crucifixion thorn (RWQCB, 2021; BLM, 2022).

Desert unicorn-plant and spiny abrojo were observed on the Oberon Project site; however, as a CRPR 4 (watch list) species without additional reasons for conservation concern (e.g., geographic range, unusual morphology, or unusual habitat/substrate), potential impacts to desert unicorn-plant and spiny abrojo are not significant (RWQCB, 2021; BLM, 2022). No other special-status plant species were observed or had a high potential to occur, but there is a possibility that several CRPR ranked 3 and 4 species could occur in a year of better rainfall. However, potential impacts to these plants would be less than significant due to their relatively low conservation status and regional occurrences outside the Project vicinity. As previously described, impacts to vegetation for the Easley Project would be avoided and minimized by implementing MMs BIO-1 through BIO-5.

Special-Status Wildlife

Gen-tie construction activities could dissuade special-status wildlife from approaching construction areas due to noise and disturbance. Wildlife present in work areas could be impacted as described for the solar facility. Construction could result in direct mortality or injury from construction equipment and wildlife dispersing from work areas could be at increased risk of predation or vehicle strikes. In most cases, adult birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) would be lost. Displaced wildlife may be unable to find suitable food or cover in new, unfamiliar areas. Gen-tie facilities could present electrocution and other pitfall hazards. Increased human presence, noise, and lighting during construction could affect wildlife in adjacent habitats by disrupting foraging, breeding, sheltering, and other activities; or may cause wildlife to avoid otherwise suitable habitat surrounding the site.

These effects would be temporary (limited to construction phase) and would occur in discrete work areas. MM BIO-6 (Wildlife Protection) identifies numerous requirements during construction to avoid, minimize, and mitigate wildlife injury and mortality, such as site inspections, ramps to ensure escape from excavations, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits.

Once completed, the gen-tie lines would have minimal effects on terrestrial wildlife movement because no new barrier to movement would be constructed beneath the line. However, the gen-tie towers and conductors would present a collision hazard for birds, as described in detail below.

BIO-8 (Bird and Bat Conservation Strategy) would require pre-construction surveys to identify active bird nests, and avoidance of disturbance or disruption nesting behavior, as well as implementation of an adaptive management framework for O&M monitoring of bird mortality, if mortality thresholds are exceeded, based on monitoring at other solar sites.

Transmission structures and fencing would provide increased perching opportunities for predatory birds, including raptors and ravens, which may prey on special-status species. MM BIO-7 (Desert Tortoise Protection) includes preparing and implementing a Raven Management Plan that would manage raven subsidies and attractants. MM BIO-9 (Gen-tie Lines) requires the gen-tie structures be designed to discourage use by raptors for perching or nesting.

Electrocution

After completion of construction and throughout the life of the Project, the gen-tie line may present an electrocution risk. Birds and bats may collide with the overhead lines, including the gen-tie transmission line. Underground gen-tie lines would not present an electrocution hazard.

While few nocturnal migrant passerines have been found in the solar arrays, more have been found underneath the gen-tie lines at the solar projects. Large birds can be electrocuted by transmission lines if the bird's wings simultaneously contact conductors, or a conductor and a ground. This happens most frequently when a bird attempts to perch or take off from a structure with insufficient clearance between these elements. Configurations less than 1 kV or greater than 69 kV, like the proposed 500 kV gen-tie line, typically do not present an electrocution potential, based on conductor placement and orientation (APLIC, 2006, 2012). Distribution lines that are less than 69 kilovolts (kV) but greater than 1 kV generally have less spacing than transmission lines, thus posing an electrocution hazard for perching raptors.

Based on studies of the gen-ties associated with other desert solar projects, it is estimated approximately 60 birds per km per year may collide with the lines. Seven detections of fatalities of special-status yellow warblers have been reported during surveys of the gen-tie lines at the neighboring desert solar sites. The predicted mortality value for the gen-tie line is 300 bird fatalities per year.

Based on information from other solar projects in the California desert, Project-related bird mortality is likely to range from a low of 0.4 birds per acre per year up to 1.7 birds per acre per year (BLM, 2018). Post-construction monitoring data was collected from regional Sonoran and Mojave Deserts (SMD) projects. The SMD projects annual fatality rates range from 0.08 to 2.99 birds per MW per year, with a mean of 1.31 birds per MW per year. Based on studies of the gen-ties associated with Blythe, McCoy, and Desert Sunlight Solar projects, it is estimated approximately 60 birds per km per year may collide with the lines (WEST, 2020).

Using these average values, approximately 655 (1.31 x 500 MW) bird fatalities are predicted annually in the solar arrays. An additional 432 bird fatalities (60 x 7.2 km (4.5 miles)) are predicted annually along the gen-tie in an average year (WEST, 2020).

Without implementation of mitigation measures, the proposed Project could cause significant impacts to native birds including mortality or injury in the Project area during construction, O&M, and decommissioning activities. For taller structures, such as the gen-tie line, the Project will would be designed to be raptor-safe in accordance with Avian Power Line Interaction Committee (APLIC) guidelines and best management practices (2006, 2012).

MM BIO-9 (Gen-tie Lines) would require mechanisms in accordance with APLIC standards to visually warn birds such as permanent markers or bird flight diverters; avoid or minimize use of guy wires; and maintain sufficient distance between all conductors and grounded components to prevent electrocution. These measures would effectively minimize impacts near the proposed gen-tie routes to less than significant.

Operations and Maintenance and Decommissioning

Proposed O&M and decommissioning activities would have similar direct and indirect impacts to vegetation and habitat, special-status plants, and special-status wildlife, as described above. However, the scale of impacts would be less than construction impacts because O&M and decommissioning activities would mostly occur in areas previously disturbed by construction.

During O&M, impacts would be limited to repairs and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation would be trimmed infrequently in discrete locations and no heavy equipment would be used for normal operation. Any ground disturbance may result in soil erosion. Herbicides used to manage weed infestations may degrade non-target vegetation in adjacent areas. Washing of solar panels would introduce additional water to the site, which would supplement natural sources and may affect vegetation composition or persistence. However, panel washing would be performed infrequently (up to four times each year) if natural rains do not sufficiently clear dust and debris. No chemical agents would be used for module washing. It is not expected that panel washing and the supplemental water would be enough to affect vegetation community composition or persistence. If the Proposed Project facility elevates ambient temperature within the site, surrounding vegetation and habitat may be indirectly impacted.

Facilities would be fenced, excluding larger wildlife, while small mammals and reptiles may pass through fencing to occupy the areas around O&M facilities, where they may be at risk of vehicle strike. Birds within the facility may be at risk of injury from collision with solar panels or electrocution from the gen-tie lines, as described for native birds. During O&M, herbicides used to treat invasive weeds may also pose risks to terrestrial or aquatic wildlife species. Herbicides that persist on site could injure wildlife that ingest target plants or come into contact with herbicides (e.g., by digging or rolling in treated soil).

O&M related ground disturbance may result in direct crushing or burial of wildlife where repairs or replacement are needed. Maintenance around facilities may temporarily increase human presence, opportunistic predators, noise, dust, and vehicle traffic, which may disrupt wildlife behavior or cause mortality.

Impacts during Project decommissioning would be similar to those during construction and would occur in previously disturbed areas. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense, including removal of all equipment and cables, facilities, primary roads, and concrete pads. During decommissioning, habitat disturbance may result from disassembling and transporting facilities, or from site remediation. The Project would be dismantled as described in Section 2.6, per an agency-approved Closure and Decommissioning Plan, and a majority of components would be recycled or reused. Following decommissioning, the Proposed Project site would be revegetated with native plants and re-seeded as required by the Decommissioning Plan.

Direct and indirect impacts to habitat from O&M and decommissioning would be minimized, avoided, or offset with measures such as biological monitoring by qualified biologists; worker training on sensitive biological resources; flagging, surveying, and monitoring of work areas; weed management; restoration of disturbed areas; protection of wildlife and special-status species; and protection of jurisdictional waters, as previously described for MMs BIO-1 through BIO-12.

Mitigation Measures for Impact BIO-1

The full text of the following mitigation measures is included in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

MM BIO-6 Wildlife Protection.

MM BIO-8 Bird and Bat Conservation Strategy (BBCS).

MM BIO-9 Gen-tie lines.

MM BIO-10 Burrowing Owl Avoidance and Relocation.

MM BIO-11 Desert Kit Fox and American Badger Relocation.

MM BIO-12 Streambed and Watershed Protection.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation measures identified above.

Impact BIO-2. The Project 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).

LESS THAN SIGNIFICANT WITH MITIGATION. Similar to the impacts to special-status species (Impact BIO-1), construction and O&M activities may result in direct and indirect impacts to threatened and endangered wildlife, including loss of individuals. No listed threatened or endangered plant species were observed or have the potential to occur on the Project site or in the vicinity. The gen-tie line overlaps with critical habitat for desert tortoise, located in the southern portion of the Oberon Project site.

Direct and indirect impacts to threatened and endangered species and their habitat would be significant. Impacts can be avoided, minimized, and mitigated with implementation of MMs specified in Section 3.5.9. Compliance with applicable CMAs on BLM lands would further minimize impacts of the proposed Project on threatened and endangered species. Construction activities would minimize grubbing and grading, except for specific facilities.

Solar and BESS Facility

Vegetation and Habitat

Vegetation, including native vegetation and habitat, would be cut or removed. Soils throughout the solar fields would be affected by some form of ground disturbance, which may result in erosion or compaction. Construction activities could accumulate dust on vegetation, which could diminish gas exchange or photosynthesis. Altered hydrology from site preparation could directly or indirectly affect native habitats by increasing stormwater runoff, increasing erosion, and degrading habitat conditions. Disturbance of native habitats may result in the spread of invasive weed species. Impacts to soils and vegetation, in turn, would affect threatened and endangered wildlife that may be present by collapsing burrows and removing vegetation used as cover, nesting, and foraging habitat.

MMs BIO-1 through BIO-5, would minimize adverse impacts to native vegetation, as previously described in Impact BIO-1. Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Impacts to desert dry wash woodland would be avoided on private lands, as on BLM-administered lands in accordance with the DRECP CMAs. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

Threatened and Endangered Plants

No listed threatened or endangered plant species were observed or have the potential to occur on the Project site or in the vicinity. There would be no impacts to threatened and endangered plants.

Threatened and Endangered Wildlife

Construction may result in direct impacts to special-status wildlife including injury or mortality. Construction activities would cause most mobile vertebrate wildlife to leave or attempt to leave the site. Wildlife 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 wildlife may be unable to find suitable food or cover in new, unfamiliar areas.

Construction could cause mortality of desert tortoise which may be crushed by construction equipment or crushed in burrows. In most cases, adult birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) would be lost. Land use conversion could exclude threatened and endangered wildlife from portions of their territories. Facilities could present hazards to wildlife. For example, vertical structures 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 wildlife to avoid otherwise suitable habitat surrounding the site. Lighting during construction may affect nocturnal wildlife species, by causing alterations to forage 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 wildlife, either as direct hazards (vehicle strikes) or as attractants such as food or water that may put wildlife in harm's way. Facilities and equipment may become nest or perch sites for certain birds (common raven, loggerhead shrike) which may prey on threatened or endangered species (desert tortoise).

Descriptions of impacts to specific threatened and endangered species that have potential to occur in the Project area are provided, as follows.

Insects

Crotch bumble bee (*Bombus crotchii*); SC. 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. The nearest historic records to the Project site include near Corn Springs and Palm Springs (Ironwood, 2023a). More recent records are documented on the western side of Riverside County, west of Palm Springs (Ironwood, 2023a).

During construction and O&M, if present, Crotch bumble bee may be deterred from foraging on the Project site due to land use conversion. Burrows may be destroyed by ground disturbing activities. In most cases, insects would fly away from disturbance. Noise during construction could disrupt foraging activities or may cause the bee to avoid otherwise suitable habitat surrounding the site.

Significant impacts to vegetation used for foraging habitat would be avoided and minimized with implementation of MMs, as previously described. Implementation of MMs BIO-1 through BIO-5 would minimize adverse impacts to native vegetation, thereby minimizing impacts to Crotch bumble bee habitat. Additionally, MM BIO-6 (Wildlife Protection) identifies numerous requirements to minimize or avoid wildlife injury such as site inspections, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits.

Reptiles

Desert tortoise (*Gopherus agassizii*); ST, FT. No live desert tortoises or active sign were documented. Nine locations of tortoise carcasses were observed, most of which were characterized by shell bones falling apart and growth rings on scutes peeling (class 4) or disarticulated bones or scutes more than 4 years old (class 5). Desert tortoise sign observed during field surveys were consistent with the predicted occupancy model, with all the observed sign occurring in areas with occupancy values of 0.3 or higher. Most of the desert tortoise sign was concentrated within the southwest portion of the Project site.

During construction and O&M, if present, a 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 the Project site. Desert tortoises, eggs, or burrows could be harmed during clearing or grading activities, or tortoises could become entrapped within open trenches and pipes. Construction or O&M activities 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 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. Construction and operation could create "subsidies," such as food, water, or nest sites or perch sites, for common ravens or other opportunistic predators. 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. Other effects could include the introduction and spread of invasive weeds and increased human presence.

During O&M, desert tortoises would be more restricted from moving through the area, which could impact local populations and gene flow. However, as described below in Impact BIO-3, the proposed Project would avoid development on approximately 446 acres of the Pinto Wash linkage within the Project area. The avoided portion of the linkage is primarily DDWW habitat adjacent to Big Wash, which would maintain east-west connectivity through the northern portion of the Project site that overlaps the linkage. The Easley Project site does not occur within high-quality habitat in the Pinto Wash linkage or within modelled linkage areas, and the best modelled habitat for connectivity in the Pinto Wash linkage is within the northern and western portions of the linkage where it does not overlap with the Easley Project site or the DFA (see Impact BIO-3). Additionally, desert tortoise surveys did not result in observations of active desert tortoise sign or live individuals within the Project footprint. Implementation of the proposed Project will have minimal impact to the local desert tortoise population.

As a state and 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, addressed below in Impact BIO-3 regarding wildlife movement.

Without implementation of MMs, the proposed Project could cause significant impacts including mortality or injury to desert tortoises if present in the Project area during construction, O&M, and decommissioning activities. Mitigation would prevent injury or mortality of desert tortoise, as described below. Impacts to desert tortoise habitat and movement may be further minimized with use of desert tortoise passage fencing as part of Project design during O&M (Section 2.7.4).

MMs BIO-1 through BIO-5, would minimize adverse impacts to native vegetation, as previously described in Impact BIO-1. Additionally, MMs BIO-6 (Wildlife Protection) and BIO-7 (Desert Tortoise Protection) would ensure no take of desert tortoise during Project construction or O&M. MM BIO-6 identifies numerous requirements to minimize or avoid wildlife injury such as site inspections, ramps to ensure escape from excavations, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits. MM BIO-7 (Desert Tortoise Protection) would require pre-construction clearance surveys, monitoring or exclusion of desert tortoises from active work areas to prevent injury, and a Raven Management Plan to minimize opportunistic predation. It requires a USFWS Authorized Biologist during construction to conduct or direct pre-construction clearance surveys for each work area and direct Biological Monitors to watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals. The Authorized Biologist shall have the authority to halt all Project activities that are in violation of these measures or that may result in take of a desert tortoise.

Tortoises would not be handled or moved without incidental take authorization from the USFWS and CDFW. Any desert tortoise handling or translocation would be performed according to a Desert Tortoise Relocation Plan (IP Easley, 2023), pending approval by both agencies (MM BIO-7). The Applicant may seek this authorization or may opt to avoid any potential desert tortoise take as specified in MM BIO-6 (Wildlife Protection) and MM BIO-7 (Desert Tortoise Protection).

With implementation of mitigation, impacts to desert tortoise would be less than significant.

On BLM-administered lands, USFWS acknowledged that approximately 11,290 acres of modeled desert tortoise habitat within the DRECP DFAs would eventually be developed for renewable energy (USFWS, 2016; 2017). USFWS concluded that the DRECP LUPA was not likely to jeopardize the continued existence of the desert tortoise and would benefit its recovery. The proposed solar plants were primarily located outside of critical habitat and areas of critical environmental concern, which contain most of the land base required for recovery of the species, and the projects included numerous measures intended to protect desert tortoise, consistent with the recommendations in the USFWS desert tortoise recovery plan (USFWS, 2016; 2017).

Birds

Swainson's hawk *(Buteo swainsoni)*; ST, BBC. The Project site provides potential migration season foraging habitat for Swainson's hawk but is well outside the nesting range. No Swainson's hawks were observed during surveys.

During construction and O&M, if present, Swainson's hawk may be deterred from foraging on the Project site due to land use conversion. In most cases, adult birds would fly away from the disturbance. Facilities including vertical structures could present a collision hazard. Noise and lighting during construction could disrupt foraging activities or may cause wildlife to avoid otherwise suitable habitat surrounding the site. Increased human presence and activity could increase incidents of vehicle strikes or endanger individuals by attracting them to work sites with trash, food, and water.

Significant impacts to vegetation used for cover and foraging habitat would be avoided and minimized with implementation of MMs, as previously described. Implementation of MMs BIO-1 through BIO-5 would minimize adverse impacts to native vegetation, thereby minimizing impacts to threatened and endangered bird habitat.

MM BIO-6 (Wildlife Protection) would minimize impacts to birds through site inspections, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits. MM BIO-8 (Bird and Bat Conservation Strategy) requires a BBCS that will identify potential hazards to birds, implement a Nesting Bird Management Plan (NBMP), include monitoring and avoidance of nesting seasons, and develop adaptive management for bird and bat mortality during O&M. Impacts due to potential collision and electrocution are discussed below for Gen-Tie Lines and would be minimized with implementation of MM BIO-8 (BBCS) and MM BIO-9 (Gen-tie Lines).

Gila Woodpecker *(Melanerpes uropygialis)*; CE, BLMS, BCC. Potentially suitable habitat within the Project site is found in desert washes in palo verde or ironwood trees large enough for cavity nests. Potential for nesting is low as only a few palo verde trees on the site are large enough for tree cavities, and the site is near the western margin of the Gila woodpecker's range. Two suitable tree cavities were observed in surveys, but no Gila woodpeckers were observed (Figure 3.5-6).

During construction and O&M, if present, Gila woodpecker may be deterred from occupying the Project site due to vegetation disturbance, and increased human presence, noise, and lighting. In most cases, adult birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) could be lost. Land use conversion could exclude Gila woodpecker from portions of their territories. Noise and lighting during construction could disrupt foraging, breeding, and sheltering activities or may cause wildlife to avoid otherwise suitable habitat surrounding the site. Increased human presence and activity could increase incidents of vehicle strikes or endanger individuals by attracting them to work sites with trash, food, and water.

Mitigation measures would be implemented, as previously described for Swainson's hawk, to minimize impacts to threatened and endangered birds and their habitat. Implementation of MMs BIO-1 through BIO-5 would minimize significant impacts to native vegetation, thereby minimizing impacts to foraging and nesting habitat. MM BIO-6 (Wildlife Protection) and MM BIO-8 (BBCS) would minimize direct impacts to birds with site inspections, monitoring and avoidance of nesting seasons, and adaptive management for bird mortality during O&M.

Elf owl *(Micrathene whitneyi)*; CE, BLMS, BCC. Trees within the desert dry wash woodland habitat could provide suitable marginal habitat for elf owl nesting. Its nesting habitat is closely correlated with nesting habitat of woodpeckers, including Gila woodpecker. Two tree cavities were observed during surveys and could be potential nesting cavities. No elf owls were observed during the survey.

The Project's potential impacts to elf owl nesting and foraging habitat would be similar to those described for Gila woodpecker and other threatened and endangered birds. Impacts would be avoided and minimized with implementation of MMs, as previously described. Implementation of MMs BIO-1 through BIO-5 would minimize significant impacts to native vegetation, thereby minimizing impacts to foraging and nesting habitat. MM BIO-6 (Wildlife Protection) and MM BIO-8 (BBCS) would minimize direct impacts to birds with site inspections, monitoring and avoidance of nesting seasons, and adaptive management for bird mortality during O&M.

Riparian Birds. Four federally listed riparian bird species known from the vicinity (western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and Yuma Ridgway's rail) have a moderate potential to occur in the Project area during migration periods, but there is no suitable nesting or foraging habitat on the site for these species. None were observed during field surveys. There would be no direct or indirect effects to nests, nest success, or nesting habitat.

The Project's impacts to nesting and foraging habitat and individuals would be similar to those described for other threatened and endangered birds. Significant impacts to riparian birds would be avoided and minimized with implementation of MMs, as previously described for Swainson's hawk. Implementation of MMs BIO-1 through BIO-5 would minimize significant impacts to native vegetation, thereby minimizing impacts to foraging and nesting habitat. MM BIO-6 (Wildlife Protection) and MM BIO-8 (Bird and Bat Conservation Strategy) would minimize direct impacts to birds with site inspections, monitoring and avoidance of nesting seasons, and adaptive management for bird mortality during O&M.

With implementation of mitigation, impacts to threatened and endangered riparian birds would be less than significant.

500 kV Gen-Tie, Collector, and Distribution Lines

Construction of the gen-tie line would primarily occur through the adjacent Oberon Project site on BLM-administered lands, which was previously analyzed in the Final EIR and Final EA for the Oberon Renewable Energy Project (RWQCB, 2021; BLM, 2022). Impacts due to construction of the Easley gen-tie line are described below.

Vegetation & Habitat

Gen-tie line construction through the Oberon Project site would affect vegetation and habitat at discrete disturbance sites where towers or other work activities would be located. If the 34.5 kV or 12 kV lines are installed overhead, similar types of impacts would occur at the pole sites located outside of the solar facility fence line. For portions of the collector lines that are buried underground, trenches would be dug through vegetated areas or desert pavement. Trenches would be backfilled with native soils and disturbance areas would be reseeded. Impacts to vegetation and habitat at the sites would be similar to those described in Impact BIO-1. Vegetation would be cleared or trimmed and soils would be disturbed. Spread of invasive weeds may degrade habitat. Construction would not affect most of the vegetation and habitat within the gen-tie routes.

Impacts to natural habitat would be avoided or minimized by implementing MMs BIO-1 through BIO-5, which require revegetation of short-term impact areas, pre-construction surveys and marking of sensitive resources, management plans, and construction crew training, would minimize and offset adverse impacts to native vegetation, thereby minimizing impacts to vegetation and habitat. Additionally, similar mitigation measures required to be implemented for the Oberon Project are included in its Final EIR (RWQCB, 2021) and Final EA (BLM, 2022). Conservation Management Actions (CMAs) would also be implemented on BLM lands per the DRECP, as described in the Final EA for the Oberon Project.

Threatened and Endangered Plants

No listed threatened or endangered plant species were observed or have the potential to occur along the gen-tie route through the Oberon Project site. There would be no impacts to threatened and endangered plants.

Threatened and Endangered Wildlife

Species affected along the gen-tie line would be the same as those described for the solar facility. Desert tortoise sign was observed along the eastern portion of the gen-tie route through the Oberon Project site in desert dry wash woodland. The gen-tie route ROW overlaps with approximately 28.2 acres of critical habitat for desert tortoise in the southern portion of the Oberon Project site.

As described for Impact BIO-1, gen-tie construction activities could dissuade threatened and endangered wildlife from approaching construction areas due to disturbance, vegetation removal, increased human presence, noise, and lighting. Construction could result in direct mortality or injury. In most cases, adult

birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) would be lost. Displaced wildlife may be unable to find suitable food or cover in new, unfamiliar areas. Construction of transmission facilities could present pitfall hazards. Increased human presence, noise, and lighting during construction could affect wildlife in adjacent habitats. These effects would be temporary (limited to construction phase) and would occur in discrete work areas.

MMs BIO-1 through BIO-5, would minimize significant impacts to wildlife habitat, including critical habitat. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

MM BIO-6 (Wildlife Protection) identifies numerous requirements during construction to avoid, minimize, and mitigate wildlife injury and mortality, such as site inspections, ramps to ensure escape from excavations, prevention of attractants such as trash or water, hazardous material avoidance, and vehicle speed limits.

MM BIO-7 (Desert Tortoise Protection) would require pre-construction clearance surveys, monitoring or exclusion of desert tortoises from active work areas to prevent injury, and a Raven Management Plan to minimize opportunistic predation. It requires a USFWS Authorized Biologist during construction to conduct or direct pre-construction clearance surveys for each work area and direct Biological Monitors to watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals. The Authorized Biologist shall have the authority to halt all Project activities that are in violation of these measures or that may result in take of a desert tortoise.

Tortoises would not be handled or moved without incidental take authorization from the USFWS and CDFW. Any desert tortoise handling or translocation would be performed according to a Desert Tortoise Relocation Plan (IP Easley, 2023), pending approval by both agencies (MM BIO-7). The Applicant may seek this authorization or may opt to avoid any potential desert tortoise take as specified in MM BIO-6 (Wildlife Protection) and MM BIO-7 (Desert Tortoise Protection).

MM BIO-8 (Bird and Bat Conservation Strategy) would require pre-construction surveys to identify active bird nests in work areas and avoidance of disturbance or disruption nesting behavior.

Once completed, the gen-tie lines would have minimal effects on terrestrial wildlife movement because no new barrier to movement would be constructed beneath the line. However, the gen-tie towers and conductors would present a collision and electrocution hazard, as described in detail in Impact BIO-1. Birds and bats may collide with the overhead lines, including the gen-tie transmission line. While few nocturnal migrant passerines have been found in the solar arrays, more have been found underneath the gen-tie lines at the solar projects. Large birds can be electrocuted by transmission lines if the bird's wings simultaneously contact conductors, or a conductor and a ground. This happens most frequently when a bird attempts to perch or take off from a structure with insufficient clearance between these elements. Configurations less than 1 kV or greater than 69 kV, like the proposed 500 kV gen-tie line, typically do not present an electrocution potential, based on conductor placement and orientation (APLIC, 2006; 2012).

Impacts would be minimized with implementation of MM BIO-9 (Gen-tie Lines) which requires mechanisms in accordance with APLIC standards to visually warn birds such as permanent markers or bird flight diverters; avoid or minimize use of guy wires; and maintain sufficient distance between all conductors and grounded components to prevent electrocution. These measures would effectively minimize impacts near the proposed gen-tie routes. MM BIO-8 (Bird and Bat Conservation Strategy) would require O&M adaptive management for bird mortality if mortality thresholds are exceeded.

Construction of towers and fencing would provide increased perching opportunities for predatory birds including raptors and ravens that prey on desert tortoise. MM BIO-7 (Desert Tortoise Protection) includes preparing and implementing a Raven Management Plan that would manage raven subsidies and

attractants. MM BIO-9 (Gen-tie Lines) requires the gen-tie structures be designed to discourage use by raptors for perching or nesting.

Operations and Maintenance and Decommissioning

Proposed O&M and decommissioning activities would have similar direct and indirect impacts to vegetation and habitat and threatened and endangered wildlife, as described above. However, the scale of impacts would be less than construction impacts because O&M and decommissioning activities would mostly occur in areas previously disturbed by construction.

During O&M, impacts would be limited to repairs and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation would be trimmed infrequently in discrete locations and no heavy equipment would be used for normal operation. Any ground disturbance may result in soil erosion. Herbicides used to manage weed infestations may degrade non-target vegetation in adjacent areas. Washing of solar panels would introduce additional water to the site, which would supplement natural sources and may affect vegetation composition or persistence. However, panel washing would be performed infrequently (up to four times each year) if natural rains do not sufficiently clear dust and debris. No chemical agents would be used for module washing. It is not expected that panel washing and the supplemental water would be enough to affect vegetation community composition or persistence. If the proposed Project facility elevates ambient temperature within the site, surrounding vegetation and habitat may be indirectly impacted.

Facilities would be fenced, excluding larger wildlife, while small mammals and reptiles may pass through fencing to occupy the areas around O&M facilities, where they may be at risk of vehicle strike from maintenance vehicles. Birds within the facility may be at risk of injury from collision with solar panels or electrocution from the gen-tie lines, as described for native birds. During O&M, herbicides used to treat invasive weeds may also pose risks to terrestrial or aquatic wildlife species. Herbicides that persist on site could injure wildlife that ingest target plants or come into contact with herbicides (e.g., by digging or rolling in treated soil). O&M related ground disturbance may result in direct crushing or burial of wildlife where repairs or replacement are needed. Maintenance around facilities may temporarily increase human presence, opportunistic predators, noise, dust, and vehicle traffic, which may disrupt wildlife behavior or cause mortality.

Impacts during Project decommissioning would be similar to those during construction and would occur in previously disturbed areas. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense, including removal of all equipment and cables, facilities, primary roads, and concrete pads. During decommissioning, habitat disturbance may result from disassembling and transporting facilities, or from site remediation. The Project would be dismantled as described in Section 2.6, per an agency-approved Closure and Decommissioning Plan, and a majority of components would be recycled or reused. Following decommissioning, the Proposed Project site would be revegetated with native plants and re-seeded as required by the Decommissioning Plan.

Direct and indirect impacts from O&M and decommissioning would be minimized, avoided, or offset with measures such as biological monitoring by qualified biologists; worker training on sensitive biological resources; flagging, surveying, and monitoring of work areas; weed management; restoration of disturbed areas; and protection of wildlife and special-status species, as previously described for MMs BIO-1 through BIO-9.

Mitigation Measures for Impact BIO-2

The full text of the following mitigation measures is included in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

MM BIO-6 Wildlife Protection.

MM BIO-7 Desert Tortoise Protection.

MM BIO-8 Bird and Bat Conservation Strategy.

MM BIO-9 Gen-tie lines.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation measures identified above.

Impact BIO-3. The Project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Solar and BESS Facility

LESS THAN SIGNIFICANT WITH MITIGATION. Wildlife movement through the area is compromised by the existing pattern of land use, including solar projects either planned, in-construction, or operational. The Desert Harvest and Desert Sunlight Solar Projects are adjacent to the north, and the Athos and Oberon Solar Projects are adjacent to the east and south. The proposed solar facility would further interrupt potential wildlife movement routes through the area, primarily for movement across undisturbed desert scrub and desert dry wash woodland habitat and anthropogenically disturbed land (agriculture).

Desert dry wash woodland serves as an important movement corridor for wildlife. This habitat provides greater food, nesting, and cover, and its wildlife diversity is generally greater than in the surrounding desert. Approximately 9.1 acres of desert dry wash woodland would be impacted in the solar facility development area and from exterior components (roads & MVAC) (Table 3.5-1a). These impacts would primarily occur on public lands (BLM); approximately 0.2 acres of desert dry wash woodland would be impacted on private lands. Approximately 732 acres of desert dry wash woodland would be avoided in the solar facility development area (Table 3.5-1b).

The northern portion of the Project area overlaps with a BLM DRECP wildlife linkage (Pinto Wash linkage) (BLM, 2015); however, since the Project site is within a BLM DRECP DFA (Figure 2-4), development for renewable energy was targeted for this area and solar development already existed within this linkage area prior to development of the DRECP (Desert Sunlight) (Figure 3.5-10). Under the DRECP, the Pinto Wash linkage occupies a vast area over 32,500 acres. The DRECP FEIS notes that up to 6,000 acres of desert linkage network could be impacted by solar development in the Cadiz Valley and Chocolate Mountains area (BLM, 2015). Additionally, this portion of the linkage is categorized by the DRECP as non-habitat or low-quality habitat (Ironwood, 2023a). The boundaries of the area serving a linkage function in this area have changed over time and the Pinto Wash linkage boundary, as codified in the DRECP, includes approximately 10,000 acres that lack potential for desert tortoise connectivity due to low quality habitat and existing obstacles to movement.

The predicted occupancy model (Nussear et al. 2009), as discussed in Section 3.5.1, identifies where tortoises are likely to occur and which portions of the Pinto Wash linkage are important to tortoise connectivity. Notably, the portion of the linkage that overlaps with the DFA and the Easley Project site

does not have high predicted occupancy and is not critical to tortoise connectivity. The habitat west of Kaiser Road and north of the adjacent Desert Sunlight Solar Farm (DSSF) is depicted as high quality and connected to critical habitat and Joshua Tree National Park to maintain a functional corridor.

Several sources including the Biological Opinion for the DSSF (USFWS, 2011) and the Desert Harvest Solar Project (USFWS, 2013), Hagerty and Tracy (2010), Penrod et. al (2012), and Averill-Murray et. al (2021) indicate that the critical linkage areas and least cost pathways are located west of Kaiser Road and northwest of the DSSF, where higher quality habitat is present (Ironwood, 2023a).

Within the development footprint, the Project would have a long-term impact on approximately 594 acres of low-quality habitat in the southernmost portion of the Pinto Wash linkage. Further conversion of the linkage area to solar development would largely prevent movement across it for many species, including desert tortoise and burro deer. However, the proposed Project would avoid development on approximately 446 acres of the linkage within the Project area. The avoided portion of the linkage is primarily DDWW habitat adjacent to Big Wash, which would maintain east-west connectivity through the northern portion of the Project site that overlaps the linkage. The Easley Project site does not occur within high-quality habitat in the Pinto Wash linkage or within modelled linkage areas, and the best modelled habitat for connectivity in the Pinto Wash linkage is within the northern and western portions of the linkage where it does not overlap with the Easley Project site or the DFA. Based on the lack of high-quality habitat and the location of modelled linkages, the portion of the Project overlapping with the Pinto Wash linkage will not impact its functionality.

Table 3.5-2 Impacts to Pinto Wash Linkage

Habitat Quality Categories	Acres overlap with Project Boundary	Acres of Impact in Project Boundary	Acres Avoided in Project Boundary
Non-habitat	771.5	391.2	380.3
Low quality habitat	268.5	202.5	66.0
High quality habitat	0	0	0
Total (all within DFA)	**1040.0**	**593.7**	**446.3**

Construction activities could temporarily discourage wildlife from approaching the Project site due to noise and disturbance. Night lighting and increased human presence could discourage wildlife from moving around the Project. After construction, the proposed solar facilities would interfere with local-scale wildlife movement by any species unable to cross the facilities due to Project fencing.

Without mitigation, impacts to wildlife movement would be significant.

Due to implementation of the Project features described below, the desert dry wash woodland and the multi-species linkage would continue to allow wildlife passage for many species across or around the Easley Project.

- *Connectivity Corridors*. The avoidance of 446 acres of the Pinto Wash linkage overlapping the Project area, comprised primarily of desert dry wash woodlands, would preserve connectivity to the larger, more functional woodland areas along the adjacent Big Wash. Avoiding this portion of the linkage is consistent with preserving the value of the desert dry wash woodland resource, as required by the DRECP CMA LUPA-BIO-13. Avoidance of 732 acres of desert dry wash woodland in the solar facility development area would preserve movement opportunities in and through the solar facility site.
- *Wildlife Friendly Fencing*. The Applicant may elect to use wildlife-friendly fencing on portions of the proposed facility based on its success at the adjacent Oberon Renewable Energy Project (see Section 2.7.4). If wildlife-friendly fencing is implemented, after vegetation is substantially reestablished, tempo-

rary desert tortoise exclusion fencing may be removed after construction. Wildlife friendly fencing would provide movement opportunities for small wildlife between revegetated habitats in the development footprint and any adjacent undeveloped habitats, including desert dry wash woodland. This fencing would maintain a level of habitat functionality and minimize fragmentation for small terrestrial wildlife in the Project area. O&M safety practices, including worker training and biological monitoring of nesting, burrowing, or denning wildlife, would be implemented to maximize long-term safety of wildlife present at the site.

- *Night Lighting*. With implementation of MM VIS-1 (see EIR Section 3.2, Aesthetics), long-term night lighting that could affect nocturnal and other wildlife and wildlife movement would be minimized to the maximum extent feasible and coordinated with the BLM.

These Project design elements would avoid and minimize impacts to wildlife movement in the Project area, as described. The Project would not threaten the long-term viability and function of the corridor (per DRECP CMA LUPA-BIO-IFS-1).

Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Impacts to desert dry wash woodland would be avoided on private lands, as on BLM lands in accordance with the DREPC CMAs. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

Wildlife "nursery sites" such as bird nests or suitable breeding habitat for other species may be found throughout the Project site, particularly in native habitat areas. MMs BIO-1 through BIO-5 would minimize habitat impacts for common wildlife and special-status species by implementing biological monitoring during construction, WEAP training for construction personnel, and post-construction vegetation and weed management. MMs BIO-6 through BIO-11 would prevent significant impacts to special-status wildlife nesting or breeding sites by requiring specific pre-construction surveys, passive translocation of certain species away from the area, avoidance of buffer areas while bird nests are active, and other related requirements.

500 kV Gen-Tie, Collector, and Distribution Lines

LESS THAN SIGNIFICANT WITH MITIGATION. Many wildlife species are expected to move through the area, across the gen-tie and medium voltage collector and distribution line routes. Construction activities could dissuade wildlife from approaching construction areas due to noise and disturbance. This effect would be temporary (limited to construction phase) and, for above ground lines, would occur at discrete sites in the adjacent Oberon Project site. If the 34.5 kV or 12 kV lines are installed overhead, similar types of impacts would occur at the pole sites located outside of the solar facility fence line. An underground collector line would require trenching, which may create a temporary barrier to movement for wildlife that cannot effectively cross the trench and a temporary hazard for wildlife that may get trapped in it. Impacts to habitat used for wildlife movement would be avoided and minimized with implementation of MMs BIO-1 to BIO-5, as previously described. MM BIO-6 (Wildlife Protection) identifies numerous requirements during construction to avoid, minimize, and mitigate wildlife injury and mortality, including checking the Project site for entrapped wildlife. MM BIO-8 (Bird and Bat Conservation Strategy) would require pre-construction surveys to identify active bird nests and avoidance of disturbance or disruption nesting behavior.

Once completed, the transmission lines would have minimal effects on terrestrial wildlife movement because no new barrier to movement would be constructed. However, the gen-tie towers and conductors would present a collision hazard for birds and bats, disrupting their movement through the Project vicinity (see Impact BIO-1). MM BIO-9 (Gen-tie Lines) would require mechanisms in accordance with APLIC standards to visually warn birds such as permanent markers or bird flight diverters, avoid or minimize use

of guy wires, and maintain sufficient distance between all conductors and grounded components to prevent electrocution. These measures would effectively minimize impacts to wildlife movement across the proposed transmission line routes. MM BIO-8 (Bird and Bat Conservation Strategy) would require an implementation of an adaptive management framework for O&M monitoring of bird mortality, based on monitoring at other solar sites.

Additionally, similar mitigation measures required to be implemented for the Oberon Project are included in its Final EIR (RWQCB, 2021) and Final EA (BLM, 2022). Conservation Management Actions (CMAs) would also be implemented on BLM lands per the DRECP, as described in the Final EA for the Oberon Project.

Operations and Maintenance and Decommissioning

Proposed O&M and decommissioning activities would have similar direct and indirect impacts on wildlife movement as described above. However, the scale of impacts would be less than construction impacts.

During O&M, impacts would be limited to repairs and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation would be trimmed infrequently in discrete locations and no heavy equipment would be used for normal operation. Any ground disturbance may result in soil erosion. Infrequent panel washing is not expected to impact habitat persistence or composition. Facilities would be fenced, excluding movement through the Project site for larger wildlife. Small mammals and reptiles may pass through fencing to occupy the areas around O&M facilities, where they may be at risk of vehicle strike. Birds within the facility may be at risk of injury from collision with solar panels or electrocution from the gen-tie lines, as described for native birds. If the Project facility elevates ambient temperature within the site, wildlife movement patterns in and around the site may be disrupted.

O&M related vegetation or ground disturbance where repairs or replacement are needed may result in disruption of wildlife movement patterns or behaviors. Maintenance around facilities may temporarily increase human presence, opportunistic predators, noise, dust, night lighting, and vehicle traffic, which may disrupt wildlife movement and temporarily discourage wildlife from approaching the Project site.

Impacts during Project decommissioning would be similar to those during construction and would occur in previously disturbed areas. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense, including removal of all equipment and cables, facilities, primary roads, and concrete pads. During decommissioning, habitat disturbance may result from disassembling and transporting facilities, or from site remediation. The Project would be dismantled as described in Section 2.6, per an agency-approved Closure and Decommissioning Plan, and a majority of components would be recycled or reused. Following decommissioning, the Proposed Project site would be revegetated with native plants and re-seeded as required by the Decommissioning Plan.

Direct and indirect impacts from O&M and decommissioning would be minimized, avoided, or offset with measures such as biological monitoring by qualified biologists; worker training on sensitive biological resources; flagging, surveying, and monitoring of work areas; weed management; restoration of disturbed areas; and protection of wildlife and special-status species, as previously described for MMs BIO-1 through BIO-11.

Mitigation Measures for Impact BIO-3

The full text of the following mitigation measures is in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

MM BIO-6 Wildlife Protection.

MM BIO-7 Desert Tortoise Protection.

MM BIO-8 Bird and Bat Conservation Strategy (BBCS).

MM BIO-9 Gen-tie lines.

MM BIO-10 Burrowing Owl Avoidance and Relocation.

MM BIO-11 Desert Kit Fox and American Badger Relocation.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation measures identified above.

Impact BIO-4. The Project would 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.

LESS THAN SIGNIFICANT WITH MITIGATION. Desert dry wash woodland is a sensitive habitat type as identified in the NECO Plan and DRECP and has a State rarity rank of S4. It is a riparian community characteristic of regional episodic hydrologic systems of the regional desert. Desert pavement, a unique habitat type with a State rarity rank of S4, was identified on the Project site; however, it is not considered sensitive. No other sensitive natural communities are found on the Project site.

Solar and BESS Facility

Desert dry wash woodland is located throughout the Project site primarily on BLM-administered lands. Approximately 0.2 acres of desert dry wash woodland would be impacted on private lands. Impacts to vegetation and habitat, including desert dry wash woodland, would be similar to those described in Impact BIO-1. Construction of the solar facility would avoid impacts to desert dry wash woodland with a 200-foot buffer in compliance with the BLM DRECP.

Desert dry wash woodland provides greater food, nesting, and cover, and its wildlife diversity is generally greater than in the surrounding desert. Examples of special-status species that depend in part on desert microphyll woodlands include black-tailed gnatcatcher and burro deer. In addition, many of the species occupying the surrounding upland desert shrublands are found in greater numbers in microphyll woodlands.

Without mitigation, impacts to desert dry wash woodland could include the removal of vegetation and loss of habitat for plant and wildlife species, as described in Impact BIO-1. Ground disturbance undermines the stability of soil and biotic crusts, leading to greater potential for erosion; affects soil density, compaction, and water infiltration, cutting off water supplies to plant roots; and promotes invasion by exotic plant species. These factors contribute to degradation of habitat quality for native wildlife and plant species, and disturbance can affect the ability of an area to support these species.

Impacts to native habitats on the Easley site, including desert dry wash woodland, would be minimized by implementing MMs BIO-1 through BIO-5. Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

Implementation of MMs would minimize and avoid significant impacts to desert dry wash woodland.

500 kV Gen-Tie, Collector, and Distribution Lines

The proposed gen-tie line primarily crosses through the existing Oberon Project site on BLM lands. Impacts to desert dry wash woodland would be similar to those described for the solar and BESS facility; however, above ground gen-tie construction would affect vegetation and habitat at discrete disturbance sites where towers or other work activities would be located. If the 34.5 kV or 12 kV lines are installed overhead, similar types of impacts would occur at the pole sites located outside of the solar facility fence line. Underground collector lines would require trenching and disturbance of habitats as described in Impact BIO-1. Impacts on the Oberon Project site were evaluated as part of the Final EIR and Final EA (RWQCB, 2021; BLM, 2022).

Construction of the gen-tie line would avoid impacts to desert dry wash woodland with a 200-foot buffer except for minor incursion, in compliance with the BLM DRECP. The gen-tie line would span desert dry wash woodland, and impacts from construction of towers would be avoided to the maximum extent feasible except for minor incursion.

Construction and O&M of the Project's gen-tie line component would not impact sensitive natural communities. Implementation of MMs BIO-1 through BIO-5 would avoid and minimize impacts to native habitat on the Easley Project site. Additionally, similar mitigation measures required to be implemented for the Oberon Project are included in its Final EIR (RWQCB, 2021) and Final EA (BLM, 2022). Conservation Management Actions (CMAs) would also be implemented on BLM lands per the DRECP, as described in the Final EA for the Oberon Project.

Operations and Maintenance and Decommissioning

Proposed O&M and decommissioning activities would have similar direct and indirect impacts on desert dry wash woodland, as described above. However, the scale of impacts would be less than construction impacts.

During O&M, impacts would be limited to repairs and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation would be trimmed infrequently in discrete locations and no heavy equipment would be used for normal operation. Any ground disturbance may result in soil erosion. Herbicides used to manage weed infestations may degrade non-target vegetation in adjacent areas. Infrequent panel washing is not expected to impact habitat persistence or composition and no chemical agents would be used for module washing. If the Proposed Project facility elevates ambient temperature within the site, surrounding vegetation and habitat may be indirectly impacted.

Impacts during Project decommissioning would be similar to those during construction and would occur in previously disturbed areas. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense, including removal of all equipment and cables, facilities, primary roads, and concrete pads. During decommissioning, habitat disturbance may result from disassembling and transporting facilities, or from site remediation. The Project would be dismantled as described in Section 2.6, per an agency-approved Closure and Decommissioning Plan, and a majority of components would be recycled or reused. Following decommissioning, the Proposed Project site would be revegetated with native plants and re-seeded as required by the Decommissioning Plan.

Direct and indirect impacts from O&M and decommissioning would be minimized, avoided, or offset with measures such as biological monitoring by qualified biologists; worker training on sensitive biological resources; flagging, surveying, and monitoring of work areas; weed management; and restoration of disturbed areas, as previously described for MMs BIO-1 through BIO-5.

Mitigation Measures for Impact BIO-4

The full text of the following mitigation measures is in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation measures identified above.

Impact BIO-5. The Project would 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.

LESS THAN SIGNIFICANT WITH MITIGATION. Two palustrine, emergent wetland areas in the Project area were identified as anthropogenic wetlands created by adjacent agricultural activities, from artificial water sources and berms. Jurisdictional waters are found along unvegetated ephemeral washes and desert dry wash woodlands (see Impact BIO-4) throughout the Project site and along the gen-tie line. Project construction and O&M would affect these wetlands and State-protected jurisdictional waters.

The aquatic resources in the Project site are subject to State jurisdiction under RWQCB and CDFW (see Section 3.5.1 on Jurisdictional Waters). Given the absence of a nexus to a federal waters of the U.S., the aquatic resources in the Project site are not subject to federal jurisdiction under CWA Section 404 and Section 401 (see Section 3.5.1).

With implementation of mitigation measures, described below, impacts to jurisdictional waters would be less than significant. Construction would require a Stormwater Pollution Prevention Plan (SWPPP) approved by the State Water Resources Control Board, LSAA from CDFW, and WDR from RWQCB, which may include additional permit requirements and BMPs to further protect jurisdictional waters.

Solar and BESS Facility

The two emergent wetland areas are located in the northern and central portions of the Project area. The Project site is intersected by numerous unvegetated ephemeral drainages that flow northeast toward Big Wash, near the confluence with Pinto Wash. Desert dry wash woodland is interspersed with creosote bush scrub, which overlap with ephemeral jurisdictional drainages on the Project site. Active channels within the lower alluvial fan, where the Project is situated, showed signs of frequent avulsion (changes in flow direction following surface water flow events) due to patterns of brief, intense surface water flow, resulting in a network of active and inactive (abandoned) channels.

Acres of impact to jurisdictional wetlands, waters, and desert dry wash woodland are shown in Table 3.5-3. Approximately 732 acres of desert dry wash woodland would be avoided in the solar facility development area.

Table 3.5-3. Impacts to Jurisdictional Waters

	Impact Acres (full project design, including 500k V gen-tie line across Oberon Project)		
Habitat Type	BLM	Private	Total
Colorado River RWQCB Jurisdictional Waters			
Easley Project Boundary			
Wetlands	---	---	---
Unvegetated Ephemeral Dry wash (OHWM width)	98.8	19.8	118.7
Desert Dry Wash Woodland	9.0	0.2	9.2
Oberon Project Boundary			
Unvegetated Ephemeral Dry wash (OHWM width)	2.0	---	2.0
Desert Dry Wash Woodland	22.2	---	22.2
TOTAL	**132.1 acres**	**20.1 acres**	**152.2 acres**
CDFW Jurisdictional Waters			
Easley Project Boundary			
Wetlands (Easley Boundary)	---	---	---
Unvegetated Ephemeral Dry wash (Bank-to-Bank)	147.6	26.4	174.0
Desert Dry Wash Woodland	9.0	0.2	9.2
Oberon Project Boundary			
Unvegetated Ephemeral Dry wash (Bank-to-Bank)	2.5	---	2.5
Desert Dry Wash Woodland	22.2	---	22.2
TOTAL	**181.3**	**26.7**	**207.9**

Notes
No wetlands would be impacted.
Within the Oberon Project boundary, impact acres include the entire 175-foot-wide gen-tie line ROW. Final gen-tie line impact acreages will be less than shown in the table, as impacts would occur only at structures and spur roads. Disturbance assumptions at each structure location are included in EIR Section 2.4.6. Furthermore, structures would be micro-sited to minimize impacts to sensitive habitats and resources to the maximum extent feasible.

Jurisdictional waters on the Project site would be directly impacted by site preparation and Project construction. After construction, water and sediment on the Project site would be conveyed downslope, across the site, by sheet flow or within channels. However, surface flow patterns, velocities, and sediment loads may be altered throughout the site by solar panel foundations and piles, access roads, fencing, BESS, substation yards, O&M building, and other Project features.

Potential significant indirect impacts to jurisdictional waters from Project activities could include decoupling of flows due to installation of Project facilities or components, increased siltation, fluvial transport of silts or pollutants, and altered flows resulting in erosion or elimination of natural sediment transport to downstream habitat areas. The decoupling of flows due to installed barriers was found to have a direct effect on the vegetation closest to the zone of decoupling (Devitt, 2022). Since the health of a desert ecosystem is linked to the integrity of surface drainage systems, maintaining wash connectivity would benefit down gradient plant communities. In a study performed by Devitt (2022), during high rainfall

significant runoff and erosion undercut structural supports of the panel arrays, suggesting that maintaining wash connectivity would benefit the solar facility as well.

The Project may include diversions at security fencing and require detention basins, but no other substantial alteration to the existing surface hydrology would occur. Alteration of the existing drainage pattern should be minimal because of the minimal grading proposed. The Project plans to maintain natural drainage to the maximum extent feasible.

Additionally, the preservation of vegetation under the solar panels would mitigate impacts of erosion and increased runoff. Cook and McCuen (2013) studied water runoff of solar modules and found that runoff volumes increased with graveled or compacted ground underneath the panels. With well-maintained grass, solar modules did not have an effect on total volumes of runoff or peak discharge rates (Cook and McCuen, 2013).

Impacts to habitat on the Project site, including jurisdictional waters, would be minimized with implementation of MMs BIO-1 through BIO-5, as previously described. In addition, MM BIO-12 (Streambed and Watershed Protection) would require a series of BMPs to prevent or minimize significant effects to jurisdictional waters and streambed function. BMPs include measures that require cleanup of petroleum spills and buffers around equipment maintenance, spoil sites, and storage or use of hazardous materials. Equipment will not operate in ponding or flowing water, silt and pollutants will be prevented from entering ephemeral drainages, no equipment will be maintained within 150 feet of streambeds, and equipment will be placed over drip pans. Maintaining natural drainage and vegetation under solar panels would further minimize impacts to jurisdictional waters from runoff and erosion.

500 kV Gen-Tie, Collector, and Distribution Lines

The gen-tie line primarily crosses the adjacent Oberon Project site. The gen-tie line is intersected by numerous unvegetated ephemeral drainages that flow northeast toward Big Wash. Desert dry wash woodland is interspersed with creosote bush scrub, which overlap with these ephemeral jurisdictional drainages on the Project site.

Impacts to jurisdictional waters would be similar to those described for the solar facility; however, aboveground gen-tie construction would have impacts at discrete disturbance sites where towers or other work activities would be located. If the 34.5 kV or 12 kV lines are installed overhead, similar types of impacts would occur at the pole sites located outside of the solar facility fence line. Underground collector lines would require trenching and disturbance of habitats as described in Impact BIO-1. Impacts on the Oberon Project site were evaluated as part of the Final EIR and Final EA (RWQCB, 2021; BLM, 2022).

Construction and O&M of the Project's gen-tie line component would not impact jurisdictional wetlands.

MMs BIO-1 through BIO-5 would minimize impacts to native habitat, including ephemeral washes, as discussed for the solar facility. MM BIO-12 (Streambed and Watershed Protection) would require a series of BMPs to protect water resources and prevent or minimize significant effects to jurisdictional waters and streambed function. Additionally, similar mitigation measures required to be implemented for the Oberon Project are included in its Final EIR (RWQCB, 2021) and Final EA (BLM, 2022). Conservation Management Actions (CMAs) would also be implemented on BLM lands per the DRECP, as described in the Final EA for the Oberon Project.

Operations and Maintenance and Decommissioning

Proposed O&M and decommissioning activities would have similar direct and indirect impacts on jurisdictional waters, as described above. However, the scale of impacts would be less than construction impacts and impacts would occur in previously disturbed areas. No jurisdictional wetlands would be impacted.

After construction, surface flow patterns, velocities, and sediment loads may be altered throughout the site by solar panel foundations and piles, access roads, fencing, BESS, substation yards, O&M building, and other Project features. Alteration of the existing drainage pattern is expected to be minimal because of the minimal grading and diversions required, and the Project plans to maintain natural drainage to the maximum extent feasible. The preservation of vegetation under the solar panels would further mitigate impacts of erosion and increased runoff.

During O&M, impacts would be limited to repairs and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation would be trimmed infrequently in discrete locations and no heavy equipment would be used for normal operation. Any ground disturbance may result in soil erosion that could runoff into jurisdictional waters. Herbicides used to manage weed infestations may degrade jurisdictional waters or associated vegetation on the Project site. Infrequent panel washing is not expected to impact persistence or composition of jurisdictional waters and no chemical washing agents would be used that may degrade waters.

Impacts during Project decommissioning would be similar to those during construction and would occur in previously disturbed areas. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense, including removal of all equipment and cables, facilities, primary roads, and concrete pads. During decommissioning, disturbance to jurisdictional waters may result from disassembling and transporting facilities, or from site remediation. The Project would be dismantled as described in Section 2.6, per an agency-approved Closure and Decommissioning Plan, and a majority of components would be recycled or reused. Following decommissioning, the Proposed Project site would be revegetated with native plants and re-seeded as required by the Decommissioning Plan.

Direct and indirect impacts from O&M and decommissioning would be minimized, avoided, or offset with measures such as biological monitoring by qualified biologists; worker training on sensitive biological resources; flagging, surveying, and monitoring of work areas; weed management; restoration of disturbed areas; and protection of jurisdictional waters, as previously described for MMs BIO-1 through BIO-5 and MM BIO-12.

Mitigation Measures for Impact BIO-5

The full text of the following mitigation measures is in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

MM BIO-12 Streambed and Watershed Protection.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation measures and permitting identified above.

Impact BIO-6. The Project would conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

LESS THAN SIGNIFICANT WITH MITIGATION . Construction, operations and maintenance, and decommissioning of the Project would be subject to policies in the Riverside County General Plan. Table 3.5-4, Consistency

with Local Policies and Ordinances describes how the Project would be consistent with the County General Plan.

Table 3.5-4. Consistency with Local Policies and Ordinances

Policy/Regulations/ Goals	Description	Consistency Analysis
Riverside County General Plan Land Use Element (LU)		
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 (AI 102).	**Consistent.** Mitigation measures provide protection of species, habitats, and waters in coordination with CDFW, USFWS, and RWQCB.
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 federal and state regulations.
LU 24.1	Cooperate with the CDFW, USFWS, and any other appropriate agencies in establishing programs for the voluntary protection, and where feasible, voluntary restoration of significant environmental habitats (AI 10).	**Consistent.** Mitigation measures provide protection of species and restoration of habitats in coordination with CDFW, USFWS, and RWQCB.
Riverside County General Plan Multi-Purpose Open Space Element (OS)		
OS 18.1	Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs and through implementing related Riverside County policies.	**Consistent.** The Project site is not within an MSHCP area.
Desert Center Area Plan (DCAP)		
DCAP 9.1	Encourage clustering of development for the preservation of contiguous open space.	**Consistent.** The Project site is located adjacent to other solar projects within a DRECP designated DFA.
DCAP 9.3	Require new development to conform with Desert Tortoise Critical Habitat designation requirements.	**Consistent.** The solar facilities on the Easley Project site do not overlap with critical habitat for desert tortoise. Critical habitat within the Chuckwalla Desert Tortoise CHU, which is encompassed under Tortoise Conservation Areas (TCAs), is located near the Project site across Kaiser Road to the west. The gen-tie line would cross desert tortoise critical habitat in the southeastern portion of the adjacent Oberon Project site. Mitigation measures provide for restoration of habitats in coordination with CDFW, USFWS, and RWQCB.

Riverside County General Plan. The solar and BESS facilities, gen-tie line, and associated components would potentially impact biological resources protected by the General Plan provisions, including special-status plants and animals, sensitive habitats, and jurisdictional waters, as previously described. Without mitigation, the Project could result in significant impacts to these biological resources; however, implementation of MMs BIO-1 through MM BIO-12, as previously described, would ensure consistency with the local policies listed above.

Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Impacts to desert dry wash woodland would be avoided on private lands, as on BLM lands in

accordance with the DREPC CMAs. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

The Project would be in compliance with the Riverside County General Plan.

Desert Center Area Plan. The Project would not conflict policies protecting biological resources in the Desert Center Area Plan, including open space and critical habitat. Without mitigation, the Project could result in significant impacts to biological resources; however, implementation of MMs BIO-1 through MM BIO-12, as previously described, would minimize impacts and ensure consistency with the Plan. Impacts to native habitat and USFWS designated critical habitat would be mitigated in accordance with regulatory permits from the USFWS, CDFW, and RWQCB. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

The Project would be in compliance with the Desert Center Area Plan.

Desert Renewable Energy Conservation Project (DRECP). The solar and BESS facility would be largely located on federally administered land and would be subject to federal policies, regulations, and goals. Some BLM-administered lands in Southern California are designated in the DRECP Land Use Plan Amendment (LUPA) as Development Focus Areas (DFA). The purpose of the DRECP is to conserve and manage plant and wildlife communities in the desert regions of California, over 10 million acres of BLM land, while facilitating the timely permitting of compatible renewable energy projects (BLM, 2015). The DRECP LUPA identifies the Project area as within a Development Focus Area (DFA), where renewable energy generation is an allowable use, incentivized, and could be streamlined under the DRECP LUPA.

The DRECP LUPA includes Conservation and Management Actions (CMAs) designed to reduce the effects of development on sensitive resources and highlight other types of mitigation that might be required to further reduce impacts. The Project would comply with all DRECP CMAs and is an allowable use on DFA lands.

The Project would be in compliance with the BLM management actions of the DRECP LUPA.

Mitigation Measures for Impact BIO-6

The full text of the following mitigation measures is in Section 3.5.9 (Mitigation Measures).

MM BIO-1 Biological Monitoring.

MM BIO-2 Worker Environmental Awareness Training.

MM BIO-3 Minimization of Vegetation and Habitat Impacts.

MM BIO-4 Integrated Weed Management Plan.

MM BIO-5 Vegetation Resources Management Plan.

MM BIO-6 Wildlife Protection.

MM BIO-7 Desert Tortoise Protection.

MM BIO-8 Bird and Bat Conservation Strategy (BBCS).

MM BIO-9 Gen-tie lines.

MM BIO-10 Burrowing Owl Avoidance and Relocation.

MM BIO-11 Desert Kit Fox and American Badger Relocation.

MM BIO-12 Streambed and Watershed Protection.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation identified above.

3.5.6. Alternative 1: No Project Alternative

Under the No Project Alternative, no construction or O&M would occur and there would be no Project-related impacts to biological resources. Vegetation, including special-status plants and sensitive communities, would not be removed, existing habitat areas would persist, and wildlife would not be displaced. Special-status species would not be impacted. Disturbance, injury, and mortality of wildlife would not occur as a result of Project activities. Wildlife movement within the Project area would not be limited; however, solar development in the vicinity of the Project area would continue through other projects and wildlife movement may still be affected within the DFA (see Tables 3.1-1 and 3.1-2, as well as Figure 2-4 in Appendix A).

3.5.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. The onsite substation and BESS would be moved at least 0.7 miles to the northeast. The length of the 500 kV gen-tie line under the Lake Tamarisk Alternative would be approximately 0.8 miles longer than the proposed 500 kV gen-tie line. All other Project features would be the same as the proposed Project. Impacts to biological resources would be qualitatively similar to the proposed Project, with slightly fewer acres of habitat disturbance near the Lake Tamarisk Community. Approximately 9 acres of desert pavement would be avoided by removing the solar panels closest to the community. The area where panels would be removed for this Alternative is also within relatively higher quality modeled desert tortoise habitat (see Figure 3.5-5 in EIR Appendix A). Mitigation Measures, as listed in Section 3.5.9, would be implemented and impact conclusions would be the same as for the proposed Project.

3.5.8. Cumulative Impacts

Geographic Scope

The geographic extent for this cumulative analysis includes activities and projects in the desert portion of Riverside County (Palm Springs to the Colorado River) because it consists of similar habitat areas and encompasses the home ranges of species such as those that would be directly or indirectly affected by the proposed Project (Figure 2-4).

Cumulative effects for biological resources include both plant and wildlife species and must consider distribution, habitat availability, designated critical habitat, local rarity or commonness, and likely responses to projects' effects for each species. From a timing perspective, the Project could contribute to cumulative effects to biological resources starting with the initiation of on-site activities and continuing throughout the O&M phase, through final decommissioning. As the number of solar projects and other development and land use changes increase in the region, the cumulative impacts to biological resources, such as habitat loss also increase. This analysis considers the current and foreseeable future projects identified in the cumulative scenario, listed in Tables 3.1-1 (Past or Present Projects or Programs in the Project Area) and 3.1-2 (Probable Future Projects in the Project Area).

This analysis presumes that MMs BIO-1 through BIO-12, identified in Section 3.5.9, would be implemented, that the Project would comply with DRECP CMAs on BLM lands, and that the Project's offsite compensation package would be developed to mitigate the Project's impacts to biological resources. Cumulative impacts of the projects on biological resources identified in the cumulative scenario, as described below by resource type, would be cumulatively significant. With avoidance through Project design and mitigation measures, compliance with the DRECP CMAs, and off-site compensation, the Project's contribution to cumulative impacts would not be considerable.

On BLM-administered lands, the DRECP identifies the federal lands in and around the Project site as a DFA, where renewable energy development should be concentrated. DFAs were designated by the BLM, in coordination with the USFWS, the CEC, and CDFW. Cumulative impacts were considered in the DRECP LUPA Final Environmental Impact Statement (FEIS) (BLM, 2015).

Cumulative Impact Analysis

Vegetation and habitat. Construction-related impacts of the cumulative projects 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. Installation of multiple solar projects concentrated in one area could also increase local ambient air temperatures in and around the solar facilities, impacting persistence of vegetation and suitability of habitat. In the context of the number of past, present, and future projects many of which are large solar projects, the effects of the proposed Project would contribute incrementally to the cumulative significant impacts to vegetation and habitat. Impacts to native habitat would be mitigated in accordance with regulatory permits from the CDFW and RWQCB. Impacts to desert dry wash woodland would be avoided on private lands, as on BLM lands in accordance with the DREPC CMAs. Mitigation for habitat impacts on BLM lands would be implemented in accordance with the DRECP and mitigation measures in the final NEPA document.

Sensitive Habitat and Jurisdictional Waters of the State. Some of the cumulative projects would impact desert dry wash woodland with minor incursions; however, the proposed Project would avoid desert dry wash woodland so it would not contribute to cumulative effects. Indirect effects from the Easley Project in adjacent habitats would be minimized with a buffer from desert dry wash woodland habitat on both private and public lands.

The Project would impact unvegetated ephemeral dry wash, which meets criteria as jurisdictional waters of the State. The cumulative projects would have qualitatively similar impacts to unvegetated ephemeral dry wash, due to the nature of the area and the large washes that cross it, resulting in a significant cumulative impact. The effects of the proposed Project would contribute incrementally to the cumulative impacts to jurisdictional waters of the State. This incremental contribution would not be considerable as the Project has been designed to avoid, minimize, and offset impacts to jurisdictional waters. Direct and indirect impacts during construction would be minimized by implementing MMs BIO-1 through BIO-5 and MM BIO-12. Implementation of MMs, CMAs on BLM lands, and permitting requirements would reduce the impacts so that residual effects would be minimal.

Special-status plants. The proposed Project could affect special-status plants, identified in Impact BIO-1. No threatened or endangered plants were identified on the site. Several widespread special-status plants could be affected. The past, present, and future Projects would have similar impacts to special-status plants that occur in similar habitat types, resulting in in a cumulatively significant impact to regional special-status plants. The contribution of the Project would not be considerable because of the limited number of special-status plants on site and the implementation of mitigation measures. Mitigation measures identified under Impact BIO-1 would avoid and minimize the impacts so that residual effects would be minimal.

Desert tortoise. Suitable habitat is present throughout the southwestern portion of the Project area. The gen-tie line crosses through the adjacent Oberon Project site, which overlaps with a fragmented portion of USFWS-designated critical habitat. Desert tortoise sign (Class 4, Class 5 carcasses) were observed in and around desert dry wash woodland on the Project site. Most of the past, present, and foreseeable future projects in the vicinity would impact similar desert tortoise habitat and many of them could directly affect desert tortoises, as shown in Table 3.5-5 (Desert Tortoise Sign Key) and Table 3.5-6 (Desert Tortoise [DETO] Sign at Desert Center Solar Projects).

Table 3.5-5. Desert Tortoise Sign Key

Sign Type	Class 1	Class 2	Class 3	Class 4	Class 5
Burrow, pallet	currently active, with desert tortoise or recent desert tortoise sign	good condition, definitely desert tortoise; no evidence of recent use	deteriorated condition which includes collapsed burrows; definitely desert tortoise	good condition; possibly desert tortoise	deteriorated condition which includes collapsed burrows; possibly desert tortoise
Scat	wet (not from rain or dew) or freshly dried, obvious odor	dried, with glaze, some odor, dark brown	dried, no glaze or odor, signs of bleaching (light brown), tightly packed material	dried, light brown to pale yellow, loose material, scaly appearance	bleached, or consisting only of plant fiber
Carcasses, shell remains, and bone fragments	< 1 year, fresh putrid, scutes mostly adhered, sheen on exposed scutes, unexposed bone waxy and solid	1-2 years, scutes mostly adhered to bone, exposed scutes pale without sheen, unex-posed bone silky	2-3 years, scutes peeling off bone, unexposed scutes pale and without sheen, no growth ring peeling	4 years, shell bone falling apart, growth rings on scutes peeling; bone fissured	> 4 years, disarticulated and scattered

Source. Easley Biological Resources Technical Report; Ironwood, 2023

Table 3.5-6. Desert Tortoise (DETO) Sign at Desert Center Solar Projects

	Easley[1] (2021/2022)		Oberon[2] (2018/2019/2020)							
Project (Survey Dates)	Dev. Footprint	Avoidance Area	Dev. Footprint	Avoidance Area	**Victory Pass[3] (2019/2020)**	**Arica (2019)**	**Athos (2017/2018)**	**Desert Harvest[4] (2010)**	**Sapphire (2022)**	**TOTAL ALL PROJECTS**
DETO Sign Type										
Live individuals	-	-	1	2	5	-	-	-	-	8
Live individuals at burrow	-	-	-	3	-	-	-	-	-	3
Tracks	-	-	1	6	-	-	1	-	-	8
Non-viable intact tortoise egg	-	-	1	-	-	-	-	-	-	1
BURROW										
Class 1	-	-	-	4	4	-	-	-	-	8
Class 2	-	-	1	2	2	-	1	1	-	7
Class 3	-	-	3	4	2	-	4	1	-	14
Class 4	-	-	1	1	-	-	4	-	-	6

Project (Survey Dates)	Easley[1] (2021/2022) Dev. Footprint	Easley[1] (2021/2022) Avoidance Area	Oberon[2] (2018/2019/2020) Dev. Footprint	Oberon[2] (2018/2019/2020) Avoidance Area	Victory Pass[3] (2019/2020)	Arica (2019)	Athos (2017/2018)	Desert Harvest[4] (2010)	Sapphire (2022)	TOTAL ALL PROJECTS
Class 5	-	-	-	-	1	-	-	-	-	1
PALLET										
Class 1	-	-	-	-	1	-	-	-	-	1
Class 2	-	-	-	-	1	-	-	-	-	1
Class 3 (none)	-	-	-	-	-	-	-	-	-	0
Class 4 (none)	-	-	-	-	-	-	-	-	-	0
Class 5	-	-	-	2	-	-	-	-	-	2
SCAT										
Class 1	-	-	-	-	1	-	1	-	-	2
Class 2	-	-	-	1	-	-	-	-	-	1
Class 3	-	-	-	-	1	-	-	-	-	1
Class 4 (none)	-	-	-	-	-	-	-	-	-	0
Class 5	-	-	1	1	-	-	-	-	-	2
CARCASS										
Class 1	-	-	-	-	1	-	-	-	-	1
Class 2 (none)	-	-	-	-	-	-	-	-	-	0
Class 3	-	-	-	1	-	-	-	-	-	1
Class 4	1	1	-	1	-	1	-	-	-	4
Class 5	-	7	4	7	-	-	-	3	2	23
TOTAL DETO SIGN	**1**	**8**	**13**	**35**	**19**	**1**	**11**	**5**	**2**	**95**

NOTES:
1 - Easley: Two Class 5 carcasses were located outside the Project Area, adjacent to BLM land.
2 - Oberon: Observed live individuals were all adults. Class 3 carcass was an unknown tortoise species.
3 - Victory Pass: Observed live individuals were all adults; 2 females, 3 males.
4 - Desert Harvest: Three Class 5 bone fragments (carcass), possibly of tortoise origin, were found and may have been washed onto the site from upstream. Due to their old age, highly weathered surfaces and edges, and the small size of the fragments, assigning them definitively to tortoise was not possible.

Due to the number and size of the cumulative projects, they would result in a cumulatively significant impact. Mitigation measures identified in this EIR under Impact BIO-2, implementation of DRECP CMAs on BLM-administered land, and other permitting requirements would prevent lethal take of desert tortoise and avoid and minimize impacts to its habitat on the Easley Project site. The surrounding projects would be subject to similar CEQA and/or NEPA mitigation measures, permitting requirements, biological resources management plans, and DRECP CMAs (for projects on BLM-administered land), which would have been developed to minimize impacts to habitat and prevent lethal take of desert tortoise. In addition, live desert tortoises found on the Easley and Oberon sites would be relocated or translocated in accordance with the Easley Desert Tortoise Protection and Translocation Plan (Aspen, 2023) and the Oberon Desert Tortoise Protection and Translocation Plan (Aspen, 2022). Desert tortoises would be moved offsite when encountered during both construction and operation if suitable habitat is not available nearby. In compliance with the BLM DRECP CMAs, the Easley, Oberon, Arica, and Victory Pass Projects will avoid suitable desert dry wash woodland habitat with a 200-foot buffer throughout the Project sites, except for minor incursion. Future projects on BLM-administered land in the Desert Center area would likewise be subject to the same DRECP CMAs to protect the hydrologic function and species habitat of the desert dry wash woodland areas. If approved, the proposed expansion of Joshua Tree National Park and creation of the Chuckwalla National Monument would strengthen and expand protection of critical habitat to the west of Kaiser Road and south of I-10. The Project's contribution to cumulative impacts to desert tortoise and its critical habitat would not be considerable.

Native birds, including special-status passerine birds. Migratory birds are expected to occur throughout the area during construction and O&M. Land use conversion in the Project area and in other of the cumulative projects would result in habitat loss and degradation, displacement, decreased foraging activities, and potentially disruption or failure of nesting, increased predation, or mortality. Solar panels and the gen-tie line of the proposed Project as well as other solar PV projects may cause electrocution and collision hazards, such as a "lake effect," leading to bird mortality. Taken together, the projects would result in a cumulatively significant impact for native birds. The proposed Project's impacts would be mitigated through pre-construction surveys, avoidance of active nests, and O&M phase adaptive management for bird mortality, as described in MM BIO-8 (Bird and Bat Conservation Strategy). Natural habitat loss would be minimized and offset through mitigation measures identified under Impact BIO-1. The incremental contribution of the proposed Project to the cumulative impacts to native bird habitat and nesting success would not be considerable because pre-construction nesting bird surveys would be performed to avoid impacts, and native habitat loss would be offset. Regarding potential collision with the solar facilities or gen-tie line, MM BIO-8 (Bird and Bat Conservation Strategy), would require adaptive management based on monitoring of bird mortality at surrounding solar projects. MM BIO-9 (Gen-tie Lines) would require mechanisms to visually warn birds such as permanent markers or bird flight diverters and maintain sufficient distance between all conductors and grounded components to prevent electrocution. With implementation of the Project's mitigation measures, the contribution to cumulative impacts to native bird populations from the proposed solar facilities would not be considerable.

Burrowing owl. Potential impacts of the solar facilities to burrowing owl include habitat loss or degradation, possible injury or mortality if they are present in a work area, particularly during nesting season, and possible mortality from collision with facilities, as described above for native birds. Other projects in the vicinity include transmission lines and solar energy projects with similar habitat for burrowing owl. Effects of the other projects would be similar to potential effects of the proposed Project. Together these projects would result in significant impacts to habitat and mortality of burrowing owls. The incremental contribution of the proposed Project to the cumulative impacts to burrowing owls, including habitat, construction-related mortality, or collision morality, would not be considerable because mitigation measures would be implemented, individuals would be relocated to an off-site location prior to construction, and potential collision would be mitigated as described above for native birds.

Special-status raptors, including golden eagle. Marginal nesting habitat for elf owl is present. The site provides suitable seasonal or year-round foraging habitat for several raptor species, described under Impact BIO-1, and is within potential foraging distance of known golden eagle nesting territories. Several raptors are likely to forage infrequently on the solar facility site 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 proposed Project. Cumulatively, these projects could result in significant impact to foraging due to habitat loss. The incremental contribution of the proposed Project to the cumulative impacts to special-status raptors would not be considerable, because native habitat loss would be minimized and potential collision would be mitigated as described above for native birds.

Desert kit fox and American badger. Active desert kit fox burrows and American badger burrows occur on the Project site. Both species could use native habitats, wherever prey animals may be present. Both species are expected to occur on the cumulative project sites and loss of the habitat and prey species could result in a significant cumulative impact. Mitigation measures identified under Impact BIO-1 would offset habitat loss and prevent or minimize wildlife injury and mortality. Pre-construction surveys would be performed to exclude both species from work sites. The incremental contribution of the proposed Project to the cumulative impacts to these species would not be considerable because individuals would be relocated out of harm's way to an off-site location and native habitat loss would be minimized.

Burro deer. The principal potential impacts to burro deer would be reduced access to dependable irrigation water at agricultural sites. Burro deer are expected to occur on the cumulative project sites and loss of native habitat and access to water sources could result in a significant cumulative impact. Mitigation measures identified under Impacts BIO-1 and BIO-3 would offset habitat loss and minimize impacts to wildlife movement. Desert dry wash woodland would be avoided. The incremental contribution of the proposed Project to the cumulative impacts to burro deer would not be considerable because no take would occur, and desert dry wash woodland used for wildlife movement would be avoided.

Special-status bats. Construction of the Project could adversely impact special-status bats through the conversion of desert shrubland foraging habitat Desert dry wash woodland that may support limited roosting sites would be avoided. Removal of those features could disturb, injure, or kill bats. Mitigation measures identified under Impact BIO-1 would minimize and offset habitat loss, inspect structures and remove wildlife or allow wildlife to escape prior to demolition, and require pre-construction surveys or scheduling of tree removal outside the bat maternal roosting season. These measures are expected to effectively minimize potential impacts to special-status bats and to offset habitat loss. Cumulative projects would also convert desert shrubland foraging habitat and remove roost sites, resulting in a significant cumulative impact to special-status bats. These projects would implement mitigation measures similar to those identified for the proposed Project, including offsite compensation for native habitats, avoidance of active roosts, avoidance of desert dry wash woodland, and Bird and Bat Conservation Strategies. The incremental contribution of the proposed Project to the cumulative impacts to special-status bats would not be considerable because desert dry wash woodland habitat would persist on the Project site, native habitat loss would be minimized, and potential collision would be mitigated as described above for native birds.

Wildlife movement. Cumulative impacts for wildlife movement consider projects within 5 miles that could impact multi-species linkages. Past, present, and foreseeable projects are listed in Tables 3.1-1 and 3.1-2 and include the SCE Red Bluff Substation and Oberon Solar Project to the south, the Sapphire, Palen, Arica, and Victory Pass Solar Projects to the east, the Athos Solar Project to the north and east, and the Desert Harvest, Desert Sunlight to the north. Together with the other solar projects in the surrounding area, cumulative impacts to wildlife movement in the vicinity of the Project area would be significant. The southernmost portion of the DRECP Pinto Wash multi-species linkage overlaps the northern Project area, a portion of which would be impacted by the proposed Project. The avoided portion of the linkage on the

Easley Project site supports desert dry wash woodland. Avoidance of this habitat would help maintain movement opportunities east-west through the southern portion of the linkage. Undeveloped lands would persist in the remainder of the multi-species linkage to the north, in ACECs located east and south of the Project site, and if approved by Congress, in the areas of the proposed expansion of Joshua Tree National Park and the Chuckwalla National Monument to the west and south. In combination with avoidance of desert dry wash woodland on BLM lands under the DRECP, and at other cumulative projects, limited wildlife movement through and around the Project would be maintained. The Project's contribution to cumulative impacts to wildlife movement would not be considerable.

Local policies and ordinances. All cumulative projects are subject to environmental review and approval by federal, State, or local agencies. During that process, the agencies review the applicable polices and ensure that each project complies with policies and ordinances, and impose conditions as appropriate to ensure compliance. Therefore, there is no significant cumulative conflict with local policies and ordinances. The proposed Project does not conflict with local policies or ordinances and thus has no contribution to any cumulative conflict. Cumulative impacts to policies and ordinances would be less than significant.

Mitigation Measures for Cumulative Impacts

Mitigation Measures BIO-1 through MM BIO-12 would be implemented to address potential biological resources impacts for the proposed Project and Lake Tamarisk Alternative. No additional mitigation is required.

Significance After Mitigation

The Project's contribution to cumulative impacts would not be cumulatively considerable with implementation of mitigation identified above.

3.5.9. Mitigation Measures

MM BIO-1 **Biological Monitoring.** Monitoring to ensure conformance with conditions of approval, including effective protection and avoidance of biological resources, shall be implemented by the Applicant as follows:

***Biological Monitoring Team*.** During construction and decommissioning, the Applicant shall employ a biological monitoring team to oversee Project activities. Any activity that may impact vegetation, wildlife, and sensitive resources shall be monitored to ensure compliance with all mitigation measures for biological resources.

The biological monitoring team shall consist of:

- *Lead Biologist:* The Applicant shall assign a Lead Biologist, approved by Riverside County, BLM, CDFW, and USFWS as the primary point of contact for the BLM and resource agencies regarding biological resources mitigation and compliance. The Lead Biologist shall have an approved MOU with Riverside County prior to commencing work on the Project.
- *Biological Monitor:* Biological monitors shall be overseen by the Lead Biologist and shall perform any required surveys, ground disturbance and construction monitoring, wildlife monitoring, inspections, marking sensitive resource buffers, and revegetation monitoring during Project activities. Biological monitors shall include trained desert tortoise monitors (MM BIO-7) and nest monitors (MM BIO-8).

- *Authorized Desert Tortoise Biologist:* For desert tortoise protection measures (MM BIO-7), the Applicant shall nominate a qualified individual to serve as Authorized Desert Tortoise Biologist, for approval by the USFWS.

The Applicant shall provide the resumes of the proposed Biological Monitoring Team to the BLM and Riverside County for approval prior to onset of ground-disturbing activities. The Biological Monitoring Team shall have demonstrated expertise with the biological resources within the Project region. The Biological Monitoring Team shall have authority to halt any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources.

The duties of the Biological Monitoring Team shall vary during the construction, O&M, and decommissioning phases, based on the biological monitoring tasks needed for compliance during each phase. During O&M, an Applicant staff member serving as a compliance manager may perform the duties of the Lead Biologist to ensure compliance with biological mitigation measures, such as performing inspections for entrapped wildlife and fence condition, reporting dead or injured wildlife, and avoiding nesting birds.

In general, the duties of the Lead Biologist shall include, but shall not be limited to:

- Regular, direct communication with representatives of the BLM, and other agencies, as appropriate. The Lead Biologist, or during O&M, the Applicant's compliance manager, shall immediately notify the BLM and applicable resource agencies in writing of dead or injured special-status species, or of any non-compliance with biological mitigation measures or permit conditions.
- Train and supervise Biological Monitors, including desert tortoise monitors, nest monitors, and construction monitors.
- Conduct or oversee Worker Environmental Awareness Program (WEAP) training (MM BIO-2).
- During construction and decommissioning, clearly mark and inspect sensitive biological resource areas in compliance with regulatory terms and conditions.
- Oversee wildlife clearance surveys, ground disturbance and grading, and biological monitoring. Ensure that all biological monitoring is completed properly and on schedule.
- Conduct or oversee bi-weekly compliance inspections during ground-disturbing activities and communicate any remedial actions needed (i.e., trash, fence, weed maintenance; wildlife mortality) to maintain compliance with mitigation measures.

***Reporting*.** The Lead Biologist, or during O&M, the Applicant's compliance manager, shall report regularly to the BLM and Riverside County to document the status of compliance with biological mitigation measures.

During construction and decommissioning:

- Provide weekly verbal or written updates to the BLM with any information pertinent to the BLM and Riverside County, to resource agencies, or to state or federal permits for biological resources.
- Prepare and submit monthly and annual compliance reports to include a summary of Project activities that occurred, biological resources surveys and monitoring that were

performed, any sensitive or noteworthy species observed, weed infestations removed, and non-compliance issues and remedial actions that were implemented.

During O&M:

- Conduct quarterly compliance inspections and reporting, to be submitted to the BLM and Riverside County, to document the condition of exclusion fencing, wildlife mortality, and any biological resource issues of note.

MM BIO-2 **Worker Environmental Awareness Training.** The Lead Biologist shall prepare and implement a Worker Environmental Awareness Program (WEAP). The Applicant shall be responsible for ensuring that all workers at the site receive WEAP training prior to beginning work on the Project and throughout construction and operations. The WEAP shall be available in English and Spanish. The Applicant shall submit the WEAP to the lead agency and resource agencies for approval prior to implementation. The WEAP will:

- Be developed by or in consultation with the Lead Biologist and consist of an on-site or training center presentation with supporting written material and electronic media, including photographs of protected species, available to all participants.
- Provide an explanation of the function of flagging that designates authorized work areas; specify the prohibition of soil disturbance or vehicle travel outside designated areas.
- Discuss general safety protocols such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures.
- Review mitigation and biological permit requirements.
- Explain the sensitivity of the vegetation and habitat within and adjacent to work areas, and proper identification of these resources.
- Discuss the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act and the consequences of non-compliance with these acts.
- Discuss the locations and types of sensitive biological resources on the Project site and adjacent areas and explain the reasons for protecting these resources.
- Inform participants that no snakes, other reptiles, birds, bats, or any other wildlife shall be harmed or harassed.
- Place special emphasis on species that may occur on the Project site and/or gen-tie lines, including special-status plants, desert tortoise, burrowing owl, golden eagle, nesting birds, desert kit fox, American badger, and burro deer.
- Specify guidelines for avoiding rattlesnakes and reporting rattlesnake observations to ensure worker safety and avoid killing or injuring rattlesnakes. Rattlesnakes should be safely removed from the work area using appropriate snake handling equipment, including a secure storage container for transport, or by calling local animal control.
- Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas, describe the Integrated Weed Management Plan.
- Provide contact information for the Lead 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.
- Desert Tortoise Education Requirements: Prior to the start of construction activities, a desert tortoise education program shall be presented by the Lead Biologist to all personnel who will be present on Project work areas. Following the start of construction, any new employee shall be required to complete the tortoise education program prior to working on site. At a minimum, the tortoise education program shall cover the following topics:
  (a) A detailed description of the desert tortoise, including color photographs;
  (b) The distribution and general behavior of the desert tortoise;
  (c) Sensitivity of the species to human activities;
  (d) The protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation;
  (e) The protective measures being implemented to conserve the desert tortoise during construction activities;
  (f) Procedures and a point of contact if a desert tortoise is observed on site.

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** Prior to ground-disturbing activities during construction, O&M, or decommissioning, authorized work areas shall be clearly delineated. These areas shall include, but not be limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils. Delineation may be implemented with common orange vinyl "fencing" or staking to clearly identify the limits of work and will be verified by the Lead Biologist. 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. Spoils shall be stockpiled in disturbed areas. All disturbances, vehicles, and equipment shall be confined to the fenced/flagged areas.

Construction activities shall minimize soil and vegetation disturbance to minimize impacts to soil and root systems. Upon completion of construction activities in any given area, all unused materials, equipment, staking and flagging, and refuse shall be removed and properly disposed of, including wrapping material, cables, cords, wire, boxes, rope, broken equipment parts, twine, strapping, buckets, and metal or plastic containers. Any unused or leftover hazardous products shall be properly disposed of off-site.

Hazardous materials shall be handled, and spills or leaks shall be promptly corrected and cleaned up according to applicable requirements. Vehicles shall be properly maintained to prevent spills or leaks. Hazardous materials, including motor oil, fuel, antifreeze, hydraulic fluid, grease, shall not be allowed to enter drainage channels.

Low-Impact Site Preparation. Native vegetation shall be allowed to recover from rootstocks and seed bank wherever facilities do not require permanent vegetation removal (e.g., access roads, foundations, paved areas, or fire clearance requirements) within the perimeter fenceline of the solar facilities and under solar arrays. Vegetation height and density shall be managed as needed for O&M and fire safety, but vegetation management shall otherwise focus on maintaining habitat and soil conditions.

MM BIO-4 **Integrated Weed Management Plan.** The Applicant shall prepare and implement an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from

infesting the site or spreading into surrounding habitat. The IWMP must 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) including requiring a Pesticide Use Permit approved by the BLM and adhere to the design features included in the Project EIR and BLM EA. CDFW, BLM, and Riverside County (or its designated representative) must approve the plan. The IWMP 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. The IWMP shall identify herbicides that may be used for control or eradication, and avoid herbicide use in or around any environmentally sensitive areas. The IWMP shall also include a reporting schedule, to be implemented by the Lead Biologist.

MM BIO-5 **Vegetation Resources Management Plan.** The Applicant shall prepare and implement a Vegetation Resources Management Plan (VRMP), to be reviewed and approved by CDFW, BLM, and Riverside County (or its designated representative). The VRMP shall address revegetation of temporarily disturbed areas and ongoing O&M management of native vegetation within the solar fields.

The Lead Biologist shall oversee implementation of the VRMP to meet success criteria and prevent further degradation of areas temporarily disturbed by Project activities. Pre-disturbance habitat values would not be restored, but off-site compensation would offset the loss in habitat value.

The Vegetation Resources Management Plan shall detail the methods to revegetate temporarily impacted sites and salvage special-status plants from the Project footprint; and outline long-term vegetation management within the solar facility during its operations.

- *Revegetation of temporarily impacted sites.* The Plan shall specify methods to prevent or minimize further site degradation; stabilize soils; maximize the likelihood of vegetation recovery over time (for areas supporting native vegetation); and minimize soil erosion, dust generation, and weed invasions. 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, vs. blading). The Plan shall include: (a) soil preparation measures, including locations of recontouring, decompacting, imprinting, or other treatments; (b) details for topsoil storage, as applicable; (c) plant material collection and acquisition guidelines, including guidelines for salvaging, storing, and handling plants from the Project site, as well as obtaining replacement plants from outside the Project area (plant materials shall be limited to locally occurring native species from local sources); (d) a plan drawing or schematic depicting the temporary disturbance areas (drawing of "typical" gen-tie structure sites will be appropriate); (e) time of year that the planting or seeding will occur and the methodology of the planting; (f) a description of the irrigation, if used; (g) success criteria; and (h) a monitoring program to measure the success criteria, commensurate with the Plan's goals, (i) contingency measures for failed revegetation efforts not meeting success criteria.
- *Cactus Salvage.* To conform with BLM DRECP CMA LUPA-BIO-VEG 5, LUPA-BIO-VEG 7, and BLM policy, the Applicant shall include salvaged or nursery stock yuccas (all species), and cacti (excluding cholla species, genus Cylindropuntia), in revegetation plans and implementation affecting BLM lands. The Plan shall include methods to salvage and replant cacti and yucca found on the site; season for salvaging the plants;

methods for salvage, storage, and re-planting them; locations for re-planting; and appropriate monitoring and success criteria for the salvage work.

- *Operations Phase On-Site Vegetation Management.* The Plan shall include methods and scheduling for on-site vegetation management throughout the operations phase, describing mowing or other vegetation treatments to be implemented, to minimize interference with the solar panels, fire hazard, soil disturbance, and disturbance of any bird nests. It also shall address disposal of mown material, and incorporate all applicable components of the Integrated Weed Management Plan, including any proposed herbicide usage.

MM BIO-6 **Wildlife Protection.** The Applicant shall undertake the following measures during construction and O&M to avoid or minimize impacts to wildlife. Implementation of all measures shall be subject to review and approval by CDFW, BLM, and Riverside County (or its designated representative).

- *Wildlife avoidance.* Project activities shall minimize interference with wildlife (including ground-dwelling species, birds, bats) by allowing animals to escape from a work site prior to disturbance; conducting pre-construction surveys and exclusion measures for certain species as specified in other measures; checking existing structures (homes, trailers, etc.) for animals such as bats, barn owls, skunks, or snakes that may be present, and safely excluding them prior to removing the structures.
- *Minimize traffic impacts.* The Applicant shall specify and enforce maximum vehicle speed limits as specified in the Traffic Control Plan, to minimize risk of wildlife collisions and fugitive dust.
- *Minimize lighting impacts.* Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light towards surrounding fish or wildlife habitat.
- *Avoid use of toxic substances.* Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants.
- *Minimize noise and vibration impacts.* The Applicant shall conform to noise requirements specified in the noise analysis of this EIR 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 or covering open tanks with 2-centimeter netting. Dust abatement shall use the minimum amount of water on dirt roads and construction areas to meet safety and air quality standards. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by biological monitors to ensure they do not create puddles.
- *Trash.* All trash and food-related waste shall be contained in vehicles or covered trash containers inaccessible to ravens, coyotes, or other wildlife and removed from the site regularly.
- *Workers.* Workers shall not feed wildlife or bring pets to the Project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- *Wildlife netting or exclusion fencing.* The Applicant may install temporary or permanent netting or fencing around equipment, work areas, or Project facilities to prevent wildlife exposure to hazards such as toxic materials or vehicle strikes or prevent birds from

nesting on equipment or facilities. Bird deterrent netting shall be maintained free of holes and shall be deployed and secured on the equipment in a manner that, insofar as possible, prevents wildlife from becoming trapped inside the netted area or within the excess netting. The biological monitor shall inspect netting (if installed) twice daily, at the beginning and close of each workday. The biological monitor will inspect exclusion fence (if installed) weekly.

- *Wildlife entrapment.* Project-related excavations and water tanks shall be secured or covered to prevent wildlife entry, entrapment, and drowning. Holes and trenches shall be backfilled, securely covered, or fenced. Open water tanks shall be covered or shall have other means of exit provided to prevent wildlife from drowning. Excavations that cannot be fully secured shall incorporate wildlife ramp or other means to allow trapped animals to escape. At the end of each workday, a biological monitor shall ensure that excavations and water tanks have been secured or provided with appropriate means for wildlife escape.
- *All pipes or other construction materials or supplies* shall be covered or capped in storage or laydown areas. Netting shall be installed over porta-potty vents. No pipes or tubing shall be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped.
- *Dead or injured wildlife* shall be reported to USFWS (for federally listed species and migratory birds) and CDFW (for all wildlife) and/or the local animal control agency, as appropriate, by the Lead Biologist (or the Applicant's compliance manager during O&M). A biological monitor shall safely move the carcass out of the road or work area if needed and dispose of the animal as directed by the agency. If an animal is entrapped, a biological monitor shall free the animal if feasible, work with construction crews to free it in compliance with safety requirements, or work with animal control or CDFW to resolve the situation.
- *Pest control.* No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site, on off-site Project facilities and activities, or in support of any other Project activities.

MM BIO-7 **Desert Tortoise Protection.** No desert tortoise may be handled or relocated without authorization from USFWS and CDFW. The Applicant shall obtain incidental take authorization from both agencies to address any potential take of desert tortoise, including authorization to handle or translocate desert tortoise. Desert tortoises shall be handled or translocated according to a Desert Tortoise Relocation Plan, pending approval by both agencies.

Authorized Personnel Roles and Titles. The Applicant shall designate a USFWS Authorized Biologist to implement the desert tortoise protection measures. The Authorized Biologist may (or may not) also serve as the Project's Lead Biologist.

The Applicant shall employ one or more desert tortoise monitors who are qualified to conduct desert tortoise clearance surveys and who will be on site during all construction. The desert tortoise monitors' qualifications will be subject to review and approval by Riverside County and the BLM. Qualifications may include work as a compliance monitor on a project in desert tortoise habitat, work on desert tortoise trend plot or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert

tortoise. Attendance at a training course endorsed by the agencies (e.g., Desert Tortoise Council tortoise training workshop) is a supporting qualification.

The Authorized Biologist shall direct one or more desert tortoise monitors to conduct pre-construction clearance surveys for each work area, watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals.

The Authorized Biologist shall be responsible for overseeing compliance with desert tortoise protective measures and for coordination with resource agencies. The Authorized Biologist will have the authority to halt any Project activities that may risk take of a desert tortoise or that may be inconsistent with adopted mitigation measures or permit conditions. Neither the Authorized Biologist nor any other Project employee or contractor may bar or limit any communications between Riverside County, BLM, CDFW, or USFWS staff and any Project biologist, biological monitor, or contracted biologist. Upon notification by the desert tortoise monitor or another biological monitor of any noncompliance the Authorized Biologist shall ensure that appropriate corrective action is taken.

The following incidents will require immediate cessation of any Project activities that could harm a desert tortoise: (1) location of a desert tortoise within a work area; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a Project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

Actions to Protect Desert Tortoise. The Applicant shall be responsible for implementing the following requirements, under direction of the Lead Biologist.

- *Preconstruction Clearance Survey*. Transects will be spaced 15 feet (5 meters) apart. Clearance will be considered complete after two successive 100 percent coverage surveys have been conducted without finding any desert tortoises. Clearance surveys must be conducted during the active season for desert tortoises (April through May or September through October), unless authorized by CDFW and USFWS. If a tortoise or an occupied tortoise burrow is located during clearance surveys, work activities will proceed only at the site and within a suitable buffer area after the tortoise has either moved away of its own accord, or if it has been translocated off the site under authorization by the USFWS and CDFW.
- *Worker Training*. The following specifications will be incorporated into the WEAP training, identified in Mitigation Measure BIO-2. Prior to the onset of construction activities, a desert tortoise education program will be presented by the Authorized Biologist to all personnel who will be present on Project work areas. Following the onset of construction, any new employee will be required to formally complete the tortoise education program prior to working on site. At a minimum, the tortoise education program will cover the following topics:
  - (a) A detailed description of the desert tortoise, including color photographs;
  - (b) The distribution and general behavior of the desert tortoise;
  - (c) Sensitivity of the species to human activities;
  - (d) The protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation;

(e) The protective measures being implemented to conserve the desert tortoise during construction activities; and

(f) Procedures and a point of contact if a desert tortoise is observed on site.

- *Construction phase tortoise exclusion fencing*. Prior to construction of solar facilities, temporary or permanent desert tortoise exclusion fencing will be installed around the work areas. The fence will adhere to USFWS design guidelines, where applicable. The Authorized Biologist will direct a clearance survey before the tortoise fence is enclosed to ensure no tortoises are in the work area. Any potentially occupied burrows will be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If live tortoises or an occupied tortoise burrow are identified in the work area, tortoises shall be relocated under authorization by USFWS and CDFW or allowed to leave on their own accord before enclosing the fence. The fence shall be either continuously monitored prior to closure, or clearance surveys shall be repeated prior to closure after tortoises are removed. Once installed, exclusion fencing will be inspected at least monthly and following all rain events, and corrective action taken if needed to maintain it. Tortoise exclusion fencing will include a "cattle guard" or desert tortoise exclusion gate at each entry point. This gate will remain closed at all times, except when vehicles are entering or leaving. 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 as long as a biological monitor is present to monitor for tortoise activity in the vicinity.
- *Unfenced work areas*. As an alternative to exclusion fencing, any work conducted in an area that is not fenced to exclude desert tortoises (e.g., gen-tie tower sites) must be monitored by a biological monitor who will stop work if a tortoise enters the work area. Work activities will proceed only at the site and within a suitable buffer area after the tortoise has either moved away of its own accord, or if it has been translocated off the site under authorization by the USFWS and CDFW. Work sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions) that are outside of the desert tortoise exclusion fencing will be fenced by installing exclusionary fencing, covered, or will not be left unfilled overnight.
- *Operation phase tortoise monitoring or exclusion*. At the Applicant's discretion, and in consultation with resource agencies, permanent desert tortoise exclusion fencing may be installed around each solar facility site, or the Applicant may prepare and implement a monitoring and avoidance program to ensure no take of desert tortoise during O&M, while allowing wildlife (possibly including desert tortoise) to move through the facilities uninjured.
- *Tortoises under vehicles*. The ground beneath vehicles parked outside of desert tortoise exclusion fencing will be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle will not be moved until the desert tortoise leaves of its own accord.
- *Tortoises on roads*. If a tortoise is observed on or near the road accessing a work area, vehicles will stop to allow the tortoise to move off the road on its own.
- *Tortoise Observations*. Any time a tortoise is observed within or near a work site, Project work activities will proceed only at the site and within a suitable buffer area after the tortoise has either moved away of its own accord, or if it has been trans-located off the site under authorization by the USFWS and CDFW. If a tortoise is

observed outside of exclusion fencing, construction will stop, and the tortoise shall be allowed to move out of the area on its own. If a tortoise or tortoise burrow is observed within the exclusion fencing, construction in the vicinity will stop, pending translocation of the tortoise or other action as authorized by USFWS and CDFW.

- *Dead or Injured Specimens*. Upon locating a dead or injured tortoise, the Applicant or its agent will immediately notify the Palm Springs Fish and Wildlife Office by email or telephone. Written notification must be made within five days of the finding, both to the appropriate USFWS field office and to the USFWS's Division of Law Enforcement. 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, cause of death, if known, and other pertinent information.
- *Raven Management Plan*. The Applicant will develop and implement a Raven Management Plan to address activities that may occur during the pre-construction, construction, decommissioning, and O&M phases of the Project that may attract common ravens (*Corvus corax*), a nuisance species that is a subsidized predator of desert tortoises and other sensitive species in the Project vicinity. The measures contained in the Raven Management Plan will be designed to:
  (a) Identify conditions associated with the Project that might provide raven subsidies or attractants.
  (b) Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities.
  (c) Describe monitoring during construction and operations, including methods to identify individual ravens that prey on desert tortoises.
  (d) The Applicant will submit payment to the Project sub-account of the Renewable Energy Action Team (REAT) Account held by the National Fish and Wildlife Foundation (NFWF) to support the Service's Regional Raven Management Program. The one-time fee will be as described in the cost allocation methodology, or more current guidance as provided by the Service or CDFW. The contribution to the regional raven management plan will be $105 per acre impacted.

MM BIO-8 **Bird and Bat Conservation Strategy (BBCS).** The Applicant will implement the final BBCS, developed in accordance with guidelines recommended by the USFWS, to avoid or minimize take of migratory birds that may nest on the site or may be vulnerable to collision with Project components (IP Easley, 2023). It describes the proposed 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 USFWS and 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 will prepare and implement a Nesting Bird Management Plan (NBMP), to include nest surveys, avoidance, and protection. The Project will 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 will be conducted by one or more biological monitors at the direction of the Lead Biologist. The biologists' qualifications will be subject to review and approval by CDFW, BLM, and Riverside County. Nest surveys will be conducted for all Project 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 will cover all work sites, including the solar facility and gen-tie, and surrounding 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 will 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 will 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.

If for any reason a bird nest must be removed during the nesting season, the Applicant or its agent will notify the CDFW and USFWS 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 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.

MM BIO-9 **Gen-tie lines.** Gen-tie line support structures and other facility structures shall be designed in compliance with current standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices). This design also reduces the potential for increased predation of special-status species, such as the desert tortoise. Mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on gen-tie lines at regular intervals to prevent birds from colliding with the lines (APLIC, 2006, 2012). To the extent practicable, the use of guy wires shall be avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision. Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions. Gen-tie lines shall maintain sufficient distance between all conductors and grounded components to prevent potential for electrocution

of the largest birds that may occur in the area (e.g., golden eagle and turkey vulture). They shall utilize non-specular conductors and non-reflective coatings on insulators.

MM BIO-10 **Burrowing Owl Avoidance and Relocation.** The Applicant will prepare and implement a Plan for wildlife relocation, including burrowing owl and other species (i.e., desert kit fox, American badger), as needed. The Plan must be reviewed and approved by Riverside County, BLM, CDFW, and USFWS prior to the start of ground-disturbing activities. Burrowing owl protection and relocation will incorporate the following requirements:

- Pre-construction surveys for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, whitewash) will be conducted throughout each work area. Survey schedules will be coordinated with constructing the desert tortoise exclusion fence and the pre-construction desert tortoise clearance surveys. As needed, follow-up surveys will 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 Lead Biologist will coordinate with the Construction Contractor to implement avoidance and set-back distances. Disturbance of owls or occupied burrows during the breeding season (February 1 through August 31) will not be permitted.
- Any unoccupied suitable burrows within the solar facility footprint will be excavated and filled in under the supervision of the Lead Biologist prior to site preparation.
- The Plan will specify detailed methods for passive relocation of burrowing owls, if needed, and monitoring and management of the passive relocation including a three-year monitoring program.

MM BIO-11 **Desert Kit Fox and American Badger Relocation.** The Applicant will prepare and implement a Plan for wildlife relocation, including desert kit fox, American badger, and other species (i.e., burrowing owl), as needed. The Plan must be reviewed and approved by the lead agencies prior to the start of ground-disturbing activities. Under direction of the Lead Biologist, biological monitors shall conduct pre-construction surveys for desert kit fox and American badger. Surveys schedules will be coordinated with constructing the desert tortoise exclusion fence and the pre-construction desert tortoise clearance surveys. Surveys shall also consider the potential presence of dens within 100 feet of the Project boundary (including utility corridors and access roads). If dens are detected each den shall then be further classified as inactive, potentially active, or definitely active. Inactive dens directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse. Potentially active dens within the construction footprint shall be monitored by a Biological Monitor for three consecutive nights using a tracking medium such as diatomaceous medium or fire clay and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, dens shall be fitted with one-way trap doors to encourage animals to move off site. After 48 hours post installation, the den shall be excavated by hand and collapsed. Dens shall be collapsed prior to construction of the perimeter fence, to allow animals the opportunity to move off site without impediment. If an active natal den is detected on the site, the CDFW shall be contacted within 24 hours. The course of action will depend on the age of the pups, location of the den site, status of the perimeter fence, and the pending construction activities proposed near the den. A 500-foot no disturbance buffer shall be maintained around all active dens. Alternatively, a designated biologist authorized by CDFW shall trap and remove animals from occupied dens and move them off

site into appropriate habitat. Additionally, the following measures are required to minimize the likelihood of distemper transmission:

- Any kit fox hazing activities that include the use of animal repellents such as coyote urine must be cleared through the CDFW prior to use.
- Any documented kit fox mortality shall be reported to the CDFW within 24 hours of identification. If a dead kit fox is observed, it shall be retained and protected from scavengers until the CDFW determines if the collection of necropsy samples is justified.

MM BIO-12 **Streambed and Watershed Protection.** Prior to ground-disturbing activities in jurisdictional waters of the State, the Applicant will obtain a Lake and Streambed Alteration Agreement (LSAA) from the CDFW and Waste Discharge Requirements (WDR) from the RWQCB. A Stormwater Pollution Prevention Plan (SWPPP) or SWPPP-equivalent document shall be prepared by a qualified engineer or erosion control specialist, and once approved by the State Water Resources Control Board and a BLM hydrologist, shall be implemented before and during construction. The SWPPP shall include BMPs for stormwater runoff quality control measures, management for concrete waste, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed.

The Applicant will implement BMPs identified below to minimize adverse impacts to streambeds and watersheds.

- Vehicles and equipment will not be operated in ponded or flowing water except as specified by resource agencies.
- The Applicant will minimize road building, construction activities, and vegetation clearing within ephemeral drainages.
- The Applicant will 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.
- Spoil sites will not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, unapproved herbicides, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from Project-related activities, will be prevented from contaminating the soil and/or entering ephemeral drainages. The Applicant shall ensure that safety precautions specified by this measure, as well as all other safety requirements of other measures and permit conditions are followed during all phases of the Project.
- When operations are completed, any excess materials or debris will be removed from the work area. No rubbish will be deposited within 150 feet of the high-water mark of any drainage during construction, operation, and decommissioning the Project.
- No equipment maintenance will occur within 150 feet of any wetland, Category 3, 4, or 5 streambed, or any streambed greater than 10 feet wide. No petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state jurisdictional waters under any flow.
- With the exception of the drainage control system installed for the Project, the installation of bridges, culverts, or other structures will be such that water flow (velocity and

low flow channel width) is not impaired. Bottoms of temporary culverts will be placed at or below stream channel grade.

- No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity of whatever nature will 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 located within or adjacent to a drainage will be positioned over drip pans. Stationary heavy equipment will have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as brooms, absorbent pads, and skimmers will be on site prior to the start of construction.
- The cleanup of all spills will begin immediately. RWQCB, CDFW, BLM, and Riverside County will be notified immediately by the Applicant of any spills and will be consulted regarding clean-up procedures.

3.6. Cultural and Tribal Cultural Resources

This section provides information on known existing cultural resources and tribal cultural resources in and surrounding the IP Easley Renewable Energy Project (Easley or Project) area and alternatives. The California Environmental Quality Act (CEQA) requires that the effects of discretionary projects on cultural and tribal cultural resources be considered in the planning process. This section evaluates the proposed Project's potential impacts to these resources.

Cultural resources reflect the history, diversity, and culture of a region, as well as the people who created them. Cultural resources are unique in that they are often the only remaining evidence of past human activity. Cultural resources can have a variety of forms, only a subsection of which are actively built or modified by humans. Cultural resources can also be natural features or connected landscapes with understood importance to people in the past and/or the present. They include archaeological, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. Cultural resources include locations of important events, traditional cultural places, sacred sites, and places associated with important people. Many cultural resources are present in the region surrounding the proposed Project area, both on the ground surface and buried completely or partially beneath it, which could be affected by development without adequate protections in place.

Tribal cultural resources (TCR) include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe. To qualify as a TCR, the resource must either: (1) be listed on, or be eligible for listing on, the California Register of Historical Resources or other local historic register; or (2) constitute a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC Section 21074(a)(2)). Native American tribes that are traditionally and culturally affiliated with a geographic area can provide lead agencies with expert knowledge of TCRs.

The Project area encompasses approximately 3,888 acres, which includes 988 acres of privately owned land under the jurisdiction of the County of Riverside (County) and 2,900 acres of land managed by the Bureau of Land Management (BLM). For purposes of the analysis of Cultural Resources and TCRs under CEQA, the area under County jurisdiction is identified herein as the CEQA Area of Direct Impacts. The 1-mile area surrounding the CEQA Area of Direct Impacts is identified herein as the CEQA Area of Indirect Impacts.

The following discussion is based on the cultural resources technical report prepared for this Project: *Phase I Cultural Resource Inventory for the Easley Renewable Energy Project, Riverside County, California* (Clark et al. 2023).

3.6.1. Environmental Setting

3.6.1.1. Natural Setting

Physiography and Geography

The Project is in the Chuckwalla Valley of eastern Riverside County, situated in the intervening valley forming the boundary between the Mojave Desert and eastern Transverse Range geomorphic provinces (CGS 2002; Hall 2007).

The Project area is situated on a series of fans emanating from the southeastern front of the Eagle Mountains. The surface of this area is highly alleviated with braided drainages incised into younger sandy Holocene remnant surfaces with a number of east-northeast trending channels cut into a relict Late Holocene surface. In general, The Project area consists of both active and remnant surface components.

The Colorado Desert climate is generally hot and dry, with average daily temperatures ranging from the low 40 degrees Fahrenheit (°F) in winter to 105°F in summer, although summer temperatures can exceed 120°F. Rapid heat loss at night results in a wide daily temperature variance of approximately 50°F. Annual rainfall totals within the Colorado Desert are among the lowest in the Sonoran Desert, averaging less than 2 inches per year in the Salton Trough and between 2 to 4 inches along the Colorado River.

Surface water is restricted to perennial and seasonal sources. Perennial water for the region is limited to the Colorado River, which lies approximately 48 miles east of the Project area and is one of the major river systems in the United States. Mountains that surround the valley include the Palen and Coxcomb ranges to the north and northeast, the Eagle Mountains to the west, and the Chuckwalla Mountains to the south. The Chuckwalla Valley basin includes four dry lakes or playas: Palen Lake, Ford Lake, Hayfield Lake, and an unnamed playa between the McCoy Range and Mule Mountain.

Flora within the Project area is typical of the Colorado Desert and characterized by a bimodal pattern of rainfall allowing for greater plant diversity. The primary plant community is Sonoran Desert Scrub, which is dominated by creosote bush. Other plant communities include Desert Dry Wash Woodland and Desert Pavement.

Faunal species within Project area consist of small mammals such as the desert cottontail, jackrabbit, kangaroo rat, packrat; lizards, snakes, desert tortoise (*Gopherus agassizii*), and a small number of birds. Large mammals typically consist of desert bighorn sheep (*Ovis canadensis nelsoni*), Sonoran pronghorn antelope (*Antilocapra americana sonoriensis*), and coyote (*Canis latrans*).

3.6.1.2. Prehistoric Setting

The Project area is near the boundary of the Colorado and Mojave deserts and is located along a known prehistoric and historic travel corridor. Scholars suggest multiple groups were present in the region at various times. Groups in the region originated from portions of the Mojave Desert, the interior Colorado Desert, and the Colorado River, as well as more distant locations, such as the peninsular ranges, the Sonoran Desert region east of the Colorado River or elsewhere in the southwestern cultural sphere of Arizona, New Mexico, and Mexico. Therefore, the area's archaeological record also may reflect affinities with any of these regions. Consequently, the prehistoric context herein draws on current knowledge from both the Mojave and Colorado desert regions.

Paleoindian Period (circa 12,000 to 8000 BP)

This first period of human occupation in California is commonly referred to as the Paleoindian Period (around 12,000 to 8,000 years before the present [BP]). Evidence of a permanent Paleoindian occupation in the Colorado Desert is scant. Isolated Paleoindian projectile points (large, fluted points) have been recovered on the surface at several locations, including Pinto Basin, approximately 37 miles northwest of the Project area, and near McCoy Spring in the northern Chuckwalla Valley, approximately 25 miles due east. However, few Paleoindian archaeological sites have been identified in the Colorado Desert. The lack of evidence may be due to an absence of large-scale data recovery efforts in the region and the instability of landforms rather than a lack of human occupation.

Archaic Period (8000 to 1500 BP)

During the Archaic period (8000 to 1500 BP), climates were generally warmer and drier. Populations grew and prehistoric economies became more diversified, shifting away from large game hunting that occurred during the terminal-Pleistocene. New technologies, such as the milling stone, indicate an increasing dependence on plant resources. Archaic Period projectile point types include Gypsum, Elko, and Humboldt series.

Late Prehistoric Period (1500 BP to Historic Period)

The Late Prehistoric period is represented by the Patayan complex. By this time, an extensive network of established trade routes traversed through the desert. This complex network of prehistoric trails consisted of major travel routes and special activity areas, interconnected with smaller trails. Broken ceramic vessels, lithic debitage, and small rock features are often found in association with these trails.

Artifacts associated with the Late Prehistoric period include Desert Side-notched and Cottonwood projectile points, brownware and buffware ceramics, and steatite shaft straighteners. Imported goods from the California coast, such as shell beads, are also found and testify to the importance of long-distance trade during this period. Late Prehistoric sites are often associated with trails, pictographs, petroglyphs, bedrock milling surfaces, and rock shelters. Along the Colorado River, subsistence strategies of native groups shifted from hunting and gathering to floodplain horticulture. Many Late Prehistoric sites have been found on the shorelines of ancient Lake Cahuilla. Water levels of this lake oscillated over the course of human history, particularly in the Salton Trough where the Salton Sea sits today (between approximately 30 and 60 miles southwest of the Project area).

Numerous petroglyphs and geoglyphs exist in the lower Colorado River area, the most well-known of which are the Blythe Intaglios. These large anthropomorphic (human-shaped) and zoomorphic (animal-shaped) figures are located along the Colorado River north of the town of Blythe, California.

3.6.1.3. Ethnographic Setting

There is archaeological evidence that ancestors of the Yuman language groups have been in the area for some time. However, these were not the only people who used this area. Ethnographic information suggests several other Native American groups, such as the Cahuilla and Chemehuevi, at least traversed the vicinity of the Project area (e.g., Bean 1978; Kelly and Fowler 1986; Laird 1976).

Native use of the Chuckwalla Valley area in the eighteenth and early nineteenth centuries was conditioned by its location as a frontier or boundary zone between the Halchidhoma to the east and the Takic groups, the Cahuilla, to the west. The Halchidhoma were linked to the desert division of the Cahuilla and the mountain division of the Serrano by ties of political friendship and long-distance exchange. Thus, the Chuckwalla Valley area formed a geographical link between these groups and formed a major travel corridor for communication between them. In addition to this east–west travel, the Chuckwalla Valley also provided a corridor for north–south travel between the territories of two Colorado River groups who were enemies of the Halchidhoma, the Mohave (also spelled Mojave) and the Quechan. Traveling parties from either one of these two groups going up or down the Colorado River traversed through the Chuckwalla Valley region to avoid the Palo Verde Valley and the Halchidhoma.

Ethnohistorical and ethnographic sources for the Chuckwalla Valley area have been limited because the area was not regularly visited by non-native people until the 1860s. This was due in part to the fact that water and feed management on the eastern California deserts posed a severe challenge to successful horse or mule travel to the Colorado River and Arizona by non-native people. In addition, the boundaries and areas of settlement of native groups in the region fluctuated over time. Thus, ethnohistoric information and archaeological data may outline different patterns of occupation and territoriality. Nevertheless, it can be said with confidence that most groups living in the vicinity of the Project when the Spanish first made forays into the area spoke languages in the Yuman family of the Hokan language stock. These include the Halchidhoma, the Mohave, and the Quechan. Surrounding groups are Uto-Aztecan speakers; the Chemehuevi speak a language of the Numic branch, and the Cahuilla are Takic-speakers. The final desiccation of Lake Cahuilla is thought to have caused major disruptions in the population in the Colorado Desert, perhaps contributing to the persistent warfare reported along the lower Colorado and Gila Rivers.

Native American groups with historical tribal territories falling within the vicinity of the Project site include the Quechan, Halchidhoma, Mohave, Chemehuevi, and Desert Cahuilla, which are discussed briefly below.

Quechan

Quechan is a variation on the names Kwichyan or Kuchiana, but this group is also commonly known as the Yuma; today they refer to themselves as Kw'tsan. The Quechan are among the Yuman groups who occupied the lower Colorado River where it forms the boundary between California and Arizona. Prior to European contact, Quechan populations may have reached 4,000.

Quechan subsistence was based on a combination of horticulture, fishing, and gathering. Plants such as maize, melons, teparies, corn, black-eyed beans, and pumpkins were cultivated in the rich silt of the Colorado River floodplain. During wet winter and spring months, Quechan groups occupied seasonal villages located above the river floodplain. In the summer and fall, small kin groups would relocate along the river to plant crops. Diets were supplemented with fish taken from the river. Several villages were located along the Colorado River, including *Avi Kwotapai* located on the west side of the Colorado River between Blythe and Palo Verde Valley and *Xenu mala vax* on the east side of the river near present-day Ehrenberg.

For the Quechan, like other lower Colorado River groups, individual dreaming to seek guidance in life and spiritually based power was a principal aspect of their religious belief and practice. This included learning sacred songs about events that occurred at the time of the creation of the world through dreaming. Singing these songs are a principal avenue of religious expression. The dreaming experience meant that sacred places could be visited, and the sacred landscape traversed, through dreaming rather than through conventional travel, although physical travel along trails to sacred places is also an important aspect of the religious experience. Travel on key Native American trails continues to be a cultural practice today to commemorate and experience traditional culture. The geography of sacred places related to the sacred song cycles of Yuman groups is a major cultural feature of the lower Colorado River region.

Halchidhoma

The Halchidhoma (also known as the Panya) are a Yuman group who, until about 1825, lived along the Colorado River between the present-day cities of Blythe and Needles. According to the oral history of the Halchidhoma, they traveled south to Mexico where they lived adjacent to a Yaqui settlement until around 1838 when most died of an epidemic. At that point, the remaining Halchidhoma moved northeast and eventually settled down with the Maricopa tribe, another Yuman group living along the Gila River.

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 indicate that an extensive trade network between the Pacific coast and the lower Colorado River region was established by at least 1100 BP. 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 Maricopa and Cocopah peoples who lived to the east along the Gila River. Ultimately, the Halchidhoma went to live with and intermarried with their allies the Maricopa, and are, therefore, poorly documented in the ethnographic literature.

Mohave

The Mohave were among the earliest residents in the Mojave Desert. They moved from the area approximately 500 years ago to the Colorado River where they were documented by Father Francisco Garcés, a Spanish explorer, in 1776. Another Spanish explorer, Juan de Oñate, may have observed this

group as early as 1604 based on his descriptions of the "Mohave" people along the Colorado River. The Mohave are 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.

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 and mesquite screwbean, which could be stored for long periods of time 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 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. Many 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. 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.

The importance of dreaming, and the belief in the fundamental interrelationship between the mundane and spiritual worlds, was 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. Mohave songs are remarkably specific in the context of geography, thereby acting 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.

Chemehuevi

The Chemehuevi are the southernmost of 16 groups of Southern Paiute peoples, and the only non-Yuman group 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. The Chemehuevi lived along the lower Colorado River, although only within the last few hundred years. Their traditional territory was the largest of any tribe in California speaking the same dialect. They occupied a huge portion of the eastern Mojave Desert, ranging from the Old Woman Mountains in eastern San Bernardino County, west to an undefined point in the middle of the Mojave Desert where Serrano territory began, and as far south as the Riverside/Imperial County line. The Spanish missionary explorer Francisco Garcés in 1775–1776 suggested that the northern Chuckwalla Valley was in the territory of the Chemehuevi.

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 Vanyume. Owing to the impermanence of most desert encampments, housing was typically made of brush erected to protect inhabitants from the harsh sun and wind. Several foods, including dried meats, dried melon and squash, agave hearts, and various seeds, were stored in specially prepared baskets, earth pits, and caves. Chemehuevi groups did not live permanently with their food caches, though, and the stealing of cached food 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 implements and baskets, often with painted designs. Chemehuevi hunters were known for their recurved, sinew-backed bows, which, though shorter than comparable Mohave bows, were nonetheless 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. They are known to have constructed hand-dug wells.

Despite an underlying friction, the Chemehuevi were traditional allies of the Mohave. 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. Some Chemehuevi families moved to the Mara Oasis, near what now is the city of Twenty-nine Palms. Some scholars suggest that the Chemehuevi may have settled in the Palo Verde Valley vicinity before the expulsion of the Halchidhoma. According to Mohave oral histories, the Chemehuevi were invited to come to the Colorado River after 1830. Chemehuevi sources, though, suggest that the Chemehuevi Valley and Cottonwood Island along the Colorado River were part of the Chemehuevi traditional territory prior to the 1800s. This continues to be a point of disagreement between scholars and between the Mohave and Chemehuevi.

In the Protohistoric and Historical periods, the Chemehuevi traveled extensively through the deserts and as far west as the Pacific coast simply for exploration purposes, and to exchange goods and obtain marine shell ornaments and raw materials. Periodically, small groups of Chemehuevi and Las Vegas Southern Paiute would travel together to the Hopi villages in Arizona, although those trips were described as purely social visits involving gift exchanges, not trading expeditions.

Desert Cahuilla

The Cahuilla language, divided into Desert, Pass, and Mountain dialects, has been assigned to the Cupan subfamily of the Takic branch of the Uto-Aztecan linguistic family. Territory traditionally claimed by the Cahuilla stretches from the summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, a portion of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto Plain near the City of Riverside and the eastern slopes of Palomar Mountain to the west.

Cahuilla villages were typically located in canyons or on alluvial fans near water and food patches. The immediate area surrounding a village was owned by a lineage. Other lands were divided into tracts owned by clans, families, and individuals. Numerous sacred sites with rock art were associated with each village. Villages were connected by trail networks used for hunting, trading, and social visits. Trading was a prevalent economic activity. Some Cahuilla were trading specialists. Cahuilla trade routes extended as far west as the Channel Islands and east to the Gila River.

The Cahuilla had access to an immense variety of plant resources across a diverse suite of habitats. Several hundred plant species were used for food, manufacturing materials, and medicine. Acorns, mesquite and screw beans, pinyon nuts, and cactus fruits were the most important plant foods. These were supplemented by a host of seeds, tubers, roots, bulbs, fruits and berries, and greens. Corn, beans, squash, and melons were cultivated. More than 200 species of plants were used as medicines. Hunting and meat processing were done by men. Game included deer, mountain sheep, pronghorn, rabbits, rodents, and

birds. These were pursued by individuals and communal hunting groups. Blinds, pits, the bow and arrow, throwing sticks, nets, snares, and traps were used to procure game. Communal hunts with fire drives sometimes occurred.

Mortars and pestles, manos and metates, pottery, and baskets were used to process and prepare plant and animal foods. Cahuilla material culture included a variety of decorated and plain baskets; painted/ incised pottery; bows, arrows, and other hunting-related equipment; clothing, sandals, and blankets; ceremonial and ritual costumes and regalia; and cordage, rope, and mats. Games and music were important social and ritual activities for the Cahuilla.

3.6.1.4. Historic Setting

In California, the historic era is generally divided into three periods: the Spanish or Mission period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American period (1848 to present). Although Europeans did pass through the Project area during the Mission and Mexican periods, all the historic resources identified in the Project area are associated with the American Period. As such, the following discussion emphasizes the American Period. 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. The areas of regional development, transportation, mining, water conveyance, military training activities, and agriculture and ranching are briefly described below.

Regional Development

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. In the 1820s, limited placer mining began in the eastern Colorado Desert. 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.

After the Treaty of Guadalupe Hidalgo in 1848, the United States took control of the Southwest and established a series of camps and forts throughout the Arizona, Nevada, and California deserts. The U.S. Cavalry was used to protect settlers and immigrants from the often-hostile tribes whose territories they were invading. Following the discovery of gold at Sutter's Mill the same year, mining camps were established in the desert beginning with Salt Creek in the Armargosa Desert. 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.

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 feasible routes. Lieutenant Amiel Weeks Whipple, a topographical engineer in the U.S. Army, was assigned the task of determining the western-most section of the route from Arkansas to Los Angeles. Whipple passed through Mojave territory in 1854, crossing the Colorado River near present-day Needles. The railroad surveys recorded the terrain and geology of the Colorado Desert. Land in the vicinity of the Project area was included in the survey in 1853.

Along the eastern bank of the Colorado River, the town of La Paz, Arizona, developed when gold was discovered nearby. The subsequent gold rush made La Paz an instant boomtown with a population that peaked at 1,500 in the 1860s. 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. Along the stage line between San Bernardino and the Colorado River, La Paz was an important stop and served as the county seat for Yuma County until 1870. The La Paz mining district yielded placer gold for only a short period. The town of La Paz went from boomtown to ghost town by the early 19th century.

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: water and transportation. Development of transportation 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 for the construction of those living quarters. The first trains ran on May 29, 1876. The Southern Pacific Railroad reached Yuma on September 30, 1877. 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.

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 Mountains, Cargo Muchachos, 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, areas in the desert were attractive places for prospective farmers of the time. Besides settlers, health reasons stimulated others' attraction to sanitariums that took advantage of the warm climate and desert hot springs in Palm Springs.

Community Development – Desert Center

There are few communities in the Chuckwalla Valley. Desert Center is the closest community, approximately 0.9 mile southwest of the Project Area. The largest nearby city is Blythe, which is located roughly 42 miles east. Other smaller communities include Hell and Eagle Mountain; neither is currently occupied.

Desert Center was founded in 1921 by Stephen Ragsdale, who opened a small gas station and diner with his wife Lydia. It is situated along a segment of former U.S. Highway 60/70 (Ragsdale Road) near the intersection of Rice Road (State Route [SR] 177) and north of Interstate 10 (I-10). The town's core buildings, including the Desert Center Café, automobile garage/service station, and cabins on the south side of Ragsdale Road as well as the post office and market on the north side are on lots that were originally carved out of a larger 40-acre parcel acquired by Ragsdale through a land patent from the State of California approved December 22, 1926.

They pumped gasoline from a 55-gallon drum and served food to weary travelers. Ragsdale was successful in establishing the town along Route 60. It was moved 5 miles to the north to its current location along the freeway following construction of I-10. The community of Desert Center experienced a resurgence associated with the Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA) and the establishment of Camp Desert Center and Airfield (see discussion below). The town, however, once again became a small quiet roadside attraction after the DTC/C-AMA was closed at the end of World War II (WWII). The airfield is now privately owned. Today Desert Center is in disrepair, although it still serves as a stopping point along I-10.

Transportation

William D. Bradshaw blazed the first road through what is now Riverside County in 1862 as an overland stage route beginning at San Bernardino, California, and ending at La Paz (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. Frink's route was an east–west road established as an alternative to the more southern Butterfield Stage route. This was apparently the first Anglo development across the Palo Verde Mesa, although it has since all but disappeared. Bradshaw's route, later known eponymously as the Bradshaw Trail, 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.

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. Bradshaw, like most early trailblazers, 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 from west to east approximately 8 miles due south of the Project area. The Bradshaw Trail is near Corn Spring (Ross, 1992:129). The Bradshaw Trail, like many other cross-country routes, became largely 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 for development of the remote desert interior. Bradshaw's trail has been largely obliterated and is now a 65-mile-long graded road that traverses mostly public land south of the Chuckwalla Mountains.

The early highway system in the United States developed out of a patchwork of trails that later became unimproved roads and eventually were connected into an integrated system of paved routes. Often, early roads in the United States followed prehistoric trails. One of the earliest transportation corridors through the Chuckwalla Valley included U.S. Highways 60 and 70, currently known as Chuckwalla Valley Road. Portions of Chuckwalla Valley Road were still unpaved up until 1926.

Today, I-10 is the major transportation corridor through the Chuckwalla Valley and 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 commercial traffic.

Mining

Riverside County was known historically for its sporadic, small-scale mining of gold, silver, lead, copper, uranium, fluorite, and manganese. Large numbers of prospectors were attracted to the region during the 1862 gold boom in La Paz (in western Arizona, 6 miles north of present Ehrenberg). Not long after, miners and prospectors began combing the mountains on either side of the Chuckwalla Valley. Gold was being mined as early as 1865 in the Eagle Mountain District. Much later, in the late 1940s, Kaiser Steel began a large-scale iron ore mining operation in the Eagle Mountains. In the 1950s, the Blythe-Eagle transmission line was constructed. It was a 161-kilovolt (kV) transmission line that connected a substation in Blythe to a substation near Eagle Mountain for the purpose of providing power to the mine and the community of mine workers.

In the Granite Mountains to the north-northwest, there was a short stint of gold mining beginning in 1894, followed by a resurgence in the late 1920s by the Chuckwalla Mining and Milling Corporation. Copper mining occurred in the Palen Mountains to the northwest during the 1910s, by the Fluor Spar Group, Homestake Group, Crescent Copper Group, Orphan Boy, and Ophir mines. Most of these mines were abandoned only a few years later.

The short-lived Pacific Mining District in the Chuckwalla Mountains was established in 1887, following gold and silver discoveries that caused the most substantial rush to Riverside County in its history. Sixty claims were filed by the end of the year, but the boom fizzled by 1890 because the owners never had enough capital to work them properly. Around 1898, some 40 claims in the area were taken up by the Red Cloud Mining Company. The company installed a new hoist and a 30-ton mill and was raising money through stock offerings to construct a tram from the mine to the mill. The company changed hands some time before 1915, however, and folded soon after. Just prior to this, six prospectors began working the Chuckwalla Placer Diggings near Chuckwalla Springs—this lasted about 15 years. The Red Cloud Mine was resurrected in 1931, when a small amalgamation plant was built, and continued operations until 1945.

With the onset of 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, established in 1936. Henry J. Kaiser had a steel mill at Fontana and the Vulcan iron mine near Kelso that supplied materials for his West Coast shipyards. Kaiser purchased the Eagle Mountain 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% 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, 416 rental houses, 185 trailers, 383 dormitories, and 32 apartments. Kaiser Steel needed to provide medical care for the residents of Eagle Mountain, and medical care provided by the company eventually became 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 (MWD) 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 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 2 reservoirs, 5 pumping plants, 63 miles of canals, 92 miles of tunnels, 84 miles of buried conduit and siphons, and a filtration plant at La Verne, California. The nearest of these pump stations to the Project area is the Eagle Mountain Pump Lift, located 7 miles north of Desert Center.

Construction of the CRA involved creative engineering solutions and newly introduced equipment at the time of its construction. It also employed more than 35,000 people during an 8-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. Prior to beginning construction, little to no infrastructure was present in the desert. Roadways, power lines, telephones, and water sources had to be built to accommodate the work effort required. Due to 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 supply systems for Southern California.

Military Training Activities

Evidence of military training is present across the Colorado Desert. George Patton's DTC/C-AMA and Operation Desert Strike have left many artifacts, features, and sites across the region. The DTC/C-AMA was established in the 1940s to prepare U.S. troops for possible deployment to North Africa. The Project vicinity is between areas where major military maneuvers took place and where camps were located, though evidence of small unit training maneuvers can be found within the Project area.

Desert Training Center/California-Arizona Maneuver Area

In 1942, during WWII, General George S. Patton, Jr., established the DTC/C-AMA in a sparsely populated region of southeastern California, Arizona, and Nevada. Its purpose was to prepare tank, infantry, and air units for the harsh conditions of North Africa by practicing maneuvers, developing tactics, and field-testing equipment. The installation was in operation for two years and was the first simulated theater of operations in the United States. Its location was chosen for its unforgiving desert heat, rugged terrain, available telephone communications system, and accessibility by established railroads and highways.

Recent renewable energy projects in the region have identified many DTC/C-AMA-related sites, artifacts, and features. These resources were understood to be pieces of a larger historic district that represents an important piece of the military history of the nation. The DTC/C-AMA was the largest training facility and the only one of its kind in American military history, eventually encompassing more than 16,000 square miles. The tactical, strategic, and logistical doctrines developed and refined during the facility's life were applied overseas and undoubtedly helped to win WWII.

DTC/CAMA resource types include maneuver areas, divisional camps, small unit training areas, air facilities and crash sites, bivouacs, campsites, ranges, supply depots and railroad sidings, and hospitals and medical centers. Based on the proximity of Desert Center, sites within the Project area could be related to most of these property types. The following is a summary of properties known to be present in the vicinity of Desert Center.

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. 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 measuring 5,000 by 150 feet, 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 and well, and a 10,000-gallon water tower. Several crash sites are known to exist in the DTC/CAMA, 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 .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.

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 along with a 4,000-gallon storage tank.

18th Ordnance Battalion Campsite. Located 5 miles east of Desert Center, this camp appears to encompass a watering point. The only structures reported included a capped well, a 50,000-gallon water tank, and a wooden tower. Tent stakes and other refuse have been found in an area that relate to this camp.

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 them are known.

Desert Center Supply Depot. A quartermaster truck site was established near the small community of Desert Center. A rock alignment for the 496th Medium Ordnance Company remains northeast of the town. The rock alignment spells out "496 MEDCO." An ammunition depot was established northeast of Desert Center, although its location has not been examined or confirmed.

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.

Desert Strike. One brief military training exercise, known as Desert Strike, took place in the desert maneuver area in May 1964. Amidst the nuclear arms race, the U.S. Strike Command conducted the joint Army and Air Force field training exercise for the major combat organizations and their support units in employing tactical nuclear and conventional weapons. Army and Air Force troop units were trained in passive and active tactics, as well as concepts and procedures for joint operations.

The exercise was a two-sided enactment, with fictitious world powers "Calonia" and "Nezona" sharing a common border at the Colorado River. The premise of the conflict between these two entities, each led by a Joint Task Force, was a dispute over water rights. Major tactical operations during the exercise included deep armor thrusts, defensive operations along natural barriers, counterattacks including airmobile and airborne assaults, and the simulated use of nuclear weapons. The Air Force provided fighter, air defense, interdiction, counterair reconnaissance, and troop carrier operations in support of both joint task forces.

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 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 a key factor in development. 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 until the late twentieth century.

The federal government and the State of California decided to invest in the cultivation of the jojoba plant as an alternative to sperm whale oil. A tax-break was given to private growers, and speculators began buying up acreage in the Chuckwalla Valley and other California deserts. In the late 1970s and early 1980s, farmers purchased land in Chuckwalla Valley and began commercially growing jojoba. Hundreds of farms were established in the 1980s by private farmers hoping to make a large profit. Approximately 6,000 acres of jojoba was planted in Chuckwalla Valley.

However, the boom was short lived because the jojoba plant grows slowly, and it takes years for plants to produce oil. Many jojoba farms were converted to other crops, including asparagus. Currently, there is only one active jojoba farm in the Chuckwalla Valley, La Ronna Jojoba Company Farm. La Ronna Jojoba Company Farm is a research/mother block of a variety of cultivars.

3.6.2. Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies.

3.6.2.1. Federal Laws, Regulations, and Policies

National Environmental Policy Act. The National Environmental Policy Act (NEPA) of 1969, as amended, requires analysis of potential environmental impacts to important historic, cultural, and natural aspects of our national heritage for major federal actions that may have a significant effect on the human environment (42 USC 4321-4375; Title 40 CFR Sections 1500-1508). The discussion of impacts pursuant to NEPA is defined by the Council on Environmental Quality regulations and requires consideration of the temporal scale, spatial extent, and intensity of the change that would be introduced by the Linear Facility Routes associated with the Project, as these traverse BLM-administered land.

National Historic Preservation Act. The federal government has developed laws and regulations designed to protect cultural resources that may be affected by actions undertaken, regulated, or funded by federal agencies. Under the National Historic Preservation Act (NHPA) of 1966, the Linear Facility Routes associated with the Project are considered a federally licensed "undertaking" per Title 36 Code of Federal Regulations (CFR) Section 800.2(o) and subject to compliance with Section 106 of the NHPA, as amended. Under these guidelines, federal agencies are required to identify cultural resources that may be affected by Project actions, assess the significance of these resources and their eligibility for inclusion on the National Register of Historic Places (NRHP) as per 16 United States Code (USC) 470w(5), and consult with the Advisory Council on Historic Preservation regarding Project effects on significant resources. Eligibility is based on criteria defined by the U.S. Department of the Interior. Generally, districts, archaeological sites, buildings, structures, and objects that possess integrity are potentially eligible for inclusion on the NRHP under the following criteria (Title 36 CFR Section 60.4):

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to yield, information important in prehistory or history.

If a cultural resource is determined to be an eligible historic property under Title 36 CFR Section 60.4, then Section 106 requires that the effects of the proposed undertaking be assessed and considered in planning the undertaking. According to Title 36 CFR Section 800, Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process, the lead agency, State Historic Preservation Officer (SHPO), and Advisory Council on Historic Preservation:

> ...should be sensitive to the special concerns of Indian tribes in historic preservation issues, which often extend beyond Indian lands to other historic properties. …When an undertaking may affect properties of historic value to an Indian tribe on non-Indian lands, the consulting parties shall afford such tribe the opportunity to participate as interested persons. Traditional cultural leaders and other Native Americans are considered interested persons with respect to undertakings that my affect historic properties of significance to such persons.

Desert Renewable Energy Conservation Plan Programmatic Agreement. Compliance with Section 106 of the NHPA will be guided by the Desert Renewable Energy Conservation Plan (DRECP) Programmatic Agreement (PA) because portions of the Project area and associated gen-tie transmission lines are within the Riverside East Solar Energy Zone and within the DRECP Land Use Plan Amendment Development Focus Area, as defined in the Final Environmental Impact Statement (BLM 2015a). The subsequent DRECP PA resulted from consultation among agencies, tribes, and other interested parties in defining how the

Bureau of Land Management (BLM) will conduct Section 106 compliance within the DRECP Land Use Plan Amendment Area. The DRECP PA establishes a process that guides BLM in fulfilling its responsibilities under Section 106 of the NHPA for proposed renewable energy projects sited on public lands administered by BLM. Importantly, Section II of the DRECP PA directs BLM to obtain the active involvement of the SHPO, Advisory Council on Historic Preservation, other federal agencies, federally recognized tribal governments and Native American organizations, other interested parties, and the public. BLM is to engage tribes and tribal organizations at the earliest stages of assessing a proposed undertaking to "identify areas which may be of religious and cultural significance to them and which may be eligible for the []NRHP" (Section II.E.2 of BLM 2015b).

Archaeological Resources Protection Act. If federal or Indian lands are involved, the Archaeological Resources Protection Act may impose additional requirements on an agency. The act (1) prohibits unauthorized excavation on federal and Indian lands, (2) establishes standards for permissible excavation, (3) prescribes civil and criminal penalties, (4) requires agencies to identify archaeological sites, and (5) encourages cooperation between federal agencies and private individuals.

Antiquities Act of 1906. The Antiquities Act of 1906 states, in part, that any person who shall appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than $500 or be imprisoned for a period of no longer than 90 days, or shall suffer both fine and imprisonment, in the discretion of the court.

Federal Land Policy Management Act. The broadest framework for managing cultural resources on public lands is the Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. ch. 35 § 1701 et seq.). This law directs the BLM to manage the multiple use of public lands in a manner that will "protect the quality of… historical… resources, and archeological values" (BLM 2004:8100.03.H). Under this law, cultural resources do not need to be determined eligible for the NRHP to receive consideration. Additionally, the Act provides for periodic inventorying of the cultural resources on public land as well as the enforcement of public land laws and regulations (BLM 2004:8100.03.H).

Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act was enacted on November 16, 1990, to address the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American cultural items, including human remains, funerary objects, sacred objects, and objects of cultural patrimony. The act assigned implementation responsibilities to the Secretary of the Interior.

If human remains are encountered on federal lands, this act states that the responsible federal official must be notified immediately and that no further disturbance shall occur in the area until clearance is given by the responsible federal official (Title 43 CFR Section 10.4). If the remains are determined to be Native American Indian, the federal agency will then notify the appropriate federally recognized Native American tribe and initiate consultation.

3.6.2.2. State Laws, Regulations, and Policies

There are numerous state regulations and policies that direct management of cultural resources on state lands and by state agencies. The following is a discussion of the most pertinent laws affecting the Project and impact analysis from a State of California and California Environmental Quality Act (CEQA) perspective. These laws identify four types of resources: historical resources, unique archaeological resources, human remains, and tribal cultural resources (TCRs).

California Environmental Quality Act

Historical Resources. Under CEQA, cultural resources listed on, or determined to be eligible for listing on, the California Register of Historical Resources (CRHR) or a local register must meet the CEQA definition of "historical resources" and must be given consideration in the CEQA process. For this EIR, effects on historical resources may be considered impacts of the Project. Under the California Code of Regulations (CCR), Title 14, Chapter 11.5, properties listed on or formally determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR. A resource is generally considered to be historically significant under CEQA if it meets the criteria for listing on the CRHR. These criteria are essentially the same as the eligibility criteria for the NRHP. In addition to being at least 50 years old, a resource must meet at least one (and may meet more than one) of the following four criteria:

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

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Unique Archaeological Resources. Additionally, CEQA states that it is the responsibility of the lead agency to determine whether the Project will have a significant effect on "unique" archaeological resources. An archaeological artifact, object, or site can meet CEQA's definition of a unique archaeological resource even if it does not qualify as a historical resource (California Public Resources Code, Section 21083.2[g]; 14 CCR 15064.5[c][3]). An archaeological artifact, object, or site is considered a unique archaeological resource if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria" (California Public Resources Code, Section 21083.2[g]):

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be taken to preserve these resources in place or provide mitigation measures.

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.

California Assembly Bill 52. Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources – tribal cultural resources (TCRs) – for consideration under CEQA. TCRs may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in the CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and eligible for listing on the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less-than-significant level.

3.6.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan. The purpose of the Cultural Resources section of the Multipurpose Open Space Element of the Riverside County (County) General Plan is to protect and preserve cultural (both archaeological and historic) resources. The following policies included in the Multipurpose Open Space Element relate to the Project with regards to cultural resources (Riverside County 2015).

- **Policy OS 19.1.** Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.
- **Policy 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. (Action Item 144)
- **Policy OS 19.3.** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.
- **Policy 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. (Action Item 145)
- **Policy 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.

The proposed Project and the County's government-to-government tribal consultation in accordance with AB 52 would be consistent with these County policies.

3.6.3. Methodology for Analysis

3.6.3.1. Cultural Resources Study Area

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 988 acres of private land in the Project area under County jurisdiction.

Indirect impacts may occur during construction, operation, maintenance, or the decommissioning of the Project. These impacts result from the introduction of visible, auditory, or atmospheric intrusions that affect the setting of the Project area. The indirect impacts study area includes a 1-mile radius around the privately owned parcels within the Project area.

The direct and indirect impacts areas for the CEQA analysis of cultural resources are referred to herein as the Cultural Resources Study Area.

Definitions of Cultural Resources

A cultural resource is defined as any object or specific location of past human activity, occupation, or use identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into four categories: archaeological, built environment, unique archaeological resources, and Tribal Cultural Resources.

Archaeological resources include both historic-era and prehistoric remains of past human activity. Historic-era resources can consist of structural remnants (such as cement foundations), historic-era objects (such as bottles and cans), and sites (such as refuse deposits or scatters). Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails.

Built environment resources consist of standing historic-era buildings and structures, the latter of which include canals, roads and trails, bridges, ditches, and cemeteries.

Pursuant to State CEQA Guidelines Section 5064.5, **historical resource** is a term used to define a prehistoric or historic-aged resource that is recommended eligible for, determined eligible for, or listed in the CRHR. Any resource that is determined eligible or listed on the NRHP is automatically eligible for listing in the CRHR and is considered a significant resource for the purpose of this analysis.

Unique archaeological resource, as defined above in Section 3.6.2, Regulatory Framework, is also considered a significant resource for the purpose of this analysis.

Within the State of California there are provisions in CEQA, its guidelines, and other provisions of the California Public Resources Code for the protection and preservation of significant cultural resources (i.e., "historical resources" and "unique archaeological resources"). The CEQA Guidelines provide three ways in which a resource can be a "historical resource," and thus a cultural resource meriting analysis: (1) the resource is listed on the CRHR; (2) the resource is included in a local register of historical resources (pursuant to Section 5020.1(k) of the California Public Resources Code), or identified as significant in an historical resources survey (meeting the criteria in Section 5024.1(g) of the California Public Resources Code); or (3) the lead agency determines the resource is "historically significant" by assessing CRHR listing guidelines that parallel the federal criteria (14 CCR 15064.5[a][1]-[3]). To qualify as a historical resource under (1) or (3), the resource must also retain the integrity of its physical identity that existed during its period of significance. Integrity is evaluated with regard to retention of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]). Finally, under California law, Native American human remains and associated grave goods are granted special consideration.

Mitigation of cultural resources that are found to be ineligible for CRHR listing is not required (Title 36 CFR Section 800 and 14 CCR 15064.5[c][4)]).

Tribal Cultural Resource (TCR)

As previously discussed, TCRs include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe. To qualify as a TCR, the resource must either: (1) be listed on, or be eligible for listing on, the California Register of Historical Resources or other local historic register; or (2) constitute a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC Section 21074(a)(2)). Native American tribes that are traditionally and culturally affiliated with a geographic area can provide lead agencies with expert knowledge of TCRs.

3.6.3.2. Previous Studies

The records search results indicate that at least 14 previous investigations have been conducted within the Cultural Resources Study Area since 1973. Five of these studies appear to include portions of or intersect the Project's direct impact area. The most recent of these studies was conducted by PaleoWest in 2020 and 2021 for the Oberon Solar Project (Knabb et al. 2021). The Oberon Solar Project inventoried approximately six percent (56 acres) of the current Project area.

3.6.3.3. Previously Identified Resources

Results of the record search indicate that 183 cultural resources have been previously recorded in the Cultural Resources Study Area. These resources include 11 prehistoric sites, 73 historic-period sites, 4 multicomponent sites, 13 built-environment resources, 2 districts, 20 prehistoric isolates, 56 historic period isolated artifacts, and 4 unknown resources. Thirty-eight of these resources were documented in the Project's direct impact area. These resources include 4 historic-period sites, 1 built-environment resource, 2 districts, and 31 historic period isolated artifacts (Table 3.6-1).

Table 3.6-1. Previously Recorded Cultural Resources within the Project's Direct Impact Area

Primary No.	Trinomial No.	Age	Type	Description	Previous CRHR Eligibility Determination
33-006825		Historic	Site	Well, boiler, and cement reservoir	Not evaluated
33-006836	CA-RIV-10759H	Historic	Site	Desert Center Army Airfield	Individually not eligible; contributor to the DTCCL
33-019415	CA-RIV-9854H	Historic	Structure	Blythe-Eagle Mountain Transmission Line	Not eligible
33-022247	CA-RIV-11584H	Historic	Site	Linear Berms	Not evaluated
33-022250		Historic	Isolate	Fragment of green glass bottle	Not eligible
33-022251		Historic	Isolate	Metal storage can with pain can-style lid	Not eligible
33-022252		Historic	Isolate	Metal hole-in-top can with a lap seam	Not eligible
33-022254		Historic	Isolate	Crushed metal vent hole can	Not eligible
33-022255		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022256		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022257		Historic	Isolate	Metal hole-in-top can	Not eligible

Primary No.	Trinomial No.	Age	Type	Description	Previous CRHR Eligibility Determination
33-022258		Historic	Isolate	Metal can with lap seams	Not eligible
33-022259		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022260		Historic	Isolate	Pick opened metal hole-in-top can	Not eligible
33-022261		Historic	Isolate	Green glass Coca-Cola bottle fragment	Not eligible
33-022262		Historic	Isolate	Green glass Coca-Cola bottle	Not eligible
33-022263		Historic	Isolate	Two green glass Coca-Cola bottles	Not eligible
33-022264		Historic	Isolate	Clear glass Coca-Cola bottle with a screw-on cap	Not eligible
33-022265		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022266		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022267		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022268		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022269		Historic	Isolate	Metal knife cut hole-in-top can	Not eligible
33-022270		Historic	Isolate	Metal hole-in-top can	Not eligible
33-022271		Historic	Isolate	Metal hole-in-top can with lap seams	Not eligible
33-022272		Historic	Isolate	Punched open metal hole-in-top can	Not eligible
33-022273		Historic	Isolate	Two metal hole-in-top cans	Not eligible
33-022274		Historic	Isolate	Cut open metal hole-in-top can	Not eligible
33-022275		Historic	Isolate	Weathered green glass Coca-Cola bottle	Not eligible
33-022276		Historic	Isolate	Weathered green glass Coca-Cola bottle	Not eligible
33-022279		Historic	Isolate	Picked open metal hole-in-top can	Not eligible
33-022280		Historic	Isolate	Knife cut metal hole-in-top can	Not eligible
33-022281		Historic	Isolate	Weathered green glass Coca-Cola bottle	Not eligible
33-022282		Historic	Isolate	Punched open metal hole-in-top can	Not eligible
33-022283		Historic	Isolate	Church key-opened round metal hole-in-top can	Not eligible
33-023675	CA-RIV-11595	Historic	Site	DTC/AMA-C Habitation Site (496th Medium Ordnance Company Camp)	Individually eligible; contributor to the DTCCL
		Prehistoric	District	Prehistoric Trails Network Cultural Landscape (PTNCL)	Eligible
		Historic	District	Desert Training Center Cultural Landscape (DTCCL)	Eligible

3.6.3.4. Phase I Cultural Resource Survey

Chronicle Heritage conducted a Phase I survey of the portion of the Project area under County jurisdiction between March 20, 2023, and April 27, 2023. Survey crews conducted an intensive pedestrian survey of the 932 acres of privately owned lands. The remaining 56 acres of private land had been previously

surveyed by PaleoWest in 2020 and 2021 (Knabb et al. 2021). The surveys documented 25 cultural resources in the direct impacts area that included 4 archaeological sites, 2 historic built-environment resources, 2 districts, and 17 isolated occurrences (Table 3.6-2).

Assessments of significance found that four cultural resources (Prehistoric Trails Network Cultural Landscape [PTNCL], the Desert Training Center Cultural Landscape [DTCCL], the Desert Center Army Airfield [P-33-006836], and the 496th Medium Ordinance Company [P-33-023675] are eligible for listing on the CRHR either individually or as contributors to historic districts. These cultural resources can be considered historical resources under CEQA. A summary of each identified resource is provided below.

Table 3.6-2. Cultural Resources Documented in the Project's Direct Impact Area.

Primary No.	Trinomial/ Temp. No.	Age	Type	Description	CRHR Eligibility
33-006825		Historic	Site	Well, boiler, and cement reservoir	Not Eligible
33-006836	CA-RIV-10759H	Historic	Site	Desert Center Army Airfield	Individually not eligible; contributor to the DTCCL
33-019415	CA-RIV-9854H	Historic	Structure	Blythe-Eagle Mountain Transmission Line	Not eligible
33-022247	CA-RIV-11584H	Historic	Site	Linear Berms	Not Eligible
33-022255		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022256		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022258		Historic	Isolate	Metal can with lap seams	Not Eligible
33-022259		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022261		Historic	Isolate	Green glass Coca-Cola bottle fragment	Not Eligible
33-022262		Historic	Isolate	Green glass Coca-Cola bottle	Not Eligible
33-022263		Historic	Isolate	Two green glass Coca-Cola bottles	Not Eligible
33-022265		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022266		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022267		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022270		Historic	Isolate	Metal hole-in-top can	Not Eligible
33-022273		Historic	Isolate	Two metal hole-in-top cans	Not Eligible
33-022280		Historic	Isolate	Knife cut metal hole-in-top can	Not Eligible
33-023675	CA-RIV-11595	Historic	Site	DTC/AMA-C Habitation Site (496th Medium Ordnance Company Camp)	Individually eligible; contributor to the DTCCL
		Prehistoric	District	Prehistoric Trails Network Cultural Landscape (PTNCL)	Eligible
		Historic	District	Desert Training Center Cultural Landscape (DTCCL)	Eligible
	HL-BE-004H	Historic	Structure	Trailer Park	Not Eligible
	CB-ISO-001	Prehistoric	Isolate	One tertiary chert flake	Not Eligible
	HL-ISO-001	Prehistoric	Isolate	One basalt flake	Not Eligible
	MH-ISO-003	Prehistoric	Isolate	One quartz flake	Not Eligible
	MS-ISO-002	Prehistoric	Isolate	One piece of brown jasper shatter	Not Eligible

Archaeological Sites

P-33-006825 is a historic period site that was originally recorded in the early 1980s by the Riverside County Historical Committee (1982). The resource was reported to consist of a well, boiler, and concrete-lined reservoir or watering trough that represent the remains of a desert watering locale known as "Boulder Well". At the time P-33-006825 was documented, all three features contained or were covered in sand and wood debris. The features that comprise P-33-006825 appear to reflect activities related to mining and ranching activities that took place in the area in the late nineteenth and early twentieth centuries.

The site was revisited by Chronicle Heritage on March 30, 2023. Although the boiler and possible well head were relocated, no evidence of the cement-lined reservoir was found. A kidney-shaped depression was also identified that may represent the remains of the previously documented reservoir that has either been completely buried or was dismantled since 1982. Additional features documented at P-33-006825 include two pairs of concrete foundations and a concrete standpipe.

As one of the few reliable wells in the area, the site played a key role in the development of the historic mining, ranching, and transportation-related activities in the Chuckwalla Valley. The wells association with broad patterns of local or regional history meets the requirements for eligibility in the CRHR under Criterion 1. Site features cannot be associated with the lives of local, state, or nationally important persons and it does not embody distinctive characteristics of a type, period, method of construction, or represent the work of a master. Therefore, this site is not eligible for listing in the CRHR under Criteria 2 and 3. Additional study of the site is unlikely to yield important additional information regarding historic mining, ranching, or transportation related activities in the Chuckwalla Valley. Therefore, this site is not eligible for listing in the CRHR under Criterion D.

An evaluation of integrity indicates that Site P-33-006825 can no longer convey its significance as a historical resource. Most of the structures that were once present at the site have been dismantled and removed. The site is in fair condition with impacts including wind-blown sand that has partially buried many of the features and the deposition of modern refuse. Although the site meets Criterion 1 for listing on the CRHR, it lacks integrity and is therefore not eligible for the CRHR.

P-33-006836 consists of the historic-era remains of the Desert Center Army Airfield. The site covers an approximately 190-acre area, most of which lies east of SR 177/Rice Road and north of the Blythe-Eagle Mountain Transmission Line (P-33-019415). The airfield has been documented as an archaeological resource but contains both archaeological and built-environment components (Hanes et al. 2019a, 2019b). Visible evidence of activities associated with the Desert Training Center include foundation remnants, discarded equipment, and modern refuse. The runway is barely discernible from the ground, and most of the original buildings have been removed (Dyste et al. 2018).

During a Phase I survey in April 2023, Chronicle Heritage revisited portions of P-33-006836. A low density of historic and modern refuse and several informal dirt roads were identified within the site boundary east of SR 177/Rice Road. However, no cultural remains associated with the airfield were documented in the small portion of P-33-006836 that extends into the Project's direct impact area. The Desert Center Army Airfield was previously determined by the BLM as not eligible for listing in the NRHP with concurrence from the State Historic Preservation Officer (2019). Although the County has also determined that the resource was not individually eligible for listing in the CRHR, the airfield was identified as a contributor to the DTCCL historic district (Riverside County Planning Department 2019).

P-33-022247 consists of a series of seven earthen linear berms that were first documented in 2012 by FirstCarbon Solutions (Dice 2013) with a revisit completed in 2020 by PaleoWest (Knabb et al. 2021). The lengths of the berms range in size from 0.75 to 2 miles with an average width of 10 feet. No artifacts were found in association with the linear berms and no evidence was found to suggest subsurface deposits are present at the site. During the Phase I survey, a previously undocumented reservoir feature was identified

at the southern end of a north-south oriented berm. Two abandoned metal water tanks lie along the southern edge of the reservoir. Additionally, a concentration of modern refuse, which includes various wood, metal, and plastic objects that appear to represent construction debris, is adjacent to the water tanks. Although some of the earthen berms associated with Site P-33-022247 may have been constructed by soldiers during military training in the Chuckwalla Valley Maneuver Area, others appear to date later in time and were associated with jojoba farming. It is unclear which portions of the site date to the 1940s and which parts were constructed in the 1960s.

Although P-33-022247 is associated with activities related to the military and agriculture in the Chuckwalla Valley during WWII and the post-WWII era, there is no clear associative values beyond its general association with the DTC/C-AMA and farming. Therefore, P-33-022247 is not significant under Criterion 1. General George Patton and General Alvan Gillem are associated with the DTC/C-AMA, however, the earthen berms that comprise this site does not convey the significance of any specific decision made by these individuals, or by individuals important to the development of agriculture and jojoba farming. This site is therefore not significant under Criterion 2. P-33-022247 lacks any distinct architectural, technological, or engineering qualities that relate to the period of significance and does not have the distinctive characteristics of a type, period, or method of construction, is not the work of a master craftsman, or have properties possessing high artistic value. It is thus not eligible under Criterion 3. Finally, earthen berms and other earthworks are common throughout the Chuckwalla Valley, and additional study of the site is unlikely to contribute important information on either the DTC/C-AMA or jojoba farming. Therefore, P-33-022247 is not eligible under Criterion 4. P-33-022247 does not meet the requirements under any criteria, and is therefore recommended not eligible both individually or as a contributor to the DTCCL for listing in the CRHR.

P-33-023675 contains the remains of a camp associated with the 496th Medium Ordinance Company and a possible bivouac area related to DTC activities. The resource encompasses a 19-acre area and was first documented in 2014 by SWCA Environmental Consultants (Millington et al. 2013). As part of the Phase I study for the Oberon Solar Project (Knabb et al. 2021), PaleoWest visited P-33-023675 in 2021 and mapped the entire resource using a combination of aerial drone photogrammetry and ground truthing. At least 20 burned areas, 9 refuse concentrations, and two large refuse dumps were identified across the site and contain various refuse items (e.g., cans, bottles, wood, etc.). These features represent different forms of refuse disposal, ranging from opportunistic dumping to more formal types of waste disposal. Numerous rock alignment features were identified that represent the formal alignment and built structure of the camp, including the remnants of walkways and potential tent pads.

Similarly, five roads were documented which were lined with an imported purple and green rock that had been ground into gravel. Eleven berms, four dugout depressions, and an earthen mound were mapped and likely represent small unit training areas or defensive positions for protection of the camp. Overall, the features mapped by PaleoWest appear to reflect various aspects of the functioning of the camp, including its planning and construction, daily operation, and decommissioning. As part of the 2021 update, a previously recorded historic period survey marker (P-33-020570), which was within the site boundary of P-33-023675, was included as part of the resource. The marker is a U.S. Coast and Geodetic Survey marker east of SR 177/Rice Road. The historic object exhibits a 1945 stamp.

During the Phase I survey of the Project area, 11 additional rock features and an artifact concentration were identified adjacent to the southeastern boundary of the site to the east of SR 177/Rice Road. Other artifacts identified within the vicinity of the rock features include two historic period glass bottles and four prehistoric pieces of debitage consisting of a tertiary chert flake, a tertiary rhyolite flake, a primary quartzite flake, and a tertiary basalt flake. As a result of these discoveries, the existing boundary of P-33-023675 was expanded to encompass the newly identified cultural remains. No cultural remains associated with P-33-023675 were identified by Chronicle Heritage in the Project's direct impact area.

The historic period remains at P-33-023675 were previously determined eligible for listing in the CRHR under Criterion 1 because of the camp's direct association with important events associated with the DTC/C-AMA between 1942 and 1944 (RWQCB 2021). Additionally, the resource was determined eligible for the CRHR under Criterion 4 for its potential to contribute to a better understanding of training activities conducted at the DTC/C-AMA. The resource was also identified as a contributor to the DTCCL historic district (RWQCB 2021). The newly identified historic period cultural remains in the expanded boundary of P-33-023675 contribute to the overall eligibility of the resource for listing in the CRHR.

The newly identified prehistoric component consisting of five flaked stone artifacts do not contain temporally diagnostic artifacts or any materials suitable for chronometric dating. This means the temporal and cultural components cannot be defined and the prehistoric artifacts cannot be associated with specific events or persons that have made a significant contribution to the broad patterns of history, and do not embody the distinctive characteristics of a type, period, or method of construction. Therefore, the prehistoric component of P-33-023675 is not recommended as eligible for listing under Criterion 1, 2, or 3. Given the small quantity of artifacts and lack of assemblage diversity, it is unlikely that additional study of the flaked stone artifacts will provide important information valuable to our understanding of the past. Therefore, the prehistoric component of P-33-023675 is not considered eligible under Criterion 4. The prehistoric component at P-33-023675 is therefore recommended not eligible for listing in the CRHR.

Isolated Artifacts

Seventeen isolated artifacts are present in the Project's direct impact area (Table 3.6-2). Four of the isolated finds date to the Prehistoric Period and consist of single pieces of flaked stone debitage. The remaining isolates consist of historic period metal cans or glass bottles. Isolated occurrences are generally considered not eligible for inclusion in the CRHR unless they possess unique or substantial qualities to warrant their listing. All isolated occurrences are recommended not eligible for inclusion in the CRHR under any criteria.

Historic Built-Environment Resources

P-33-019415 (also recorded as P-33-022249 and P-33-023910) is a complex of historic-era structures, a portion of which intersect the Project's direct impact 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. Approximately 45 to 50 feet in width, the Blythe-Eagle Mountain Transmission Line consist of a series of double pole, wood towers supporting three transmission lines.

The Blythe-Eagle Mountain Transmission Line 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 (BLM 2011; CPUC 2011). Further, the County determined that the resource again was not individually eligible for listing in the CRHR in 2019 (County of Riverside 2019). Chronicle Heritage revisited the portion of P-33-019415 within the current Project area in April 2023 and found that the current condition of the transmission line, access road, and domestic powerline are unchanged since 2021 and the previous determination remains valid. Therefore, Chronicle Heritage supports the previous determination of P-33-019415 as not eligible for listing in the CRHR.

HL-BE-004H consists of the historic-era Green Acres Mobile Home Park. The resource encompasses a 9.4-acre triangular-shaped parcel (APN 808-030-011) on the southeast side of SR 177/Rice Road. The park currently houses a mix of recreational vehicles, vehicle-pulled trailers, and mobile homes, but contains little permanent infrastructure. An L-shaped road (Capp Road) provides access to concrete pads where recreational vehicles and small trailers can be parked. A smaller road connecting both sides of Capp Road

is fronted by several more permanent mobile homes. Utility lines along the southern and eastern sides of the parcel bring power to the site. The County of Riverside Assessor (2023) lists the construction date of the park as 1967. A review of aerial images indicates that aside from some minor changes in landscaping, the mobile home park has changed little since it was constructed.

Although the mobile home park is associated with historic settlement in the area, there is no evidence to indicate that the property is directly associated with any events that made a significant contribution to the broad patterns of our history. Furthermore, the mobile home park cannot be associated or linked with any particular person. Thus, the historic built-environment resource is not eligible for listing in the CRHR under Criteria 1 and 2. The permanent infrastructure associated with the mobile home park does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; therefore, HL-BE-004H is not significant under Criterion 3. Because additional study of the resource is unlikely to contribute important information on late twentieth-century settlement that occurred in the Chuckwalla Valley, the mobile home park is not significant under CRHR Criterion 4. Therefore, HL-BE-004H is recommended not eligible for listing in the CRHR under any criteria.

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. 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 a width of approximately 10 miles that is centered along the I-10 corridor.

PTNCL site types are divided into three categories: destinations, trails, and trail-associated sites or features (RWQCB 2021:C-27). 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 trail-associated sites and features. 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 (RWQCB 2021:C-27). No cultural remains associated with the PTNCL have been documented in the Project's Cultural Resources Study Area. The closest documented constituents of the PTNCL lie approximately 2.5 miles south of the Project area.

The Desert Training Center Cultural Landscape/Historic District (DTCCL) is a contiguous historic district that encompasses the entirety of the Project area. Two resources (P-33-006836 and P-33-0023675) located within the Project's direct impact area are eligible as contributors to this district. The 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 (Riverside County Planning Department 2019:3.6-24). Two historic-era resources in the Project area have been identified as contributors to the DTCCL. These include the Desert Center Army Airfield (P-33-006836/CA-RIV-10759H) and the historic-period component of 496th Medium Ordinance Company camp (P-33-023675/CA-RIV-11595).

Historical Resources in Indirect Impact Area

One identified historical resource, SR 177/Rice Road (P-33-025150; also recorded as P-33-023788/CA-RIV-11683), lies within the Project's indirect impact area. The historic roadway begins at I-10 near Desert Center and extends for 27 miles across the Chuckwalla Valley, eventually merging with SR 62. The MWD built the road in 1933 to facilitate the construction of the CRA. The road was originally known as Parker Dam Road or Aqueduct Road. It served as a trunk road from which branch roads were established to transport materials, equipment, and personnel to various points along the canal alignment. The road was added to the state highway system in 1972. The portion of the resource within the Cultural Resource Study area consists of a two-lane paved asphalt roadway that is 24 feet wide. The shoulders are unpaved with widths ranging from approximately 14 to 16 feet. The resource was previously determined eligible for inclusion in the CRHR under Criteria 1, 3, and 4.

3.6.3.5. AB 52 Native American Tribal Consultation

AB 52 states that once California Native American tribes have received the project notification letter, the tribe then has 30 days to submit a written request to consult (PRC § 21080.3.1(d)). Upon receiving a Tribe's written request to consult, the lead agency then has 30 days to begin tribal consultation. Consultation must include discussion of specific topics or concerns identified by tribes. Any information shared between the Tribes and the lead agency representatives is protected under confidentiality laws and not subject to public disclosure (GC § 6254(r); GC § 6254.10) and can be disclosed only with the written approval of the Tribes who shared the information (PRC § 21082.3(c)(1-2)).

Consultation as defined in AB 52 consists of the good faith effort to seek, discuss, and carefully consider the views of others. Consultation between the lead agency and a consulting Tribe concludes when either of the following occurs: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists on a TCR; or (2) a consulting party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2(b)).

In compliance with AB52, notices regarding this Project were sent to all requesting tribes on July 12, 2022.

No response was received from Colorado River Indian Tribe, Quechan Indian Nation, Morongo Band of Mission Indians, Torres-Martinez Desert Cahuilla Indians, Twenty-Nine Palms Band of Mission Indians, Cahuilla Band of Indians, Ramona Band of Cahuilla Indians, Santa Rosa Band of Mission Indians, or Cabazon Band of Mission Indians.

The Augustine Band of Cahuilla Indians responded in an emailed letter dated July 13, 2022. The letter stated that the tribe is unaware of any specific cultural resources that may be affected by the Project. The tribe did not request consultation.

The Agua Caliente Band of Cahuilla Indians responded in an emailed letter dated August 22, 2022. A meeting was held on July 31, 2023, in which this Project was discussed. On November 2, 2023, the cultural report and the project conditions of approval were provided to the tribe. A subsequent letter was received

from Agua Caliente dated November 17, 2023, stating that proper mitigation measures had been proposed by the County and that the concerns of the Agua Caliente Band of Cahuilla Indians, Tribal Historic Preservation officer had been addressed. The letter concluded consultation.

The Soboba Band of Luiseno Indians responded in a letter dated August 9, 2022, stating that the Project is situated within their Tribal Traditional Use Area and that there are existing sites in the area of the project. Soboba requested consultation and this was initiated on August 11, 2022. A meeting was held on June 28, 2023, in which this Project was discussed. No specific Tribal Cultural resources or impacts were identified by Soboba in this meeting. On November 2, 2023, the cultural report and the Project conditions of approval were provided to the tribe. Another follow-up email was sent to the tribe on January 4, 2024.

Although no specific physical Tribal Cultural Resources were identified Agua Caliente and Soboba 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.

The Project also 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 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. This is State Law and a standard condition of approval and is not considered a mitigation measure for the purposes of this project. Further, CEQA requires the Lead Agency to address any unanticipated cultural resources discoveries during Project construction. Therefore, a condition of approval that dictates the procedures to be followed should any unanticipated cultural resources be identified during ground disturbing activities has been placed on this Project. This is also a standard condition of approval and is not considered a mitigation measure for the purposes of this Project.

3.6.4. CEQA Significance Criteria

Section V of Appendix G to the State CEQA Guidelines addresses typical adverse changes in the significance of a historical resource and/or archaeological resource as defined under California Code of Regulations, Title 14, Chapter 3, Section 15064.5. The proposed Project would result in a significant impact under CEQA related to cultural resources and tribal cultural resources if the Project would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5 (see Impact CUL-1).

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5 (see Impact CUL-2).

c. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations, Section 15064.5 (see Impact CUL-3).

d. Disturb any human remains, including those interred outside of formal cemeteries (see Impact CUL-4).

e. 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) (see Impact TCR-2), 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 (see Impact TCR-1).

The County of Riverside's Environmental Assessment Form includes additional significance criteria, which were also used in the analysis. Almost all of the County of Riverside criteria for the issue area of Cultural and Tribal Cultural Resources are identical to existing the CEQA criteria for that issue area, except for the following criteria. The additional criteria differing from the above CEQA criteria that indicate that a project could have potentially significant impacts are:

f. Alter or destroy a historic site (see Impact CUL-1).

g. Alter or destroy an archaeological site (see 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.
- 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.

3.6.5. Proposed Project Impact Analysis

This section analyzes impacts to cultural resources identified within the Cultural Resource Study Area, which includes the 988 acres of private land that are under County jurisdiction and surrounding 1-mile area. This section also includes an examination of the Project's cultural resources impacts per the County's Environmental Assessment Checklist identified above.

This analysis considers both direct and indirect impacts to cultural resources.

- **Direct impacts** to cultural resources are those associated with Project construction, operation, maintenance, and decommissioning. Construction usually entails surface and subsurface ground disturbance, and direct impacts to cultural resources may result from the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historical built-environment resources when those buildings or structures must be removed to make way for new buildings or structures or when the vibrations of construction impair the stability of historical buildings or structures nearby. New buildings or structures can have direct impacts on historical built-environment resources when the new buildings or structures are stylistically incompatible with their neighbors and the setting, or when the new buildings or structures produce a harmful effect to the materials or structural integrity of the historical built environment resources, such as emissions or vibrations.

- **Indirect impacts** to cultural resources are those that may result from increased erosion due to site clearance and preparation or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Similarly, historical built environment resources can suffer indirect impacts when Project construction creates potentially damaging noise and vibration, improved accessibility and vandalism, or greater weather exposure. The long-term presence of solar panels, transmission lines, or towers also has the potential to result in indirect visual impacts to significant cultural resources where setting is a key contributor to the property's importance.

Additionally, unknown and/or potentially significant buried resources could be inadvertently unearthed during ground-disturbing activities during construction and decommissioning. Destruction of potentially significant cultural resources could be a significant impact.

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to cultural and tribal cultural resources. The Native American Heritage Commission (NAHC) recommended early consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the Project, to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. The NAHC also recommends the following steps that have been incorporated into the Native American consultation processes and EIR mitigation measures herein:

- Contacting the appropriate regional California Historical Research Information System (CHRIS) Center, for an archaeological records search;
- Contacting the NAHC for a Sacred Lands File search and a Native American Tribal Consultation List;
- Preparation of a professional report detailing the findings and recommendations of the records search and field survey, if an archaeological inventory survey is required;
- Lead agencies should include provisions for the identification and evaluation of inadvertently discovered archaeological resources in their mitigation and monitoring reporting program plan, because the lack of subsurface evidence of archaeological resources does not preclude their subsurface existence;
- Monitoring all ground-disturbing activities by a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources; and
- Lead agencies should include in their mitigation and monitoring reporting program plans previsions for the disposition of recovered cultural items and for inadvertently discovered Native American remains.

Several commentors from the Lake Tamarisk Desert Resort expressed concerns about the General Patton Desert Training Center historical area and are concerned about impacts to the artifacts in the area. One commentor stated that the Project seems to conflict with the BLM objectives of preserving features at historically significant sites, such as the General Patton training area.

3.6.5.1. Cultural Resources

Impact CUL-1. The Project would cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5.

LESS THAN SIGNIFICANT WITH MITIGATION.

Direct Impacts. As stated in Section 3.6.3, Methodology for Analysis, there are no known CRHR-eligible historical resources (i.e., historic built-environment resources) in the Project's direct impact area for construction, operations, maintenance, and decommissioning. Therefore, the Project would not alter or destroy a historical resource. Because no historical resources would be subject to direct impacts from the implementation of the Project, no mitigation is necessary.

Indirect Impacts. One CRHR-eligible historical resource, SR 177/Rice Road (P-33-025150; also recorded as P-33-023788/CA-RIV-11683), lies adjacent to the Project in the indirect impact area. The historic roadway has been determined eligible for inclusion in the CRHR under Criterion 1, 3, and 4. The Project would be clearly visible from this historical resource. However, the visual changes would be in kind with the current nature and scale of existing visible developments. Visual impacts to the setting would be addressed by the following measures: Mitigation Measures AES-1 and AES-2, which would employ design elements that reduce the visual contrast to characteristics of the landscape. With implementation of these mitigation measures, the proposed Project would not compromise the integrity of the resource. As such, SR 177/Rice Road is not subject to significant indirect impacts from the construction, operation, maintenance, or the decommissioning of the solar and BESS facility and gen-tie line.

Mitigation Measures for Impact CUL-1

MM AES-1 **Surface Treatment of Project Structures and Building**s. See full text in Section 3.2 (Aesthetics).

MM AES-2 **Project Design.** See full text in Section 3.2 (Aesthetics).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact CUL-2. The Project would cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5.

LESS THAN SIGNIFICANT WITH MITIGATION.

Direct Impacts. There are 3 known CRHR-eligible archaeological resources in the Project's direct impact area. The entirety of the Project area lies within the boundaries of two CRHR-eligible historic districts (PTNCL and DTCCL). No prehistoric archaeological remains associated with the PTNCL have been identified in the Project's direct impact area. Two contributors to the DTCCL, P-33-006836 (Desert Center Army Airfield) and P-33-023675 (496th Medium Ordinance Company), are mapped within the Project's direct impact area. The latter of these sites has also been previously determined eligible for individual listing in the CRHR under Criteria 1 and 4. Results of the Phase I survey found no evidence of archaeological remains associated with either P-33-006836 or P-33-023675 within the Project's direct impact area. Because no significant archaeological resources would be subject to direct impacts from the construction, operations, maintenance, or the decommissioning of the BESS and solar facility and gen-tie line, no mitigation is necessary.

Direct effects to any newly identified resources would be addressed by the implementation of Mitigation Measures (MM) CUL-1 through MM CUL-6, which would reduce these impacts to less-than-significant levels.

Indirect Impacts. Portions of the PTNCL, DTCCL, and P-33-023675 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 these resources. However, the visual changes would be in kind with the current nature and scale of existing visible developments. Visual impacts to the setting would be addressed by the following measures: Mitigation Measures AES-1 and AES-2, which would employ design elements that reduce the visual contrast to characteristics of the landscape. Therefore, the proposed Project would not compromise the integrity of the resources. 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.

Mitigation Measures for Impact CUL-2

MM AES-1 **Surface Treatment of Project Structures and Buildings.** See full text in Section 3.2 (Aesthetics).

MM AES-2 **Project Design.** See full text in Section 3.2 (Aesthetics).

MM CUL-1 **Project Archaeologist and Cultural Resource Monitoring Plan**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-2 **Develop and Implement Cultural Resources Environmental Awareness Training.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-3 **Archaeological Monitoring**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-4 **Unanticipated Discovery**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-5 **Treatment of Human Remains**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-6 **Phase IV Monitoring Report.** See full text in Section 3.6.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact CUL-3. The Project would cause an adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations, Section 15064.5.

LESS THAN SIGNIFICANT WITH MITIGATION. No unique archaeological resources have been identified to date in the Project's direct or indirect impact areas. Therefore, the Project would not cause an adverse change in the significance of any known unique archaeological resources. Should a unique archaeological resource be identified during construction, operations, maintenance, and decommissioning of the Project, direct effects to any newly identified unique archaeological resources would be addressed by the implementation of Mitigation Measures CUL-1 through MM CUL-6, which would reduce potential impacts to a less-than-significant level.

Mitigation Measures for Impact CUL-3

MM CUL-1 **Project Archaeologist and Cultural Resource Monitoring Plan.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-2 **Develop and Implement Cultural Resources Environmental Awareness Training.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-3 **Archaeological Monitoring.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-4 **Unanticipated Discovery.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-5 **Treatment of Human Remains.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-6 **Phase IV Monitoring Report.** See full text in Section 3.6.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact CUL-4. The Project would disturb any human remains, including those interred outside of dedicated cemeteries.

LESS THAN SIGNIFICANT WITH MITIGATION. A review of the archaeological record searches and results of recent Phase I survey did not identify any human remains in the Project's direct or indirect impact areas. However, previously unidentified human remains could be found and potentially impacted (directly or indirectly) during Project construction and decommissioning. 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 MM CUL-5, any potential impacts on human remains would be less than significant.

Mitigation Measures for Impact CUL-4

MM CUL-5 **Treatment of Human Remains.** See full text in Section 3.6.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

3.6.5.2. Tribal Cultural Resources

Impact TCR-1. The Project would cause adverse change in the significance of a Tribal Cultural Resource determined by the Lead Agency.

LESS THAN SIGNIFICANT WITH MITIGATION. The direct and indirect impacts of solar and BESS facility and gen-tie line construction, operations, maintenance, and decommissioning, would potentially cause disturbance or damage to tribal cultural resources. This would be a significant impact under criterion TCR-1 (adverse change in the significance of a tribal cultural resources identified through tribal consultation). However, impacts are not anticipated because no tribal cultural resources determined by the County have been found in the Project area or identified through tribal consultation.

Mitigation Measures for Impact TCR-1

MM CUL-1 **Project Archaeologist and Cultural Resource Monitoring Plan**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-2 **Develop and Implement Cultural Resources Environmental Awareness Training.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-3 **Archaeological Monitoring**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-4 **Unanticipated Discovery**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-5 **Treatment of Human Remains**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-6 **Phase IV Monitoring Report.** See full text in Section 3.6.9 (Mitigation Measures).

MM TCR-1 **Native American Monitor**. See full text in Section 3.6.9 (Mitigation Measures).

MM TCR-2 **Artifact Disposition**. See full text in Section 3.6.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact TCR-2. The Project would cause adverse change in the significance of a Tribal Cultural Resource eligible for or listed on the CRHR or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k).

LESS THAN SIGNIFICANT WITH MITIGATION. The direct and indirect impacts of solar and BESS facility and gen-tie line construction, operations, maintenance, and decommissioning, could cause disturbance or damage to tribal cultural resources. This would be a significant impact under criterion TCR-2 (adverse change in the significance of a tribal cultural resources eligible or listed on the CRHR). However, no TCRs have been identified and therefore this project would have no impact. Should a tribal cultural resource be identified during construction, operations, maintenance, and decommissioning of the Project, direct effects to the newly identified resource would be addressed by the implementation of Mitigation Measures CUL-1 through MM CUL-6, MM TCR-1, and MM TCR-2, which would reduce potential impacts to a less-than-significant level.

Mitigation Measures for Impact TCR-2

MM CUL-1 **Project Archaeologist and Cultural Resource Monitoring Plan**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-2 **Develop and Implement Cultural Resources Environmental Awareness Training.** See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-3 **Archaeological Monitoring**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-4 **Unanticipated Discovery**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-5 **Treatment of Human Remains**. See full text in Section 3.6.9 (Mitigation Measures).

MM CUL-6 **Phase IV Monitoring Report.** See full text in Section 3.6.9 (Mitigation Measures).

MM TCR-1 **Native American Monitor**. See full text in Section 3.6.9 (Mitigation Measures).

MM TCR-2 **Artifact Disposition**. See full text in Section 3.6.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

3.6.6. Alternative 1: No Project Alternative

Under the No Project Alternative, the Project would not be constructed so there would be no impact to historical resources. Other projects or linear facilities could potentially be developed at this location, because it is located on land designated as a DRECP Development Focus Area (DFA), but any future project(s) would be evaluated under separate CEQA and/or NEPA analyses.

3.6.7. Alternative 2: Lake Tamarisk Alternative

Under this alternative, approximately 30 acres of land would be removed from development footprint in the area closest to the community of Lake Tamarisk and the length of the 500 kV gen-tie line would be extended 0.8 miles longer than the proposed Project. However, under the Lake Tamarisk Alternative, the number of CRHR eligible resources within the direct impact area would be the same as 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 Alternative 2'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 3.6.6. 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.

3.6.8. Cumulative Impacts

Geographic Scope

Cultural cumulative impacts include the Project's impacts and those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1, Past and Present Projects or Programs in the Project Area, and 3.1-2, Probable Future Projects in the Project Area). The Desert Center area was selected as the geographic scope, because the archaeological and historical resources within this area are expected to be similar to those that occur on the Project site due to their proximity and because similar environments, landforms, and hydrology would result in similar land use and, thus, site types.

Most of these projects involved or will involve grading or other excavation activities that have the potential to impact cultural resources. If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would contribute to cumulative impacts. Such designations would afford additional protection to cultural and tribal cultural resources.

Cumulative Impact Analysis

As discussed under Impact CUL-1 the Project would not alter or destroy a historical resource, either directly or indirectly. There are no known CRHR-eligible historical resources in the Project's direct impact area. Because the visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments, the portion of SR 177/Rice Road (P-33-025150) within the indirect impact area would also not be impacted by the Project. Therefore, the Project would not make a considerable contribution to cumulative impacts on any known CRHR-eligible historical resource.

As discussed under Impact CUL-2 the Project would not alter or destroy any CRHR-eligible archaeological resources, either directly or indirectly. No evidence of P-33-023675, the PTNCL, or the DTCCL were identified within the Project's direct impact area. Furthermore, because the visual changes resulting from the Project would be in kind with the current nature and scale of existing visible developments, the portion of these resources within the indirect impact area would also not be impacted by the Project. Therefore, the Project would not make a considerable contribution to cumulative impacts on any known CRHR-eligible archaeological resource.

As discussed under Impact CUL-3, the Project would not alter or destroy a unique archaeological resource, either directly or indirectly. There are no known unique archaeological resources in the Project's direct or indirect impact areas. Therefore, the Project would not contribute to cumulative impacts to any unique archaeological resource.

As discussed under Impact CUL-4, the Project would not disturb any human remains, including those interred outside of dedicated cemeteries. This is because a review of the archaeological record search and results of recent surveys did not identify any human remains, burial sites, or cemeteries in the Project

area. 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]) and in accordance with relevant mitigation measures. Therefore, the Project's impacts combined with those of nearby projects would not result in a cumulatively considerable impact on human remains, including those interred outside of dedicated cemeteries.

As discussed under Impacts TCR-1 and TCR-2, 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. There are no tribal cultural resources that have been identified in the Projects direct or indirect impacts area. Therefore, the Project will not contribute to the cumulative impacts to any tribal cultural resource.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM AES-1, MM AES-2, MM CUL-1 through MM CUL-6, MM TCR-1, and MM TCR-2 would be implemented to address potential cultural and tribal cultural resources impacts for the proposed Project. No additional mitigation is required.

Significance After Mitigation

The Project's incremental contribution to impacts to cultural and tribal cultural resources would not be cumulatively considerable.

3.6.9. Mitigation Measures

The following MMs were developed to substantially lessen the potentially significant effects to cultural resources that could result in the event of an unanticipated discovery cultural or archaeological resources or human remains. The following MMs were developed to comply with the COAs provided by the County of Riverside (ADM, 2023; RCCOA, 2023):

MM CUL-1 **Project Archaeologist and Cultural Resource Monitoring Plan.** 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 that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to 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 wet-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 frequency and location of inspections will be determined by the Project Archaeologist.

MM CUL-2 **Develop and Implement Cultural Resources Environmental Awareness Training.** Prior to issuance of a Notice to Proceed by the County and for the duration of ground disturbance (as defined in MM TCR-1), the Applicant shall provide Worker Environmental Awareness Program (WEAP) training to all workers prior to or on their first day of employment at the

Project site. The training shall be prepared by the Cultural Resources Specialist (CRS), 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 will be given the opportunity to participate in the WEAP training. The CRS 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:

- 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 only the CRS, alternate CRS, and supervisory cultural 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 CRS.
- 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 CRS or supervisory cultural resource field staff, and that redirection of work would be determined by the construction supervisor and the CRS.
- An informational brochure that identifies 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. No ground disturbance shall occur prior to implementation of the WEAP training unless such activities are specifically approved by the County.

MM CUL-3 **Archaeological Monitoring.** A qualified lead archaeological monitor that meets the Secretary of the Interior's Professional Qualifications Standards (as defined in Title 36 Code of Federal Regulations 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 SOI qualifications but may work under the supervision of the lead archaeological monitor; in such cases the lead archaeological monitor must be on site. Any additional archaeological monitors will meet the qualifications of a bachelor's degree in anthropology/archaeology or completion of an archaeological field school and two or more years of archaeological project experience. Daily monitoring forms will be completed by the archaeological monitor(s) and the CRS will be responsible for retaining and/or editing them. The lead archaeological monitor will have the authority to increase

or decrease the monitoring effort should the monitoring results indicate that a change is warranted.

MM CUL-4 **Unanticipated Discovery.** 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* are discovered, the following procedures shall be followed:

All ground disturbance activities within 100 feet of the discovered 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, recovery, avoidance, etc) for the 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. Tribal Cultural Resources are also considered cultural resources.

** 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.

MM CUL-5 **Treatment of Human Remains.** 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

MM CUL-6 **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.

MM TCR-1 **Native American Monitor**. Prior to the issuance of grading permits, the developer/permit applicant shall enter into an agreement with the consulting tribe(s) for at least one Native American Monitor per archaeological monitor. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of 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) shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. The developer/permit applicant shall submit a fully executed copy of the agreement 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.

MM TCR-2 **Artifact Disposition.** 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 one of the following methods.

(a) 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.

(b) Curation at a Riverside County Curation facility that meets federal standards per 36 CFR Part 79 and therefore will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

If more than one Native American Group is involved with the project and cannot come to a consensus as to the disposition of cultural resources, the landowner(s) shall then proceed with curation at the Western Science Center. The details of any disposition of artifacts shall be documented in the Phase IV report.

3.7. Energy

This section describes the environmental setting and regulatory framework with respect to energy consumption and generation for the proposed Project, including applicable plans, policies, and regulations. The analysis of energy includes evaluating the Project's use of energy during construction and operation, as well as evaluating the Project's consistency with state or local plans for renewable energy or energy efficiency.

3.7.1. Environmental Setting

The SCE transmission system into which the Easley Project would interconnect at the Red Bluff Substation serves approximately 15 million people in central, coastal, and southern California, excluding the City of Los Angeles and certain other cities (SCE, 2023). The southern California bulk electric power transmission system includes the high-voltage transmission facilities of SCE and San Diego Gas & Electric (SDG&E), with major interconnections to systems of Pacific Gas & Electric (PG&E), Los Angeles Department of Water and Power (LADWP), and Arizona Public Service (APS).

As of 2021, California generated 33,260 GWh of energy from solar projects, and 67,461 GWh of energy from renewable sources, which is 17.1% and 34.8% of California in-state generation, respectively (CEC, 2023).

3.7.2. Regulatory Framework

3.7.2.1. Federal Laws, Regulations, and Policies

DRECP Land Use Plan Amendment (LUPA) to the California Desert Conservation Area (CDCA). The DRECP is a collaboration between the BLM, California Energy Commission, California Department of Fish and Game, and U.S. Fish and Wildlife Service. The Record of Decision for the DRECP LUPA, Phase I of the larger collaboration, was signed in 2016 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 10.8 million acres of BLM-managed federal lands in seven California counties. The portion of the Project that would be located on BLM land is designated as a DFA.

3.7.2.2. State Laws, Regulations, and Policies

Assembly Bill 32. Assembly Bill (AB) 32, also known as the California Global Warming Solutions Act of 2006, required a reduction of greenhouse gas emissions to 1990 levels by 2020. (This target has been increased to a level 80 percent below 1990 levels by 2050.) The California Air Resources Board 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 approach to address climate change (CARB, 2018).

Energy Action Plan and Loading Order. 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 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 (CPUC, 2008). Since that time, the California Public Utilities Commission (CPUC) and California Energy Commission (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 will accelerate California's renewable portfolio standard requirements of electricity utility providers to 50 percent renewable energy sources by 2025, 60 percent by 2030, and will require that the next 40 percent comes from zero-carbon sources of electricity by 2045 (California Legislative Information, 2018).

Senate Bill 350. Also known as the Clean Energy and Pollution Reduction Act, establishes clean energy, clean air, and greenhouse gas reduction goals, including reducing greenhouse gas to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050. Additionally, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This objective will increase the use of RPS eligible resources, including solar, wind, biomass, geothermal, and others (CEC, 2020).

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, in order to assure that energy 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 Pub. Resources Code § 21100(b)(3)).

3.7.2.3. Local Laws, Regulations, and Policies

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. The RCGP sets forth County land use policies and guidance for implementation (Riverside County, 2015, 2021). The RCGP is augmented by more detailed Area Plans covering specific selected areas within the County. Area Plans provide a clear and more focused opportunity to enhance community identity within the County and stimulate quality of life at the community level. The proposed Project is within the County's Desert Center Area Plan.

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. The General Plan's policy goals that are potentially relevant to energy for the Project are provided below.

Land Use Element:

- **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.

Multipurpose Open Space Element:

- **Policy 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.
- **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.

As a solar energy generation project, the proposed Project would be consistent with each of these County policies.

3.7.3. Methodology for Analysis

All construction- and operation-related activities would involve use of energy-consuming equipment and processes. This analysis presents a qualitative discussion of the proposed Project's energy use for all phases and components. 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:

- 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.

The energy impact analysis emphasizes avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy resources. State CEQA Guidelines, Section 15126.2(b) requires the analysis to focus on energy use that is caused by the project. If analysis of the project's energy use reveals that the project may result in significant environmental effects due to inefficient, wasteful, or unnecessary use of energy, then the analysis must identify ways to mitigate that energy use.

3.7.4. CEQA Significance Criteria

The criteria used to determine the significance of potential energy impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to energy if the Project would:

- *Result in wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation (see Impact E-1); or*

The following CEQA significance criterion from Appendix G is not included in the analysis and is not discussed further beyond this summary:

- *Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency.*

  The proposed Project would generate up to 400 MW of renewable energy and would assist the State in achieving its energy objectives under Senate Bill 100 and 350 and greenhouse gas emissions reduction goals under AB 32. The proposed Project would be located on private and BLM-administered land. The public lands within the Project solar application area include lands designated as DFA lands by the DRECP and are targeted for renewable energy development. The proposed Project would be consistent with federal goals for the construction of renewable energy infrastructure and generation of renewable energy and would make the best use of public lands to generate, store, and transmit affordable renewable solar electricity for distribution to the State. Additionally, the proposed Project would be consistent with applicable policy goals relevant to energy in the Riverside County General Plan Land Use and Multipurpose Open Space element. Therefore, the proposed Project would directly support federal, state, and local plans for renewable energy development. Beneficial impacts related to state or local plans for renewable energy or energy efficiency would occur, and the Project would not conflict with or obstruct a state or local plan for renewable energy.

3.7.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to energy. Public concerns related to energy involved concerns about the energy required to cool the BESS facility, and how much energy would be taken from the local grid, and the heat in the region affecting battery efficiency. Scoping comments also expressed concerns about meeting renewable energy goals, which are addressed in the analysis below and incorporated into the Project Objectives (see Section 1.3).

Project decommissioning impacts would be the same as those described under Project construction.

Impact E-1. Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation?

LESS THAN SIGNIFICANT. Project construction and decommissioning are each anticipated to last approximately 20 months. During construction, motorized equipment and vehicles would consume energy resources in the form of fossil fuels (i.e., diesel fuel and gasoline). Additionally, construction would require the manufacture and delivery of new equipment and materials, which would also require energy use.

Although construction activities would consume fossil fuels, consumption of these resources would be temporary and would cease upon the completion of construction. The fuel consumed during construction of the proposed Project would be typical of similar solar projects. Mitigation Measure AQ-2 (Control On-Site Off-Road Equipment Emissions) requires the proposed Project to minimize unnecessary use of construction equipment so that activity levels are not wasteful; for example, by requiring equipment to be properly maintained and limiting construction equipment idling.

Based on these considerations, construction of the proposed Project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. Construction impacts would be less than significant.

Once operational, the Project would require relatively minor amounts of maintenance activity (see Section 2.7, Operation and Maintenance Activities), as the solar modules and BESS would automatically generate and store power from solar energy. During operations, up to 10 permanent staff could perform daily visual inspections, maintenance, and minor repairs. A minimal workforce and maintenance activities are anticipated. Operation and maintenance would result in minimal energy use due to the small workforce needed and the limited number of vehicles required to commute to the site and transport materials.

The proposed Project would generate renewable energy, reducing the use of fossil fuel for electrical generation by conventional power plants. As discussed in Section 3.9, Greenhouse Gas Emissions, the proposed Project would produce up to about 1.4 million megawatt-hours (MWh) of electricity each year for delivery to California's end-users. The avoided emissions in the year 2030 would be approximately 527,800 MT of CO_2 per year.

Although the battery storage component would require the use of some energy, the output of the storage component would occur at hours of peak demand, which would have a beneficial effect of shifting the types of fuel-burning generating units on the grid that could be displaced. The energy generated by the proposed Project would be many times greater than the amount used. As such, operation of the proposed Project would result in a less-than-significant impact with respect to the inefficient consumption of energy.

Decommissioning impacts are anticipated to be similar to the construction impacts and would also use energy after the end of the Project's useful life, per an agency-approved Closure and Decommissioning

Plan; however, the specific types and amount of energy to be used during decommissioning are uncertain. No mitigation would be necessary. The proposed Project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources.

Mitigation Measures for Impact E-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.7.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction or new operational activities. Therefore, the No Project Alternative would not affect energy resources in the Project area. However, the No Project Alternative would also not contribute to meeting California's renewable energy goals and would not provide the renewable benefits of the Project. The No Project Alternative would have no effect on energy resources, while the proposed Project would have adverse impacts related to energy that are less than significant, while generating beneficial renewable energy.

Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project in order to fulfill State mandates for renewable energy. A different solar energy project would potentially result in similar impacts to energy resources as those identified for the proposed Project, although those impacts would vary based on location and the specific characteristics of another solar project proposal.

3.7.7. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would not result in any significant changes to the construction or operational activities as they relate to energy resources. Alternative 2 would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. With this relatively small reduction in acreage, neither the electrical output, nor consumption of energy resources, would be appreciably reduced compared to the proposed Project. The impacts of Alternative 2 would be similar to the proposed Project.

3.7.8. Cumulative Impacts

Geographic Scope

The geographic scope of the cumulative analysis for energy consumption would be 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.

Cumulative Impact Analysis

As discussed above, construction of the proposed Project would not result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources (Impact E-1). Energy use during construction would be reduced by best management practices and adherence to the proposed Mitigation Measure AQ-2 which would minimize construction equipment activity, limit the idling of equipment, and encourage carpooling. The use of fossil fuel by operational worker commutes and use of vehicles and equipment during maintenance is not considered to be wasteful, inefficient, or unnecessary.

This energy use would contribute to the construction and operation of a solar facility that would increase the availability of renewable energy, thus reducing the use of fossil fuel for electrical generation by conventional power plants. Most of the cumulative projects identified in Tables 3.1 1 and 3.1 2 are renewable energy facilities and the remainder are energy infrastructure, such as a storage project, or transmission lines and substations. If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would contribute to cumulative impacts.

Although construction activities associated with cumulative projects would require the use of fossil fuels, it is assumed each project would initiate best management practices and comply with applicable policies and regulations as part of project approval to reduce wasteful, inefficient, or unnecessary use of energy resources. Furthermore, most of the cumulative projects would also contribute renewable energy to the California electrical transmission system, reducing the State's overall reliance on fossil fuels. The proposed Project would not contribute to cumulatively considerable energy impacts and would make a beneficial cumulative contribution to supporting federal, state, and local plans for renewable energy development.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

The Project's incremental contribution to impacts to energy would not be cumulatively considerable.

3.7.9. Mitigation Measures

No mitigation would be required.

3.8. Geology, Soils and Mineral Resources

This section describes the regional and local geology, soil conditions, and mineral resources, and the regulatory framework for these resources. CEQA does not generally consider the impact of the existing environment on the Project; however, this section identifies seismic hazards that could potentially affect structures associated with the Project to assist decision-makers in addressing regulatory concerns. The area relevant to the analysis of geology, soils, geologic hazards, and mineral resources is the physical footprint of Project construction, operation and maintenance, and decommissioning activities. The study area for faulting and seismic hazards includes the larger southern California region, because distant faults can produce ground shaking and secondary seismic hazards in the Desert Center area.

3.8.1. Environmental Setting

3.8.1.1. Geologic Setting and Physiography

The Project site's elevation ranges from approximately 550 feet above mean sea level (amsl) near the easternmost boundary to approximately 745 feet amsl near the southwestern boundary corner (Google Earth, 2023). The Project site is located in the Chuckwalla Valley near the northeast corner of the Colorado Desert geomorphic province. The Colorado Desert is bounded to the east by the Colorado River, to the south by the Mexican border, and to the west by the Peninsular Ranges. The northern border extends approximately along the southern edge of the eastern Transverse Ranges and the San Bernardino–Riverside County line (Norris and Webb, 1976). Except for a narrow band along the Colorado River and northwestern Imperial County, drainage in the Colorado Desert is internal. In eastern Riverside County, much of the drainage ends in the Chuckwalla Valley.

The Chuckwalla Valley is situated between the Chuckwalla Mountains to the south and the Palen and Coxcomb Mountains to the north. Alluvial divides reaching up to 1,500 feet amsl serve as boundaries between the mountain ranges to the north and west of the valley. The valley is dominated by up to 1,200 feet of sand, gravel, and clay derived from the surrounding highlands, and contains numerous dry lake beds that are separated by sand dunes. The surrounding mountains reach 2,000 to 4,000 feet amsl and the lowest point of the valley is Ford Dry Lake, located southeast of the Project at an elevation of approximately 360 feet amsl. Most of the area consists of broad alluvial fans characterized by bar and swale topography interrupted by larger drainages which can be more heavily vegetated. Sand dunes occur in some regions of the Chuckwalla Valley.

3.8.1.2. Geology

The site is situated on the western end of the Chuckwalla Valley and receives outwash from the Chuckwalla Mountains to the south. The geology of the area is dominated by alluvial fans and basin deposits. Geologic mapping of the area is provided on the Eolian System Map of the East Riverside Area (CGS, 2014) and Geologic Map of California: Salton Sea Sheet (Jennings, 1967) which indicates the Project site is underlain by Quaternary alluvium ranging from Holocene (less than 11,700 years before present [BP]) to latest Pleistocene (11,700 to 126,0000 BP) in age. The California Geologic Survey (CGS) and Jennings units mapped in the Project area are somewhat equivalent, except for the scale and detail of mapping, and are discussed together. The units underlying the Project site are described below (CGS, 2014; Jennings, 1967).

Alluvial Fan Deposits (Qyf)/Alluvium (Qal). Alluvial fan deposits of Holocene to latest Pleistocene age consisting of unconsolidated to slightly consolidated, poorly to moderately sorted, fine to coarse grained sand and gravel. The gravel includes pebbles, cobbles, and boulders (CGS, 2014). Jennings (1967) describes this unit as alluvial sand, silt, clay, and gravel, locally including some older alluvium. This unit is broadly

distributed throughout the Chuckwalla Valley and locally contains active alluvial fans and washes that serve as sources of wind-blown (eolian) sediment. Modification of surface drainage by the construction of training dikes for the control of storm water runoff creates downstream shadow effects, rendering parts of these alluvial fans abandoned (CGS, 2014). This unit underlies most of the Project site and Project structures including solar arrays, laydown areas, access roads, fences, the BESS, and the substation would be located on this unit.

Alluvial Wash Deposits (Qw)/Alluvium (Qal). Alluvial wash deposits consisting of unconsolidated fine - to coarse-grained sand and sandy gravel with subordinate fine sand and silt and exhibits bar and swale morphology (CGS, 2014). As a channel meanders and erodes laterally, a succession of bars with intervening swales forms, called bar and swale topography. Bars in a river are elevated regions of sediment (such as sand or gravel) that have been deposited by the flow and swales are the intervening low-flow channels. This unit is included in the area mapped by Jennings (1967) as alluvium and is described as alluvial sand, silt, clay, and gravel, locally including some older alluvium. This unit is found underlying a small area of the northern portion of Project site near the northernmost boundary. Proposed solar arrays fence, proposed access roads, and a proposed laydown area would be located on areas within the Project underlain by this unit.

Older Alluvium (Qoa)/Pleistocene Nonmarine Sedimentary Deposits (Qc/Qco). Older alluvial deposits of Pleistocene age are comprised of undifferentiated alluvial fan, alluvial valley, and alluvial terrace deposits. In general, these deposits are capped by a gravel lag or desert pavement with moderately to strongly developed desert varnish (CGS, 2014). Jennings (1967) describes this unit as mostly dissected older alluvium and fanglomerate with well-developed desert pavement and desert varnish (Qc), with areas of extremely dissected older folded or uplifted fan deposits (Qco). This unit is found crossing portions of the proposed gen-tie line within the Oberon Project boundaries where it is consolidated with the Oberon Project gen-tie line right-of-way (ROW).

3.8.1.3. Slope Stability

Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying colluvium. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. The steeper the slope and the thicker the colluvium, the more likely the area is susceptible to debris flows. Another indication of unstable slopes is the presence of old or recent landslides or debris flows. The Project site is relatively flat with a slight descending slope to the northeast. The Riverside County General Plan shows the Project area as having no potential for seismically induced slope instability and as having slope grades of less than 15 percent (Riverside County, 2021a). There is no potential for slope failure at the Project site.

3.8.1.4. Soils

The soils underlying the site reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of human modification. Potential hazards/impacts from soils include erosion, shrink-swell (expansive soils), and corrosion. The National Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Soil Web Survey was reviewed to identify soil units and characteristics underlying the Project; however, no SSURGO soil data were available for the area. Therefore, national-level State Soil Geographic (STATSGO) soil data for California were reviewed (NRCS, 2016). The STATSGO data indicated that the Project area is primarily underlain by the Vaiva-Quilotosa-Hyder-Cipriano-Cherioni association, with a small amount of the Rositas-Dune Land-Carsitas association underlying portions of the eastern most parcels for the Project both north and south of Highway 177.

The Vaiva-Quilotosa-Hyder-Cipriano-Cherioni soil association typically consists of very shallow to shallow, somewhat excessively drained, gravelly to sandy loam (loam consists of approximately equal amount of sand, silt, and clay) formed in alluvium over shallow bedrock or hardpan (NRCS, 2023). The Vaiva-Quilotosa-Hyder-Cipriano-Cherioni soils are typically non-plastic to slightly plastic (plasticity, the ability of a soil to be deformed and retain that deformation, is exhibited by a soil due to the presence of clay minerals) and moderately alkaline (NRCS, 2023).

The Rositas-Dune Land-Carsitas soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material on dunes and sand sheets or alluvium on alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways (NRCS, 2023). Dune Land is a miscellaneous area with little to no identifiable soil and consists of unstable sand in ridges and troughs that shift with the wind (USDA, 2018). The Rositas-Dune Land-Carsitas soils are typically non-plastic and moderately alkaline (NRCS, 2023).

Geotechnical evaluations conducted just east of the Project for the Athos Renewable Energy Project (Athos) by Terracon Consultants, Inc. (2018) indicates that soil materials in the Project vicinity generally consist of sand with variable amounts of silt, gravel, and cobbles, may be moderately corrosive, and are not expansive.

Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. Soils containing high percentages of fine sands and silt and that are low in density, are generally the most erodible. As the clay and organic matter content of soils increases, the potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion. The soils in the Project area are predominantly sandy in character. The County of Riverside General Plan Safety Element (2019) maps the Project area as having moderate to high wind erosion susceptibility.

A total of approximately 66 acres of isolated areas of desert pavement were identified in western portions of the Project site within and near areas of desert dry wash woodland during the biological survey for the Project, with about 44 acres of desert pavement underlying Project disturbance areas. In the Project area, desert pavement is sparsely vegetated with an intermittent layer of cryptogamic crust (Ironwood, 2023, Appendix G). Along the gen-tie ROW, only small area of previously identified desert pavement, approximately 8 acres, were identified. The areas of desert pavement along the gen-tie ROW were previously identified during the Oberon Project and coincide with the area where the Easley gen-tie ROW is consolidated with the Oberon Project gen-tie line ROW.

Desert pavement is a desert surface with closely packed, interlocking angular or rounded rock fragments of pebble and cobble size. Desert pavement forms where wind action and sheetwash have removed all smaller particles or where rock fragments have migrated upward through sediments to the surface. This tightly packed gravel armors the surface and prohibits fine soil particles from being entrained by wind (Potter, 2016) and protects the finer grained underlying sediment from further erosion.

Older, well-established desert pavement typically exhibits varnish, an oxidized surface that occurs with age and fluvial inactivity. Desert varnish is the thin red to black coating found on exposed rock surfaces in arid regions. Varnish is composed of clay minerals, oxides, and hydroxides of manganese and/or iron. Desert pavement is sparsely vegetated with an intermittent layer of cryptogamic crust. The ground surface is sandy and gravelly mixed alluvium with various rocks and gravel. Desert pavement is often interwoven between areas of creosote bush scrub and desert dry wash woodland where it occurs on the Project site, and primarily occurs on the western portion of the Project site and crossing small portions of the gen-tie line.

Desert varnish was not mapped during Project surveys; however, it is common on exposed rock faces of desert pavement. Both desert pavement and desert varnish take thousands of years to form.

The significance of desert pavement is its long-term stability. When desert pavement is disturbed and broken up, the very fine particulate matter immediately beneath the stable pavement that has accumulated by infiltration through the pavement over centuries becomes exposed to air currents. The result is high inputs of fugitive dust into the air and subsequent soil loss on site. If left undisturbed, desert pavement restricts the infiltration of water into the underlying soils and allows desert runoff to playas near Desert Center.

Desert pavement is sparsely vegetated and can also include cryptogamic crusts (biologic soils crusts). Desert pavement generally overlies older alluvium formations (BLM, 2015); the alluvium in the Project area ranges in age from Holocene to late, therefore large amounts of desert pavement are not present and where present are most likely in areas of older, less disturbed, and more stable alluvium. Some of the surface soils in the area have been disturbed by past activities, including agricultural uses, grading of roads, and use as a World War II maneuver area (see Section 3.10, Hazards and Hazardous Materials), that have likely disrupted and significantly reduced the amount of desert pavement in the area.

3.8.1.5. Seismicity

The Project site is in seismically active Southern California. The type and magnitude of seismic hazards affecting the site is dependent on the distance to active faults, the intensity and the magnitude of a seismic event, distance from the event, and geologic conditions underlying and surrounding the area.

Fault Rupture

Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. The site is not crossed by any known active faults (USGS, 2023a) and is not located within an Alquist-Priolo Earthquake Fault Zone as shown on the Earthquake Zones of Required Investigation website (CGS, 2023). The closest known Quaternary faults to the site are the Blue Cut fault, located approximately 10.3 miles north of the Project; the Aztec Mine wash fault, approximately 12.6 miles south of the Project; and the Salton Creek fault, approximately 14 miles south of the Project (USGS, 2023a). All three are considered undifferentiated Quaternary in age and therefore potentially active, with the Blue Cut fault considered as a seismic source in the USGS National Seismic Hazard Model (NSHM) (USGS, 2023a). The Blue Cut fault is within a County of Riverside Earthquake Fault Study Zone on Figure S 2 of the Riverside County General Plan Safety Element (2019).

Ground Shaking

The area is subject to ground shaking associated with earthquakes on faults of the San Andreas fault system. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational movement. Several factors influence how ground motion interacts with structures, making the hazard of ground shaking hard to predict. What is normally felt during an earthquake are the vibrations caused by the seismic waves propagating through the earth's crust. These waves can vibrate in any direction at many different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the Project. The seismic evaluation conducted for the adjacent Athos Project by Terracon (2018) indicates moderate to strong ground shaking should be anticipated in the Project area.

Liquefaction

The Riverside County General Plan Safety Element (2019) maps the Project area in a moderate zone of liquefaction susceptibility. The area has not been mapped by the California Geologic Survey (CGS) Seismic Hazards Program. Liquefaction occurs when loose, water-saturated sediments lose strength and fail

during strong ground shaking; it is further defined by the CGS as the transformation of granular material from a solid state into a liquefied state as a consequence of increased pore-water pressure. Liquefaction usually occurs in areas with young, saturated unconsolidated sediments with groundwater levels of 50 feet or less. Excess water pressure is vented upward through fissures and soil cracks and can also result in a water-soil slurry flowing onto the ground surface. Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping (Riverside County, 2021a). A geotechnical evaluation in the Project vicinity for the adjacent Athos Project (Terracon, 2018) estimated groundwater depth to be greater than 70 feet below ground surface in the area and concluded that potential for liquefaction is low due to anticipated depth of groundwater and subsurface conditions.

3.8.1.6. Subsidence

Land subsidence is a gradual settling or sudden sinking of the ground surface due to removal or displacement of subsurface earth materials. The principal causes include compaction associated with withdrawal of fluids such as groundwater or petroleum, compaction of organic soils, underground mining, or natural compaction or collapse, such as with sinkholes or thawing permafrost. In California, subsidence is typically caused by human withdrawal of fluids. Subsidence can also occur through earthquake induced ground failure, as well as the settling and compaction of unconsolidated sediments during liquefaction. The compaction of susceptible aquifer systems caused by excessive groundwater pumping is the single largest cause of subsidence in California. Fine-grained sediments (clays and silts) within an aquifer system are the main culprits in land subsidence due to groundwater pumping; when groundwater levels decline to historically low levels these fine sediments are susceptible to becoming compressed and having less space to store water. The County Safety Element maps the Project area as susceptible to subsidence; however, no areas with documented subsidence are mapped underlying the Project area (Riverside County, 2019). Additionally, no subsidence areas are mapped by the USGS as underlying the site (USGS, 2023b).

3.8.1.7. Sand Transport/Migration

Sand dune transport systems form where winds are consistently strong enough to lift and push fine sand grains across the dune surface, especially where there is little or no vegetation to stabilize the loose soil. Sandy alluvium (unconsolidated sediment deposited by flowing water in streams or sheets) in dry washes and alluvial fans are examples of sources for these materials, and strong winds generally transport the sands to areas with topographic irregularity, such as at the mountain front, where decreasing wind energy deposits sand. Active washes are large contributors of eolian sands in desert landscapes, transporting sand from upslope to the valley axis where most dune systems exist (areas of strongest prevailing winds). Except in high-force winds, wind does not typically suspend and transport sand high into the air (BLM, 2015).

The Chuckwalla Valley is a region of active aeolian sand migration and deposition. Aeolian processes play a major role in the creation and establishment of sand dune formations and habitat in the Chuckwalla Valley. A study by Kenney (2017) of the sand corridor throughout the Chuckwalla Valley concluded that the sand transport system relies on local sand systems, rather than systems that cross the entire Chuckwalla Valley. Regional eolian system studies in the valley indicate that the prevailing wind responsible for sand transport is from the northwest toward the southeast and locally controlled by topography (e.g., mountain ranges) (BLM, 2018). The dominant sand migration direction within the corridors is toward the east and south. Sand delivered from upwind is deposited, replenishing sand that has been lost downwind.

No active surface aeolian (wind-driven) sand deposits are present within the Project site; however, fluvial sand transport across the site likely carries sand downslope toward Big Wash and Pinto Wash, where fine sands may be taken up into the aeolian sand transport system toward the Palen Dunes. Eolian deposits mapped outside the sand migration zones are present outside of the Project boundary to the northeast.

At its closest point, the Project site is more than a mile southwest of the southeast-trending Palen Lake sand migration zone (SMZ); the Palen Lake SMZ is part of the Palen Sand Dune System. The Project site is not located within any identified sand transport or migration zone. Active washes near the Palen Lake SMZ are important for eolian systems as a sand source, sand transport, and stabilizing moisture. Several minor washes pass through the Project site that may aid in the transport of eolian material; however, they have not been mapped as eolian sand sources (Kenney, 2017). A portion of Big Wash, a drainage traversing east to southeast from the Eagle Mountains, located just north and northeast of the Project site is mapped by Kenney (2017) as an eolian sand source and provides stabilizing moisture.

3.8.1.8. Mineral Resources

The Project site is mapped within Mineral Resource Zone (MRZ) 4 (CGS, 1994; Riverside County, 2015), 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 boundaries. The California Department of Conservation Division of Mine Reclamation Mines Online website (CDOC, 2023) indicates that no mines are located within the Project area. Several gravel pits are mapped west of the Project site and two former borrow pits are mapped southeast of the Project site on USGS topographic maps (USGS, 1986 and 1987) in areas mapped as alluvium; however, these pits likely are no longer active as they are not mapped on the Mines Online website nor is there any visible evidence of active mining of the sites on aerial photographs (CDOC, 2023; Google Earth, 2023).

The U.S. Bureau of Land Management (BLM) categorizes mineral resources on BLM-administered land as locatable, leasable, or mineral materials. Locatable minerals include metallic minerals such as gold, silver, copper, lead, zinc, and uranium; nonmetallic minerals such as alunite, asbestos, barite, bentonite, gypsum, geodes/gem minerals, mica, and zeolite mica; and uncommon varieties of stone (BLM, 2015). Leasable minerals include fluid minerals such as oil, gas, coalbed methane, carbon dioxide, and geothermal resources, as well as solid minerals such as coal, sodium, and potash. Mineral materials include construction materials such as sand, gravel, cinders, decorative rock, and building stone. There are no BLM mapped locatable, leasable, or mineral material areas in the Project area (BLM, 2015). According to the BLM Mineral and Land Records System (MLRS) and the BLM Land and Records System (LR2000), there are no active mining claims, mineral use authorizations, or mineral leases within the Project site or surrounding area (BLM, 2023a and 2023b).

The presence of alluvial materials at and near the Project site means that the property could potentially be accessed and developed as a source of sand and gravel materials, collectively referred to as aggregate resources.

3.8.2. Regulatory Framework

3.8.2.1. Federal Laws, Regulations, and Policies

International Building Code (IBC). Published by the International Code Council (ICC), 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, equipment, 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 ICC 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 U.S. 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 (UBC) as the basis for the California Building Code (CBC).

Clean Water Act. The Clean Water Act (CWA) (33 U.S. Code § 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 waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain non-point-source discharges to surface water. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source discharges of pollutants into waters of the U.S. Discharges or construction activities that disturb 1 or more acres are regulated under the NPDES stormwater program and are required to obtain coverage under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements, such as the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which would further specify best management practices (BMPs) and other measures designed to avoid or eliminate pollution discharges in waters of the U.S. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards. Although the Project would not be required to obtain a NPDES permit as there are no waters of the U.S. on or near the Project site, the Applicant has committed to preparing at SWPPP or SWPPP-equivalent document for the Project.

Institute of Electrical and Electronics Engineers. The Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations" was developed by the Substations Committee of the IEEE Power Engineering Society and approved by the American National Standards Institute and the IEEE SA Standards Board. This document provides seismic design recommendations for substations and equipment consisting of seismic criteria, qualification methods and levels, structural capacities, performance requirements for equipment operation, installation methods, and documentation. This recommended practice emphasizes the qualification of electrical equipment. IEEE 693 is intended to establish standard methods of providing and validating the seismic withstand capability of electrical substation equipment. It provides detailed test and analysis methods for each type of major equipment or component found in electrical substations. This recommended practice is intended to assist the substation user or operator in providing substation equipment that will have a high probability of withstanding seismic events to predefined ground acceleration levels. It establishes standard methods of verifying seismic withstand capability, which gives the substation designer the ability to select equipment from various manufacturers, knowing that the seismic withstand rating of each manufacturer's equipment is an equivalent measure. Although most damaging seismic activity occurs in limited areas, many additional areas could experience an earthquake with forces capable of causing great damage. This recommended practice should be used in all areas that may experience earthquakes.

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.

3.8.2.2. State Laws, Regulations, and Policies

California Building Code (CBC). The CBC is promulgated under the California Code of Regulations, Title 24, Parts 1 through 12 (also known as the California Building Standards Code) and is administered by the California Building Standards Commission. The Project is subject to the applicable sections of the CBC. The Riverside County Building Department is responsible for implementing the CBC for the Project. The Project would comply with applicable seismic design and construction criteria of the most recent CBC or federal standards.

The earthquake design requirements consider the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures.

California Fire Code (CFC). Chapter 12, Section 1206 of the 2019 CFC provides provisions related to the installation, operation, and maintenance of Electrical Energy Storage Systems. Subsection 1206.2.4 – Seismic and Structural Design states that "Stationary storage battery systems shall comply with the seismic design requirements in Chapter 16 of the California Building Code and shall not exceed the floor-loading limitation of the building."

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act of 1972, Public Resources Code Sections 2621–2630 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. While this Act does not specifically regulate components not intended for human occupancy; it does help define areas where fault rupture, and thus related damage, is most likely to occur. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations to determine whether building setbacks should be established. Cities and counties affected by the zones must regulate certain development "projects" within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

Seismic Hazards Mapping Act. The Seismic Hazards Mapping Act (the Act) of 1990 (Pub. Resources Code, Chapter 7.8, Division 2, Sections 2690–2699.) is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. The Act directs the California Department of Conservation, Division of Mines and Geology [now the California Geological Survey (CGS)] to delineate Seismic Hazard Zones or Zones of Required Investigation. Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements. A geotechnical investigation of the site must be conducted, and appropriate mitigation measures incorporated into the project design before development permits may be granted. Cities, counties, and State agencies are directed to use

seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones. However, to date, seismic hazard mapping has not been completed by the State Geologist for the Project area.

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 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.

3.8.2.3. Local Laws, Regulations, and Policies

Riverside County Code of Ordinances. Title 15 of the Riverside County Code of Ordinances regulates buildings and construction by adopting by reference the CBC, in addition to County-specific amendments which are equal to or more stringent than the provisions of the CBC. The County requires project applicants to obtain a grading permit from the building official prior to conducting grading or clearing of any kind. County Ordinance No.457.98 requires a grading permit for any exploratory excavations consisting of 1,000 cubic yards or greater in any one location of one acre or more. This applies to all trenching, borings, and any access road clearing/construction that may be necessary.

Riverside County Department of Environmental Health. The Environmental Health Department oversee Onsite Wastewater Treatment Systems (OWTS) permits, projects, and reviews and approves the 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 (OWTS 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:

- A percolation report, including 3 sets of detailed plans, signed by a Professional of Record registered with the Department (individuals or companies listed here are permitted to perform percolation testing in unincorporated Riverside County contracted cities).
- 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 Riverside County Environmental Health Permit for construction, reconstruction, or destruction of the well is required throughout the county.

Riverside County General Plan. The Multipurpose Open Space Element (MOSE) and the Safety Element of the 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. The following policies included in the MOSE are relevant

to the proposed Project with respect to conservation and protection of mineral resources (Riverside County, 2015).

- **Policy OS 14.2**. Restrict incompatible land uses within the impact area of existing or potential surface mining areas.
- **Policy OS 14.4.** The County Geologist shall impose conditions as necessary on proposed mining operations projects to minimize or eliminate the potential adverse impact of mining operations on surrounding properties, and environmental resources.

The intent of the Safety Element is to provide policies to reduce death, injuries, property damage, and economic and social impact from seismic and geologic, flood and inundation, fire, hazardous waste, and climate change-related hazards and provide policies for disaster preparedness, response, and recovery. The following policies included in the Safety Element are relevant to the proposed Project with respect to seismic and geologic hazards (Riverside County, 2021a).

- **Policy S 2.2.** Request geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landslides, or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory structures/buildings, as determined by County officials. Any studies or surveys should be prepared/completed by a state licensed professional. (AI 81)
- **Policy S 2.3.** Require that a state-licensed professional investigate the potential for liquefaction in areas designated as underlain by "Susceptible Sediments" and "Shallow Groundwater" for all proposed critical facilities, except for accessory buildings. Any studies must be prepared/completed by a state-licensed professional.
- **Policy S 2.6**. Request structures in liquefaction and slope instability hazard zones to mitigate the potential of seismically-induced differential settlement through appropriate techniques as determined by geotechnical studies, including a 100-percent maximum variation of fill depths as warranted.
- **Policy 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.
- **Policy 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.
- **Policy S 2.15.** Request geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, prior to the issuance of development permits. Within the documented subsidence zones of the Coachella, San Jacinto, and Elsinore Valleys, the studies should address the potential for reactivation of these zones, consider the potential impact on the project, and provide adequate and acceptable mitigation measures.
- **Policy 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.
- **Policy S 2.20**. Request buildings to be designed to resist wind loads as appropriate for their form and location.

Desert Center Area Plan: The Project site is located within the area covered by the Desert Center Area Plan (DCAP). The DCAP contains policies that guide the physical development and land uses in this oasis in the unincorporated portion of eastern Riverside County and addresses critical issues facing Desert

Center. Policies are included that address land use, agricultural preservation, light pollution, transportation, multipurpose open space and wildlife habitat and local wildland fire, seismic, and geologic slope hazards (Riverside County, 2021b). The DCAP does not include any policies specific to mineral resources. The DCAP includes the following policies specific to geologic and seismic hazards.

- **DCAP 11.1.** Protect life and property from seismic-related incidents through adherence to the policies in the Seismic Hazards and Geologic Hazards section of the General Plan Safety Element.
- **DCAP 12.1.** Protect life and property, and maintain the character of Desert Center, through adherence to the Hillside Development and Slope section of the General Plan Land Use Element, the Rural Mountainous and Open Space land use designations within the General Plan Land Use Element, and the Slope and Soil Instability Hazards section of the General Plan Safety Element.

The proposed Project is consistent with these County policies and would comply with requirements for technical studies identified in the policies.

3.8.3. Methodology for Analysis

Evaluation of potential geology-related impacts is based on data and reports from the 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 required geotechnical investigation in all final engineering plans and designs. It is assumed that geotechnical considerations for future structures are designed in accordance with applicable requirements of the CBC and the County of Riverside Municipal Code and any applicable building and seismic codes in effect at the time the grading plans are approved. It is also assumed that the Applicant will include a geotechnical engineering review of the Project engineering plans prior to construction. This EIR assesses 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 area.

3.8.4. CEQA Significance Criteria

The criteria used to determine the significance of potential geology, soils, and mineral resources impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to geology, soils, and mineral resources if the Project would:

- *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:*
    - *Strong seismic ground shaking (Impact GEO-1);*
    - *Seismic-related ground failure, including liquefaction (Impact GEO-2);*
- *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);*
- *Be located on expansive soil, as defined in Table 18.1-B of the Uniform Building Code (1994) [Section 1802.3.2 of the California Building Code (2007)], creating substantial direct or indirect risks to life and property (Impact GEO-5);*

- *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-6);*
- *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (Impact MR-1).*

The County of Riverside's Environmental Assessment Form includes additional significance criteria, which were also used in the analysis. Most of the County of Riverside criteria for the issue area of Geology, Soils, and Mineral Resources are identical to the existing CEQA Appendix G criteria for those issue areas, except for several criteria related to topography, unstable soils, sewage disposal systems, and wind erosion that differ in wording, include additional hazards, or are completely new and different criteria. The County criteria that differ from the CEQA criteria would result in a significant impact if the Project would:

- *Be impacted by or result in an increase in wind erosion and blowsand, either on or off site (see 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, collapse, or rockfall hazards (see 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 (see Impact GEO-4).*

The following State CEQA Appendix G significance criteria were found to have no impact and are not analyzed or discussed further beyond these summaries:

- *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.*

  No known active faults or Alquist-Priolo Earthquake Fault Zones or County of Riverside Fault Study Zones cross or are in the immediate vicinity of the Project. Therefore, there would be no impact related to fault rupture.

    - *Landslides*

  The Project site is relatively flat to gently sloping with no potential for landslides or seismically induced landslides. Therefore, there would be no potential for loss, injury, or damage due to landslides or seismically induced landslides.

- *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 in the Project area delineated in the County of Riverside General Plan (Riverside County, 2015) or the Desert Center Area Plan (Riverside County, 2021b).

The following criteria from the County of Riverside's Environmental Assessment Form not already included in CEQA Appendix G and discussed above were found to have no impact and are not analyzed or discussed further beyond these summaries:

- *Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?*

  The Project site is not located near any large bodies of water and would not be subject to seiche. There are no volcanos in Riverside County and thus the Project would not be subject to volcanic hazards. The

Project site is located on and in a relatively flat area and is not near any significant slopes, the soils are primarily sandy to loamy, and thus the Project would not be subject to mudflows.

- *Change topography or ground surface relief features?*

  The proposed 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, pre-fabrication areas, and internal and external roads. Inverter station locations would require only light grubbing. The solar array areas would not be graded, but instead would be mowed and rolled to reduce vegetation height.

- *Create cut or fill slopes greater than 2:1 or higher than 10 feet?*

  No mass grading or cut and fill slopes would occur as part of the Project.

- *Result in grading that affects or negates subsurface sewage disposal systems?*

  No mass grading or cut and fill slopes would occur as part of the Project and therefore there would be no impact related to grading affecting or negating existing subsurface sewage disposal systems.

- *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 site or along the gen-tie line.

3.8.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to geology, soils, and mineral resources. Public concerns expressed during the scoping process involved concerns regarding impacts of ground disturbance and grading changing drainages and washes, erosion due to the removal of stabilized soils and soil crusts, concerns regarding the ability of the soil to support revegetation after the Project's life due to chemical vegetation treatments resulting in sterilization of the soil, and adverse effects on carbon sequestration in desert vegetation and desert soils due to Project grading and soil disturbance.

Project decommissioning impacts would be the same as those described under Project construction.

Impact GEO-1. The Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving strong seismic ground shaking.

LESS THAN SIGNIFICANT. Although no known active or potentially active faults underlie the Project area, seismically induced ground shaking due to earthquakes along the active faults in the region could occur. Ground shaking at the site could range from moderate to strong (Terracon, 2018) and could result in damage to Project structures, including the PV solar panels, inverters/transformers, interior collection lines, BESS, on-site substations, O&M building, and the gen-tie line, which could result in adverse effects if not designed and engineered appropriately.

Potential impacts on the solar facilities and associated structures from ground shaking would be reduced through compliance with applicable regulations and standards, and established engineering practices. Seismic design of the substation would be per the current IEEE 693 "Recommended Practices for Seismic Design of Substations." The regulatory requirements put in place prior to final Project design and construction would minimize any potential impacts related to secondary seismic effects during operation and maintenance activities. A geotechnical investigation and report would be required and would include recommendations regarding geotechnical and engineering design. Structures would be designed in

accordance with the County of Riverside Building Code and the most recent CBC and would be consistent with the recommendations outlined in the geotechnical report to be prepared for the proposed Project. Compliance with existing regulatory requirements and implementation of geotechnical design recommendations in the Project's final engineering design would reduce impacts of seismically induced ground shaking to a less than significant level.

Mitigation Measures for Impact GEO-1

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

Impact GEO-2. The Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.

LESS THAN SIGNIFICANT. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Liquefaction usually occurs in areas with young, saturated unconsolidated sediments with groundwater levels of 50 feet or less. The Project site is located in seismically active Southern California and may be subject to moderate to strong ground shaking. Although the County of Riverside has mapped the Project area as having moderate susceptibility to liquefaction, groundwater levels in the Project area are expected to be greater than 70 feet below ground surface resulting in low potential for liquefaction (Terracon, 2018). Additionally, the solar facilities, gen-tie line, and associated structures would be designed in compliance with applicable regulations and standards, geotechnical recommendations, and established engineering procedures. The impact of seismic-related ground failure, including liquefaction, that would result in substantial adverse effects would be less than significant.

Mitigation Measures for Impact GEO-2

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

Impact GEO-3. Result in substantial soil erosion or the loss of topsoil.

LESS THAN SIGNIFICANT WITH MITIGATION. Since most of the Project site has nearly level to gently sloping topography, no mass grading would be required; however, some areas of the solar site would be impacted by some form of ground disturbance, including mowing, grubbing, minor grading, compaction, and excavation. Some of the areas where facilities and arrays would be located would require light grubbing for leveling and trenching.

Construction would require ground disturbance for construction of the solar arrays, substation, O&M building, septic system, BESS foundations, access roads, gen-tie line towers, and other features. These activities would expose soil and increase the potential for wind and water erosion and also could disturb desert pavement, resulting in the ecological loss of this soil characteristic. Ground disturbance for Project construction could disturb approximately 44 acres of desert pavement on the Project site (or 67% of the total 66acres of desert pavement mapped on the Project site) that primarily underlies solar arrays. The remaining mapped desert pavement in the Project site is within or near areas of dry desert wash woodland

avoidance and would not be disturbed by Project construction. Areas of desert pavement have been previously mapped with the Oberon Project gen-tie ROW where the proposed Easley gen-tie will be consolidated (approximately 8 acres); however, disturbance for the gen-tie towers would be limited to the tower site and these areas will have likely been previously disturbed by Oberon Project construction (IP Oberon LLC, 2021). Although, the areas of mapped desert pavement that underlie the solar arrays would be primarily mowed and grubbed, it is likely that the surface of these areas of desert pavement would be disturbed to some degree during construction activities for the components that overlie the mapped desert pavement. Undisturbed desert pavements have been found to be the lowest emitters of dust in a study of Mojave Desert soil surfaces but when the underlying soils particles are exposed due to mechanical disturbance, the fine soils below desert pavements can become the highest emitters of dust in desert landscapes (Potter, 2016). Disturbed soils and desert pavement can cause or accelerate erosion, the generation of fugitive dust, and increase sediment in stormwater runoff to ephemeral streams and playa lakes, causing increased turbidity and sedimentation.

The increase in erosion due to Project construction would result in a significant impact without mitigation. Mitigation Measure AQ-1 (Fugitive Dust Control Plan) would require a fugitive dust abatement plan that would mitigate the dust emissions during construction by implementing a suite of effective dust control practices, such as using soil stabilizers or watering exposed areas. The Applicant has prepared a Dust Control Plan that includes identification of sources of fugitive dust that are anticipated to occur during construction, identifies Best Available Control Measures (BACMs) implemented during construction to reduce fugitive dust emissions, and identifies contingency control measures implemented if the BACMs are not adequately controlling fugitive dust (see IP Easley, 2023, Appendix U). Mitigation Measure HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) would ensure proper protection of water quality and soil resources, address exposed soil treatments in the solar fields for both road and non-road surfaces, and identify all monitoring and maintenance activities. Mitigation Measure HWQ-5 (Project Drainage Plan) would require hydrologic assessment of flood discharges and would show how they would be conveyed through or around the site and ensure that erosion does not leave the site and impact adjacent landowners or nearby water features such as ephemeral streams and playas. Mitigation Measure BIO-1 (Biological Monitoring) requires a biological monitoring team oversee activities that impact vegetation and ground disturbing activities. Mitigation Measure BIO-3 (Minimization of Vegetation and Habitat Impacts) would require minimization of soil and vegetation disturbance and impacts to soil and root systems, including management of vegetation height and density. Additionally, MM BIO-5 (Vegetation Resources Management Plan) would require revegetation of disturbed areas which would reduce the potential for soil erosion in areas of disturbed soils, including areas of disturbed desert pavement, during Project operation. With implementation of the mitigation measures, impacts related to soil erosion would be less than significant. In addition, the Applicant has committed to preparing a SWPPP (or equivalent document) that would also include BMPs that would reduce potential erosion.

Soils in desert environments and vegetation are involved in carbon sequestration, the long-term storage of carbon dioxide ($C0_2$) removed from the atmosphere due to biological activities of plants that ultimately sequester carbon within the soil. The $C0_2$ released into the soil by the plants may combine with calcium to form calcium carbonate (or caliche) in the soil (Allen and McHughen, 2011). Disturbance of soils and removal of vegetation during Project construction could result in the release of CO_2 into the atmosphere due to damage to carbon sequestrating materials. However, the Project does not include any mass grading; only mowing, grubbing, limited grading, and compaction would occur for small areas of the site for the substation, storage containers, BESS, O&M facility, laydown yards, pre-fabrication areas, and internal and external road locations, and Project construction would not remove large swaths of vegetation. Most areas of the Project site would only require mowing and rolling of woody vegetation to a height of 12 inches and woody vegetation in areas that would not impact Project operation would only be partially cut during construction to allow for regrowth. Most areas of important hydrologic functions and

areas of dry desert wash woodland would be avoided by Project design. Implementation of Mitigation Measure BIO-3 would require minimization of soil and vegetation disturbance which would further reduce the potential for disturbance of carbon sequestering soils during Project construction. Therefore, soils sequestering carbon would not be substantially disturbed and would thus not release large qualities of CO_2 to the environment. Additionally, implementation of MM BIO-5 (Vegetation Resources Management Plan) would require revegetation of disturbed areas which would reduce the potential for carbon loss to the atmosphere during Project operation. Due to Project design and implementation of the mitigation measure, impacts related to damage to carbon sequestrating materials and release of CO_2 into the atmosphere would be less than significant.

Operation and maintenance activities would include daily operations and routine maintenance activities, such as PV panel washing, up to four times per year, to optimize output. Cleaning operations would not alter the drainage patterns on site and would not lead to a substantial increase in erosion or loss of topsoil. No heavy equipment use is anticipated during normal operation activities. Roads would be reconditioned approximately once per year to repair erosion or destabilization. Operation and maintenance vehicles could include trucks (pickup and flatbed) and loaders for routine and unscheduled maintenance and water trucks for solar panel washing. During O&M activities, vehicles would be limited to use existing roads and travel paths roads and would not result in additional ground disturbance. Mitigation Measure AQ-1 (Fugitive Dust Control Plan) restricts vehicular access during O&M to established unpaved travel paths and ensure the paths remain stabilized and Mitigation Measure HWQ-5 (Project Drainage Plan) requires a Project Drainage Plan that shows how water would traverse the Project without altering drainage patterns and leading to erosion or loss of topsoil. With implementation of the mitigation measures, impacts related to soil erosion during Project operation and maintenance would be less than significant.

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.

The Project does not include any sand transport or migration zones so would not result in a loss of sand transport from development of a solar project. The minor washes that pass through the Project site are located more than a mile southwest of the SMZ and are not mapped as eolian sand sources; however, fluvial sand transport across the Project site likely carries sand downslope toward Big Wash and Pinto Wash, which are both mapped as eolian sand sources (Kenney, 2017). Construction of a solar project on this site may result in a slight reduction of the sand source and sand transport; however, large portions of the Project area along the washes would not be developed to avoid direct impacts to desert dry wash woodland and the Project would be designed to allow water to flow through the Project site. Therefore, the Project would continue to allow sand and stabilizing moisture to reach their destination. Impacts would be less than significant.

Mitigation Measures for Impact GEO-3

MM AQ-1 **Fugitive Dust Control Plan.** See full text in Section 3.4 (Air Quality).

MM BIO-1 **Biological Monitoring.** See full text in Section 3.5 (Biological Resources).

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan**. See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan [DESCP].** See full text in Section 3.11 (Hydrology and Water Quality).

MM HWQ-5 Project Drainage Plan. See full text in Section 3.11 (Hydrology and Water Quality).

Significance After Mitigation

The impact would be less than significant.

Impact GEO-4. The Project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

LESS THAN SIGNIFICANT. The Project site is in an area that has no landslide, lateral spreading, or rockfall hazard due to the flat to gentle slope and a low liquefaction potential as discussed above. The site is in an area mapped as susceptible to subsidence by the County (Riverside County, 2019). Regional ground subsidence is typically caused by petroleum or groundwater withdrawal, and documented historic subsidence has occurred in Riverside County in the areas of Temecula, Murrieta, San Jacinto Valley, and Coachella Valley due to increased groundwater pumping for agricultural and increased urbanization (Riverside County, 2016). However, there are no areas of documented current or historic subsidence in or near to the Project area (Riverside County, 2019; USGS, 2023b). During the 1980s and 1990s when regional groundwater extraction was at its historic maximum in the area, no localized or regional subsidence was documented. No petroleum or natural gas withdrawals are taking place in or near the Project area. Therefore, the potential for local or regional ground subsidence resulting from petroleum, natural gas, or groundwater extraction is considered to be very low and not significant. Given the geologic setting of the region, the Project site is unlikely to become unstable as a result subsidence caused by the Project and result in collapse. The impact would be less than significant.

Overall, the Project area has a low risk of becoming unstable and resulting in geologic impacts. The solar facilities and associated structures would be designed in compliance with all applicable federal, state, and local regulations and standards, and established engineering procedures. A geotechnical investigation and report would be required and would include recommendations regarding geotechnical and engineering design. Compliance with existing regulatory requirements and implementation of the geotechnical recommendations of the required geotechnical investigation and report in Project design would reduce impacts related to unstable geologic units or soil to less than significant.

Mitigation Measures for Impact GEO-4

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

Impact GEO-5. The Project would be located on expansive soil creating substantial direct or indirect risks to life and property.

LESS THAN SIGNIFICANT. Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from several factors, including rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Soils with moderate to high shrink-swell potential would be classified as expansive soils. The soils in the Project area contain high percentages of sand and have a low potential to be expansive. Therefore, the potential for expansive soils to create direct or indirect risks to life or property are less than significant.

Mitigation Measures for Impact GEO-5

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

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.

LESS THAN SIGNIFICANT. Construction and decommissioning would require several hundred temporary employees. During construction, restroom facilities would be provided by portable units to be serviced by licensed providers and no permanent wastewater disposal system would be needed.

During operations, restroom facilities would be located adjacent to the O&M building for on-site personnel. A self-contained septic system or a septic system and leach field would be used. The septic system, and leach field if required, would be in the vicinity of the O&M building to serve the sanitary wastewater treatment needs. Soils in the Project area are somewhat excessively drained and contain high percentages of sand. Percolation testing and design of the septic system would be conducted to meet applicable County septic system requirements. The impact would be less than significant.

Mitigation Measures for Impact GEO-6

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

Impact MR-1. The Project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

LESS THAN SIGNIFICANT. No known mineral sites or mines are located on the Project site, and it is not under a claim, lease, or permit for the production of locatable, leasable, or saleable mineral or mineral materials. The site is located within MRZ 4, where there is not enough information available to determine the presence or absence of mineral deposits. As such, the Project would not result in the loss of availability of a known mineral resource of value to the region or residents of the state.

Construction and operation of the proposed Project would restrict mineral exploration on this land for the life of the Project, but it would not change the mineral content of the area. The Project site is underlain by alluvial materials that may contain aggregate resources; however, use of the site as a solar PV energy facility would not appreciably reduce or restrict the availability of aggregate resources from outside the Project site. Any potential on-site aggregate resources would become available again following decommissioning of the Project. The use of the Project site would result in a less-than-significant impact on known mineral resources.

Mitigation Measures for Impact MR-1

No mitigation would be required.

Significance After Mitigation

The impact would be less than significant.

3.8.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in the development of the solar facility and gen-tie line nor require new construction and/or operational activities, as described in Section 2.11.1. As such, the environmental impacts associated with the proposed Project, as described in Section 3.8.5, would not occur. The No Project Alternative would not result in any direct or indirect impacts to or related to geologic and seismic hazards, soils, or mineral resources. Therefore, the No Project Alternative would not have impacts related to geology, soils, or mineral resources.

However, in the absence of the proposed Project or an alternative to the Project, the purposes and goals for renewable energy generation that would be met by the proposed Project (or an alternative) would not be achieved. As a result, it is possible that another, similar energy generation project would be constructed in the future to meet the renewable energy generation goals in the Desert Center area. Such a project would likely introduce similar impacts related to geologic and seismic hazards, soils, and mineral resources that would be introduced through the proposed Project or an alternative.

3.8.7. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would remove approximately 30 acres of solar panels closest to the Lake Tamarisk Desert Resort (LTDR) and relocate the onsite substation and BESS to a location 0.7 miles further north of the LTDR. This relocation of the onsite substation would result in the 500 kV gen-tie line for this alternative being approximately 0.8 miles longer than the proposed 500 kV gen-tie line. Despite the increased length of the gen-tie line, this alternative would lead to an overall decrease in ground disturbance due to the removal of solar panels. Operation of the project under Alternative 2 would be the same as for the proposed Project. Impacts related to slope stability, seismic hazards, mineral resources, topography, subsidence, and sand migration would be the same as for the proposed Project. Impacts related to disturbance of desert pavement would be approximately 9 fewer acres under Alternative 2 due to the decrease in ground disturbance northeast of the Lake Tamarisk Desert Resort. Impacts related to erosion would also be slightly decreased. Implementation of MM AQ-1, MM BIO-1, MM BIO-3, MM BIO-5, MM HWQ-1, and MM HWQ-5 would reduce any impacts to less than significant.

3.8.8. Cumulative Impacts

Geographic Scope

The geographic extent for the consideration of cumulative effects to geologic, soils, and mineral resources is the Project footprint and a 1,000-foot buffer around the Project. The buffer size corresponds with impacts resulting from geologic hazards being localized in nature, despite geologic hazards, such as seismic events, being felt for great distances. Impacts resulting from erosion are also localized in nature and unlikely to extend much beyond the actual Project's boundaries and adjacent areas of other projects unless an extreme event results in substantial downstream/downwind erosion for soil.

Tables 3.1-1 and 3.1-2 list existing and reasonably foreseeable projects in the region. The existing Desert Sunlight and Desert Harvest Solar Projects are north of the proposed Project and the Athos Renewable Energy Project is located to the east. Under-construction solar projects near the proposed Project include the Oberon Renewable Energy Project to the southeast and the Arica and Victory Pass Solar Projects to the southeast. The proposed Sapphire Solar Project is adjacent to the northern area of the Easley Project and the Skybridge Project is located farther north by the Desert Sunlight Solar Farm. The Athos Renewable Energy Project, the Oberon Renewable Energy Project, the Sapphire Solar Project, and the Desert Harvest Solar Project would be adjacent to the Project site, with several gen-tie lines partially co-located in the Oberon ROW.

These projects could therefore combine with the proposed Project and result in a cumulatively considerable geologic or erosion impacts.

Cumulative Impact Analysis

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. 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. As such, 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 and operation could combine with the effects of construction and operation of other projects if they were adjacent to each other; for example, if they contributed sediments to the same waterways. The proposed Project is adjacent to two large solar projects that would require substantial ground disturbance, the Oberon Renewable Energy Project (operational) and the Sapphire Solar Project (proposed). While each project's soil disturbance could result in off-site water and wind erosion, the Oberon and Sapphire Projects have 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, and SWPPP, and plans to stabilize and/or revegetate disturbed areas that that would reduce wind and water erosion and minimize its potential to leave its project site. Additionally, construction of the Oberon Project is expected to be complete prior to the start of construction of the Easley Project. Additionally, the Easley 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 (MM AQ-1, MM BIO-1, MM BIO-3, MM BIO-5, MM HWQ-1, and MM HWQ-5, respectively) 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, it would not combine with the erosion from nearby projects and would not combine to create a cumulatively significant impact due to erosion. These same plans, regulations, and measures would ensure that the proposed Project's contribution to erosion would not be cumulatively considerable.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM AQ-1, MM BIO-1, MM BIO-3, MM BIO-5, MM HWQ-1, and MM HWQ-5 would be implemented to address potential geology, soils, and mineral resources impacts for the proposed Project and alternatives. No additional mitigation is required.

Significance After Mitigation

The impact would be less than significant.

3.8.9. Mitigation Measures

MM AQ-1 **Fugitive Dust Control Plan.** See full text in Section 3.4 (Air Quality).

MM BIO-1 **Biological Monitoring.** See full text in Section 3.5 (Biological Resources).

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan**. See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan [DESCP].** See full text in Section 3.11 (Hydrology and Water Quality).

MM HWQ-5 **Project Drainage Plan.** See full text in Section 3.11 (Hydrology and Water Quality).

3.9. Greenhouse Gas Emissions

This section describes the environmental setting and regulatory framework with respect to greenhouse gas (GHG) emissions for the proposed Project, including applicable plans, policies, and regulations. The analysis describes the Project's potential GHG emissions during construction and operation, as well as the Project's consistency with state or local plans adopted for the purpose of reducing GHG emissions. This section includes an estimate of the electricity produced from renewable energy resources that would displace the production of electricity from conventional (fossil-fueled) resources.

3.9.1. Environmental Setting

The global climate depends on the presence of naturally occurring GHG to provide what is commonly known as the "greenhouse effect" that allows heat radiated from the Earth's surface to warm the atmosphere. The greenhouse effect is driven mainly by water vapor, aerosols, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and other constituents. Globally, the presence of GHG affects temperatures, precipitation, sea levels, ocean currents, wind patterns, and storm activity.

Human activity directly contributes to emissions of six primary anthropogenic GHGs: CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The standard definition of anthropogenic GHG includes these six substances under the 1997 Kyoto Protocol (UNFCCC, 1998). The most important and widely occurring anthropogenic GHG is CO_2, primarily from the use of fossil fuels as a source of energy.

Effects of GHG Emissions. Changing temperatures, precipitation, sea levels, ocean currents, wind patterns, and storm activity provide indicators and evidence of the effects of climate change. From 1950 onward, relatively comprehensive data sets of observations are available. Research by California's OEHHA documents climate change indicators by categorizing the effects as: changes in California's climate; impacts to physical systems including oceans, lakes, rivers, and snowpack; and impacts to biological systems including humans, vegetation, and wildlife. The primary observed changes in California's climate include increased annual average air temperatures, more-frequent extremely hot days and nights, and increased severity of drought. Impacts to physical systems affected by warming temperatures and changing precipitation patterns show decreasing snowmelt runoff, shrinking glaciers, and rising sea levels. Impacts to terrestrial, marine, and freshwater biological systems, with resulting changes in habitat, agriculture, and food supply are occurring in conjunction with the potential to impact human well-being (OEHHA, 2018).

California GHG Emissions Trends. California first formalized a strategy to achieve GHG reductions in 2008, when California produced approximately 479 million metric tons of CO_2 equivalent (MMTCO2e) according to the official Air Resources Board inventory (CARB, 2022a). The State's economy-wide emissions have been declining in recent years. California's sources of GHG emitted approximately 369 MMTCO2e in 2020 (CARB, 2022a), which is less than ten percent of the U.S. total GHG emissions. The electric power sector emissions were 59.5 MMTCO2e in 2020 from a combination of in-state generation and electricity imported to California (CARB, 2022a).

3.9.2. Regulatory Framework

3.9.2.1. Federal Laws, Regulations, and Policies

U.S. EPA GHG Mandatory Reporting Program (40 CFR Part 98). This rule requires mandatory reporting of GHG emissions for industrial facilities and power plants that emit more than 25,000 MTCO2e per year. The reporting program (40 CFR Part 98.300, Subpart DD) applies to electric and transmission distribution

equipment that use high GWP gases, including SF_6, for insulation. Currently, there are no federal regulations limiting GHG emissions from the types of sources that would occur with the proposed Project. The circuit breakers and gas switches related to electric power transmission and distribution may be sources of GHG subject to reporting due to the leakage of SF_6.

3.9.2.2. State Laws, Regulations, and Policies

California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)]. The California Global Warming Solutions Act of 2006 (AB 32) required that California's GHG emissions be reduced to 1990 levels by 2020. The reduction is being accomplished through an enforceable statewide cap on global warming emissions beginning in 2012. AB 32 directs the California Air Resources Board (CARB) to develop regulations and a mandatory reporting system to track and monitor global warming emissions levels (AB 32, Chapter 488, Statutes of 2006). AB 32 requires CARB to update the Scoping Plan at least every 5 years. Accordingly, CARB released a 2022 Scoping Plan Update in November 2022 (CARB, 2022b), which outlines a roadmap to achieve carbon neutrality by 2045.

In passing AB 32, the California Legislature found that:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*

Other major Executive Orders, legislation, and regulations adopted for the purpose of reducing GHG emissions support the implementation of AB 32 and California's climate goals, as described below.

California Governor's Executive Orders on GHG Emissions. In September 2018, Executive Order B-55-18 established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. CARB was directed to develop the framework for implementing the goal of carbon neutrality. Executive Order B-30-15 (April 2015) established a California GHG reduction target of 40 percent below 1990 levels by 2030. One purpose of this interim target is to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 (Executive Order S-3-05, June 2005). This executive order also specifically addresses the need for climate adaptation and directs State agencies to update the California Climate Adaptation Strategy to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change. Senate Bill 32 (SB 32) of 2016 codified this GHG emissions target to 40 percent below the 1990 level by 2030.

California Renewables Portfolio Standard (RPS) Program. Electric utilities in California must procure a minimum quantity of the 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:

- 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;
- 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; and
- To double the energy efficiency savings in electricity and natural gas end uses by retail customers by 2030.

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 suppliers of transportation fuels, retail providers of electricity, and operators of electricity generating facilities. The program is triggered when facility emissions exceed 25,000 metric tons of CO_2 equivalent (MTCO2e) 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. No specific reporting requirements apply to electric power generation from solar resources.

Emission Reductions of SF_6 from Gas Insulated Equipment (17 CCR 95350 to 95359). Electric power gas insulated equipment and switchgear used in transmission and distribution systems are subject to this regulation for reducing or phasing-out SF_6 emissions and leaks. The regulation, initially adopted by CARB in 2010 and amended in 2022, requires owners of such gas-insulated equipment or switchgear to phase out use of SF_6, maintain records and inventories of their gas-insulated equipment and capacities, and report CO2e emissions to demonstrate compliance with annual limits set by the rule.

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 Public Resources Code 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 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.

3.9.2.3. Local Laws, Regulations, and Policies

County of Riverside Climate Action Plan (CAP). The County published a Climate Action Plan Update, in November 2019, to present the current GHG inventory, forecasts and targets for the County of Riverside. 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 MMTCO2e for activities within the

unincorporated communities served by the County of Riverside, as well as County government operations (Riverside County, 2015 and 2019).

The 2019 Climate Action Plan Update identifies various policies to promote renewable energy as a means of achieving GHG emissions reductions. The County General Plan includes one policy directly relevant to the proposed Project:

- **Policy AQ 20.19**. Facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations (AI 147).

The Project, a solar generation and energy storage facility, is consistent with this policy.

3.9.3. Methodology for Analysis

All construction- and operation-related emissions are quantified based on the best available forecast of Project activities. The emissions estimates are derived from use of the California Emissions Estimator Model (CalEEMod), version 2020.4.0, software developed by California Air Pollution Control Officers Association (CAPCOA).[9] The Easley Renewable Energy Project EIR Appendix J, Greenhouse Gas Emissions Report, September 2023, provides details on the construction and operational assumptions for the proposed Project and resulting quantities of GHG emissions used in this analysis.

This analysis includes an estimate of GHG emissions avoided by the ability of the proposed solar facility to produce electricity from of renewable resources. To determine the potential GHG avoided, the overall annual energy production volume is estimated, without considering energy storage. The amount of energy produced for the grid is assumed to displace the use of California's flexible natural gas-fired resources or electricity otherwise imported to California. The calculation considers that solar pro-duction without storage occurs during mid-day hours when California's demand for grid power is off-peak; however, the storage component would allow the solar facility to shift delivery to peak demand hours, when higher-emitting fuel-burning resources could be displaced.

The overall quantities of direct and indirect GHG emissions are compared against the CEQA threshold of significance for GHG emissions recommended by the California local air quality management district, in this case the SCAQMD.

3.9.4. CEQA Significance Criteria

The criteria used to determine the significance of potential environmental impacts of GHG emissions are based on Appendix G of the CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to GHG emissions if the Project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The threshold of significance for GHG emissions from industrial facilities in the SCAQMD is 10,000 MTCO2e per year (SCAQMD 2023). Project-related GHG emissions would be considered to have a significant impact on the environment if total Project emissions (direct and indirect effects) would exceed this threshold. Construction-phase GHG emissions arising from short-term activities may be amortized over the longer-

[9] Use of desktop version 2020.4.0 of CalEEMod is allowed based on the project 2022 application filing date; the initial online version of the CalEEMod software was launched in December 2022 (2022.1.1.3).

term life of the Project, defined as 30 years, and added to the operational emissions for comparison with the threshold (SCAQMD 2008).

3.9.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed public concerns related to the topic of global climate change in the desert ecosystem and dry spells. Public concerns address the use of water and temperatures of the region. As part of the effort to address scoping comments and disclose indirect GHG emissions, this analysis includes quantification of GHG emissions attributable to energy consumed for the purposes of delivering the water supply. The "Heat Island Effect" is discussed in Section 3.5 (Biological Resources).

Scoping comments also identify concerns about the production of the solar panels that could be used for the Project, and the potential carbon footprint (for example, emissions created by manufacturing and transporting) of imported or foreign-produced solar panels. Following the changes in the CEQA Guidelines established in response to SB 97, the California Natural Resources Agency indicated that full life-cycle analysis is beyond the scope of a CEQA document for a given project.

Impact GHG-1. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT. The Project would directly and indirectly generate GHG emissions due to construction activities and during operation. Operation of the solar generating station would produce electricity from renewable energy resources that would displace the need to produce electricity from conventional (fossil-fueled) resources. Separate discussions appear for the different effects on GHG emissions: those caused by development activities including construction and operations with maintenance and inspection; the effects of land use conversion; and indirect GHG emissions reductions due to the electricity produced from renewable energy.

Emissions from Development Activities: Construction, Operations, and Decommissioning. Construction, operations, and eventual decommissioning activities would cause GHG emissions resulting 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, and 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 30 to 50 years, per an agency-approved Closure and Decommissioning Plan.

Equipment and vehicle use over the duration of construction would amount to 11,222 MTCO2e of GHG emissions during the construction years. Energy consumed during the extraction and delivery of the construction water supply would add 756 MTCO2e to the one-time construction emissions. The sum of emissions from these one-time construction activities would be 11,978 MTCO2e. (Refer to EIR Appendix J, Easley Renewable Energy Project, Greenhouse Gas Emissions Analysis, September 2023, Attachment A for emissions inventory results, and Attachment B for CalEEMod Output.)

The effects of short-term construction GHG emissions may be averaged over a 30-year life of the Project when comparing to the annual significance threshold, as recommended by SCAQMD (SCAQMD 2008). The overall construction GHG emissions amortized over 30 years would be equivalent to an annualized rate of 399 MTCO2e/year. This would be the sum of 374 MTCO2e/year from equipment, vehicles, and helicopters plus 25 MTCO2e/year for the use of water during construction when considered over 30 years. During the operational life of the Project, direct on-site O&M activities would contribute an additional amount of

559 MTCO2e/year. These annually recurring GHG emissions from development activities are shown in Table 3.9-1.

Table 3.9-1. Easley Project: GHG Emissions

Activity	One-Time During Construction (MTCO2e)	30-year Amortized Emissions (MTCO2e per year)	Easley Project GHG Emissions (MTCO2e per year)
Construction Equipment and Vehicles, Year 1: One-Time and 30-year Amortized	4,072	136	—
Construction Equipment and Vehicles, Year 2: One-Time and 30-year Amortized	7,069	236	—
Construction Helicopter Activity, Year 2: One-Time and 30-year Amortized	81	3	—
Construction Water Use, Year 1-2: One-Time and 30-year Amortized	756	25	—
Total, Construction: One-Time and 30-year Amortized	**11,978**	**399**	**399**
Operation and Maintenance	—	—	559
Effects of Land Use Conversion	—	—	16,098
Emissions Avoided by Producing Electricity	—	—	-333,686
Total GHG Emissions, Construction and Operations			**-316,630**

Source: EIR Appendix J.

Effects of Land Use Conversion. Installation of the Project would result in ground disturbance that would disturb soils and remove some vegetation that naturally provide carbon uptake. Converting a portion of the existing land would eliminate the natural sequestration of carbon because the existing soil and vegetation acts as a sink by removing CO_2 from the atmosphere. Ground disturbance and vegetation removal during construction accordingly adds to the GHG impact because a portion of the soils and vegetation onsite would no longer be present to sequester CO_2. The loss of carbon uptake depends on what fraction of natural vegetation on the site would be cleared for permanent installation of foundations, roads, or other onsite facilities, and on efforts to minimize soil erosion or protect existing ground cover to minimize the loss of carbon uptake. The actual amount of this loss is uncertain because it would depend on the particular characteristics of the site, and the available data on rates of sequestration by vegetation and soils are approximations. The loss of natural carbon uptake would not be expected to exceed 4.31 MTCO2e per year per acre; absent a reliable factor for the site setting, this factor is a proxy based on removing the natural sequestration capability of grassland (published in Appendix A of the CalEEMod User's Guide; CAPCOA 2021). At this rate, the permanent conversion of up to 3,735 acres, due to vegetation removal, compacted soils for access roads, and impervious areas for equipment at the site, would result in 16,098 MTCO2e per year of sequestration capability being lost. This estimate is conservatively high. 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 the natural carbon storage process for effective carbon sequestration.

Emissions Avoided by Producing Electricity. The production of renewable power would displace power produced by carbon-based fuels that would otherwise be used to meet electricity demand. The power displaced is incremental power provided by generators elsewhere on the grid, typically from natural gas power plants.

The Project would produce up to about 840,000 megawatt-hours (MWh) of electricity each year for delivery to California's end-users. Some of the electricity produced would displace fuel-burning by California's flexible natural gas-fired resources or electricity otherwise imported to California. This would avoid GHG that could otherwise be emitted by fuel-burning generators. The rate of GHG emissions displacement would vary with the mix of generators and imported electricity displaced, with the least efficient and highest-emitting generators normally being turned down to accommodate the additional renewable generation; in California, there is a single dominant dispatchable fuel (natural gas) (CEC 2019; CPUC 2022). To estimate the emissions avoided by solar production, this analysis assumes that the BESS component would dispatch its stored energy after the solar output decreases for the day. Because natural gas provides most of the flexible capacity, this analysis uses an avoided emissions displacement factor of approximately 0.373 MT of CO_2 per MWh, which is a conservatively low emission factor for efficient, conventional generation using natural gas, combined cycle generators (CEC 2019). (Refer to EIR Appendix J, Easley Renewable Energy Project, Greenhouse Gas Emissions Analysis, September 2023, Attachment C for details on the avoided GHG emissions results.)

The proposed energy storage component would allow the solar facilities to shift the solar output to the grid-wide system during peak (evening) hours when the solar production has the most benefits (or is most valuable in deferring use of natural gas elsewhere). While the solar PV component of the Project would provide power to the grid during daylight hours, the BESS component allows that power to be stored and discharged during high demand periods. The battery system would be charged fully during the cheapest CAISO generation hours (i.e., during middle of the day when solar generation is highest and power prices are lowest across the grid, commonly referred to as the belly of the duck). Energy from the BESS would then be dispatched during the evening ramp after the sun goes down and power prices peak as natural gas-fired power plants must be dispatched rapidly to meet evening demand. The BESS is expected be both charged and discharged fully each day. Applying the factor of 0.373 MTCO2/MWh for displacement of efficient, conventional generation using natural gas, as published by the California Energy Commission (CEC 2019), operation of the BESS as articulated above would result in the avoidance of 333,686 MTCO2/year for the 650 MW BESS.

The combined direct and indirect effects of the emissions quantified in Table 3.9-1 indicates that a net GHG reduction would occur as a result of implementing the Project, by avoiding around 316,630 MTCO2e annually. This impact would be less than significant, and no mitigation is required.

Mitigation Measures for Impact GHG-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact GHG-2. Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

LESS THAN SIGNIFICANT. 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 solar generating station would be used to serve the needs of California's customers and would facilitate compliance with California's Renewables Portfolio Standard (RPS).

The renewable energy targets in the RPS support California's overall approach to achieving GHG reduction goals. The California Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 32 (SB 32) of 2016

codified the GHG emissions target to 40 percent below the 1990 level by 2030. Subsequently, California's Clean Energy and Pollution Reduction Act of 2015 [Senate Bill 350 (SB 350)], SB 350 set ambitious 2030 targets for energy efficiency and renewable electricity, among other actions aimed at reducing GHG emissions across the energy and transportation sectors. SB 350 also enhances the state's ability to meet its long-term climate goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. The current RPS was signed into law in September 2018 with Senate Bill 100 (SB 100), which established the goals of 50 percent renewable energy resources by 2026 and 60 percent renewable energy resources by 2030. SB 100 also sets a target for California to achieve a GHG-free energy supply by December 31, 2045.

The strategy for achieving the GHG reductions is set forth by the ARB Climate Change Scoping Plan. Overall, the electricity produced by the Project would contribute to continuing GHG reductions in California's power supply. Because the Project would use renewable energy resources to produce electricity, the avoided GHG emissions would be consistent with and would not conflict with the California's GHG emissions reduction targets and the Climate Change Scoping Plan that relies on achieving the RPS targets. Additionally, the Project would be consistent with County of Riverside policy direction on promoting renewable energy, as in the 2019 Climate Action Plan Update, and to facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations (Policy AQ 20.19).

Other activities related to construction, operation, and decommissioning of the Project would either be exempt from or would be required to comply with ARB 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.

As the total GHG emissions generated during construction, operation, and decommissioning of the Project would be considerably less than the GHG emissions avoided, the solar power plant would lead to a net reduction in GHG emissions across the State's electricity system, which would contribute to meeting the State's GHG 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.

Mitigation Measures for Impact GHG-2

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.9.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities (solar panel installation, substation and O&M building, and construction of access roads and gen-tie line). The No Project Alternative would cause no direct or indirect emissions of GHG from development activities. No additional production of renewable power would occur, and there would be no new potential to displace fuel-burning by California's fossil fueled generating resources or electricity otherwise imported to California. Accordingly, the No Project Alternative would also not contribute to meeting California's renewable energy goals. Because no new GHG emissions would occur with the No Project Alternative, this alternative would have no impact related to GHG emissions.

Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project. A different solar energy project would potentially result in similar impacts to GHG emissions as those identified for the proposed Project.

3.9.7. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would not result in any significant changes to the construction or operational activities as they relate to GHG emissions. Alternative 2 would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. With this relatively small reduction in acreage, the overall quantity of GHG emissions caused by construction activities would be slightly reduced, and other effects of the proposed Project on GHG emissions would not be appreciably changed compared to the proposed Project. The impacts of Alternative 2 would be similar to the proposed Project.

3.9.8. Cumulative Impacts

Geographic Scope

This impact assessment describes impact of the proposed Project of contributing towards global climate change through GHG emissions. Because the direct environmental effect of GHG emissions is to influence global climate change, GHG emissions are by their nature inherently a cumulative concern with a cumulatively global scope.

Cumulative Impact Analysis

No single project could, by itself, result in a substantial change in the global climate. As the project-specific analysis for this proposed Project analyses cumulative global impacts, there is no separate cumulative impacts analysis for global climate change.

Furthermore, the evaluation of GHG impacts evaluates the contribution of the proposed Project to inherently address cumulative climate change effects and demonstrates that the proposed Project would result in a long-term net reduction of GHG emissions and would not conflict with GHG reduction goals. The Project-specific incremental contribution to GHG emissions would therefore not be cumulatively considerable.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.9.9. Mitigation Measures

Impacts would be less than significant, and no mitigation would be required.

3.10. Hazards and Hazardous Materials

This section evaluates the impacts from hazards and hazardous materials resulting from implementation of the proposed Easley Renewable Energy Project (Project). The analysis in this section: presents an overview of existing conditions that influence risks associated with hazards and hazardous materials; describes the applicable regulations; identifies the criteria used for determining the significance of environmental impacts; and describes the potential impacts from hazards and hazardous materials of the proposed Project.

Issues raised during scoping related to hazards and hazardous materials include concerns regarding health effects from the increase in wind-blown dust, which carries silica, pollens, and other chemicals/pollutants (herbicides), concerns relating to Valley Fever, health hazards related to electric and magnetic fields (EMF), increased risk of wildfire due to presence of power lines, contamination from chemicals used for vegetation management, concerns regarding hazardous materials releases if/when the solar panels are broken. These issues are discussed in the analysis below.

3.10.1. Environmental Setting

3.10.1.1. 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 primarily on open space desert scrub land in Riverside County, north of Interstate 10 (I-10) and east of Desert Center, California. Vegetation communities at the Project site are generally limited to scattered creosote brush scrub and desert dry wash woodland. Land uses near the Project include agriculture, the small community of Lake Tamarisk, scattered residences, renewable energy, energy transmission, historical military operations, and recreational development and use. The community of Lake Tamarisk, identified as the Lake Tamarisk Desert Resort (LTDR), is located south to southwest of the Project site and is a 55-plus, member-owned community. In addition to community facilities and amenities, the Lake Tamarisk community includes individual homes and RV lots.

The Project is on a mix of private and federal lands. The federal lands are BLM-administered public lands within a Desert Renewable Energy Conservation Plan (DRECP) Development Focus Area (DFA). The surrounding area consists of primarily BLM-administered land with some private land, including the small community of Lake Tamarisk, scattered rural residences, and farms. Several existing, under construction, and proposed solar projects are in the Desert Center vicinity. The existing Desert Sunlight and Desert Harvest solar projects are north of the proposed Project and Athos Renewable Energy Project is located to the east. Solar projects that are under construction nearby include the Oberon Renewable Energy Project to the southeast, and the Arica and Victory Pass Solar Projects and the Palen Solar Project to the southeast. The Sapphire Solar Project, proposed by EDF Renewables, is adjacent to the northern area of the Easley Project. The Project's proposed gen-tie line would be located within an approximate 6.7-mile 500 kV ROW starting at the onsite substation located on private property (APN 808-023-018) and continuing south of the substation into and across the Oberon Renewable Energy Project site on BLM-administered land for the remainder of the route.

3.10.1.2. Hazardous Materials

Hazardous materials used during construction may include petroleum products such as gasoline, diesel fuel, and hydraulic fluid; lubricating oils and solvents; cleansers; explosives; and other substances. Some of these materials would be used at material yards and on the ROW to operate and maintain equipment during construction. During construction, hazardous materials would be stored at designated material yards for storing hazardous materials on private land adjacent to BLM-administered land. Hazardous materials would be stored only in designated areas on impervious surfaces, on plastic groundcovers, or with secondary containment, to prevent spills or leaks from infiltrating the ground. Liquids would be stored in secured areas (fenced or locked building on the solar site). Storage containers would be properly labeled to indicate the contents of the container. Staging yards, refueling areas, and chemical storage areas, if needed, would be located on private land adjacent to BLM-administered land in upland areas that do not slope to sensitive resources. Construction materials would be sorted on site throughout construction and hazardous waste would be transported to an appropriate hazardous waste handling facility. (IP Easley, 2023, Appendix W)

Due to the remote location of the Project site, if onsite fuel tanks are utilized for equipment refueling, they are assumed to be no larger than 1,000 gallons each and they would comply with all applicable regulations. All hazardous chemicals would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages. The fuels stored on site would be within a fenced and secure temporary staging area. As there would be regulated hazardous materials on site, storage procedures would be dictated by the Hazardous Materials Management Plan (HMMP) (IP Easley, 2023, Appendix W) that would be developed prior to construction. Spill prevention measures and secondary containment would be implemented as part of the Project where warranted.

Trucks and construction vehicles would be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and county regulations. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 355 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or legally disposed of as a result of Project construction. Material Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel.

If quantities of hazardous materials exceed regulatory thresholds, the Project would ensure that storage is undertaken in compliance with a Spill Prevention, Control, and Countermeasure (SPCC) Rule and a Hazardous Materials Business Plan (HMBP), which would be developed prior to construction, in compliance with the Unified Program (EPA, 2010; CalEPA, 2023). Regulatory thresholds for a SPCC are onsite tanks with storage capacity of more than 1,320 gallons of petroleum, and for an HMBP are hazardous materials handled and stored on site in quantities of equal to or greater than 500 pounds, 55 gallons, or 200 cubic feet of gas.

Noxious weeds and other nonnative invasive plant species could create a fire hazard if allowed to become established, and invasive weeds could also become problematic from an ecological perspective. Therefore, weed control activities would be implemented within the Project limits and would include both mechanical and targeted herbicide control methods, as necessary. Herbicides may be necessary to control the spread of invasive weeds following construction as part of an integrated pest management strategy. All weed control using herbicides and adjuvants used on the Project site would be conducted with chemicals identified in the approved Integrated Weed Management Plan (IWMP) at rates and in conditions specified in the IWMP (IP Easley, 2023, Appendix N). Pesticides and herbicides are hazardous materials and would be used according to manufacturer labeling. Pesticides and herbicides used on BLM-administered land will be those identified and approved by the BLM in the IWMP. Small quantities of other materials such as pesticides, fertilizers, paints, lubricants and fuels, cleaners and solvents, and

miscellaneous chemicals may be used during Project operation and maintenance activities. The HMMP developed for the Project (IP Easley, 2023, Appendix W)

Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at county landfills. Hazardous waste and electrical waste would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling) by authorized disposal companies as needed. All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

3.10.1.3. Formerly Used Defense Sites (FUDS)

There are three formerly used defense sites located in the vicinity of the Project: Desert Training Center/ California-Arizona Maneuver Area (DTC/C AMA), Desert Center Division Camp (Camp Desert Center), and Desert Center Army Air Field. In 1942, as part of World War II (WWII) military efforts, the DTC/C AMA facility was created for training troops in desert conditions. DTC/C AMA was the largest training ground in military history, at approximately 18,000 square miles, and included 11 divisional camps and stretched from Indio, California, eastward to near Prescott, Arizona, north to Searchlight, Nevada, and south to Yuma, Arizona. Desert training of troops, armored vehicles, artillery, and military planes took place at DTC/C AMA from 1942 to 1944. These maneuvers included weapons training, firing exercises, and laying out and removing landmine fields (Meller, 1946). Three separate maneuver areas were identified within DTC/C AMA, areas A, B, and C; the proposed Project is located in area A, which consisted of the portions of DTC/C AMA west of the Colorado River (BLM, 1985).

Desert Center Division Camp was located primarily north and west of Desert Center, California, northwest of and in the general vicinity of the Project, and consisted of 34,000 acres used for maneuvers, camp sites, an evacuation hospital, and an ammunition depot. No permanent division camp was constructed at this site, only temporary structures used to house the evacuation hospital, an observer detachment, an ordnance maintenance company, a quartermaster truck unit, and Ammunition Depot. No. 1. The maneuver areas were associated with the surrounding DTC/C AMA (USACE, 1996).

The Desert Center Army Airfield, located approximately 1 mile east of the Project, was located within the Desert Center Division Camp and was used to aid in combat training during maneuvers (Military Museum, 2020). The airfield included two 5500-ft runways with associated taxiways and parking aprons, and numerous support buildings. The airfield had two petroleum underground storage tanks (USTs) that were removed in 1998 (USACE, 2021). The airfield is currently owned and operated by the Chuckwalla Valley Raceway.

The former WWII military use of the Project area may have resulted in the presence of military munitions and explosives of concern (MEC), munitions debris (MD), and unexploded ordinance (UXO). The Project operator would prepare an Unexploded Ordnance (UXO) Identification, Training and Reporting Plan to formalize UXO training, investigation, removal, and disposal of military waste debris and ordnance.

3.10.1.4. Valley Fever

Valley Fever (coccidioidomycosis or “cocci”) is an illness caused by the inhalation of soil-dwelling *Coccidioides* fungus spores. The *Coccidioides* fungus lives in the top 2 to 12 inches of soil and dirt in many parts of California; it is most prevalent in the Central Valley and in desert/dry areas (CDPH, 2013). When soil containing this fungus is disturbed by activities such as digging, vehicles, or by the wind, the fungal spores become airborne and can be inhaled. Valley Fever is not transmitted from person to person (CDPH, 2023a).

Valley fever can be serious and even fatal. Many people exposed to the *Coccidioides* fungus spores exhibit no symptoms, while others may have cold or flu-like symptoms that usually go away on their own after

several weeks to months. It is likely that numerous mild cases of Valley Fever go undiagnosed. It usually infects the lungs and can cause flu-like symptoms or pneumonia. Some people may require hospitalization. In rare cases, the infection can spread beyond the lungs to other parts of the body (this is called disseminated Valley fever) (CDPH, 2023b).

Valley Fever is considered endemic in California, with cases in the state increasing from less than 1000 cases in 2000 to more than 9000 cases in 2019 and 7200 cases in the first 9 months of 2020 (CDPH, 2020, 2022a). According to the California Department of Public Health (CDPH), the number of reported incidences of Valley Fever in California in 2019 was the highest since coccidioidomycosis became individually reportable in 1995 (CDPH, 2020). There were 9089 cases reported in 2020, with an incidence rate of 22.9 cases per 100,000 population (CDPH, 2022). Valley Fever is highly endemic in counties where incidence rates are greater than 20 per 100,000 population. The number of incidences has significantly increased in Riverside County from 34 cases with an incidence rate of 1.5 per 100,000 in 2013 to 290 cases and an incidence rate of 11.9 per 100,000 in 2019 (CDPH, 2022). In 2021 and 2022, there were an estimated 471 and 385 reported cases, respectively; this results in incidence rates of approximately 19.2 and 15.7 per 100,000 for 2021 and 2022 (CDPH, 2023c), which are rapidly approaching the rate required for a County to be classified as having endemic Valley Fever.

Several notable incidences of solar farm construction workers contracting Valley Fever have occurred in San Luis Obispo and Monterey Counties. Between October 2011 and April 2014, 44 cases of Valley Fever were identified among the 3,572 employees at 2 solar farm construction sites in San Luis Obispo County (an incidence rate of 1.2 cases per 100 workers) (Wilken et al., 2015). In Monterey County, nine confirmed cases of Valley Fever were identified among 2,410 construction workers who worked on a solar farm project in 2016. This corresponded to an annualized rate of Valley Fever among workers of 1,095 per 100,000 population whereas the 2016 rate for the entire County was 17.5 per 100,000 population in July 2017. At the Monterey solar site, the workers reported frequent high dust levels that were unable to be controlled by water trucks, infrequent use of respirators or dust masks, and inadequate Valley Fever symptom and prevention training. In both cases the CDPH conducted investigations and provided similar recommendations that included: improving worksite dust-control measures; using earth-moving equipment and trucks with high-efficiency particulate air (HEPA) filtered enclosed cabs to protect the operator; implementing and enforcing criteria for suspending work on the basis of wind and dust conditions; providing outdoor workers access to National Institute for Occupational Safety and Health–approved respiratory protection when conducting or in close proximity to soil-disturbing work, and for exposure to excessive wind-blown dust; providing clean coveralls daily to employees; encouraging workers to remove coveralls and work shoes before entering vehicles to leave the worksite; developing effective Valley Fever training for all employees that includes ways to reduce exposure, how to recognize symptoms, and where to seek care; and improving compliance by employers and their designated health care providers with reporting cases to local health jurisdictions, workers' compensation carriers, and Cal/OSHA.

3.10.1.5. Environmental Contamination

Ground-disturbing activities could encounter environmental contamination if the activity is near commercial or industrial sites with known contamination or adjacent to sites that store and use large quantities of hazardous materials, or in agricultural areas that may have used herbicides, pesticides, or fumigants. The substation, storage container, O&M facility, laydown yards, pre-fabrication areas, and internal and external road locations would require mowing, grubbing, grading and compaction. Inverter station locations would require light grubbing. The solar array areas would require mowing and rolling of woody vegetation to a height of 12 inches in an effort to preserve vegetation and provide for better and faster post-construction site revegetation. Some of the areas where facilities and arrays would be located would require leveling and smoothing. Ground disturbance for the 500 kV gen-tie line would include excavation for tower foundations and smoothing or grading of pull sites.

Land uses in the region of the proposed Project include existing/under construction solar facilities (Desert Sunlight, Desert Harvest, Athos Renewable Energy Project, Oberon Renewable Energy Project, Arica and Victory Pass Solar Projects, Palen Solar Project, and the Sapphire Solar Project), the Lake Tamarisk residential community, a mobile home park, agricultural parcels, a towing and storage facility, and the Chuckwalla Valley Raceway and associated private airport (Desert Center Airport). Otherwise, no commercial or other industrial uses are near the Project site, other than the land uses listed above.

A review of the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substance Control (DTSC) EnviroStor websites revealed no known listed hazardous material or contaminated sites at or immediately adjacent to the Project site (SWRCB, 2023; DTSC 2023). The Geotracker database review did identity a landfill, the Desert Center Sanitary Landfill (DCSL), located approximately 0.35 miles west of the Project and a closed leaking underground site located 2 miles south of the Project in Desert Center (SWRCB, 2023). The DCSL is on land owned by the BLM, but the landfill is operated by the Riverside County Department of Waste Resources (RCDWR). The DCSL was opened to the public in 1972 and is still in operation; the current permitted waste management area accepting waste is approximately 7 acres in size. Wastes accepted at the landfill include residential, mixed municipal, agricultural, construction/demolition wastes and small amounts of dead animals and triple rinsed pesticide containers (RCDWR, 2022). The DCSL is currently undergoing site monitoring and sampling of three groundwater monitoring wells along the periphery of the landfill as per a Waste Discharge Requirement Order and an accompanying Monitoring and Reporting Program. In 2000, volatile organic compounds (VOCs) were detected in the monitoring wells and after additional sampling and testing and coordination with the Regional Water Quality Control Board (RWQCB), monitored natural attenuation and continued groundwater and gas probe monitoring was chosen as the appropriate corrective action for the DCSL (RCDWR, 2022). The trend of VOCs in the groundwater at and near the DCSL shows a general decreasing trend of VOC concentration in the wells since 2005 (RCDWR, 2022). Groundwater flow in the landfill area is to the northeast and water levels range from 220 to 240 feet below ground surface. This deep contaminated groundwater is unlikely to be encountered during Project construction even if it has migrated towards the Project site.

3.10.1.6. Battery Energy Storage Systems

The Project includes the installation of up to 650 MW of 2- or 4-hour energy storage. The storage system would consist of battery or flywheel system technology housed in electrical enclosures and buried electrical cable. Up to 300 electrical enclosures would be installed on concrete foundations designed for secondary containment. The storage component would have a footprint of approximately 35 acres. A battery energy storage system (BESS) is a type of system that uses an arrangement of batteries and other electrical equipment to store electrical energy. Containerized systems, which are one form of a modular design, have become a popular means of integrating BESS projects efficiently.

The battery energy storage system (BESS) could use any commercially available battery technology, including but not limited to lithium ion, flow, lead acid, sodium sulfur and sodium or nickel hydride. Battery systems are operationally silent. Flywheel systems have a noise rating of 45 dBA. However, either system would be accompanied by air conditioners or heat exchangers and inverters, and a 10,000-gallon water tank would be located at each BESS location.

The BESS would be designed, constructed, operated and maintained in accordance with applicable industry best practices and regulatory requirements, including fire safety standards. The BESS would comply with the current California Fire Code (CFC), which governs the code requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for load shedding, load sharing and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosure and the site installation design are all required to be approved by the State Fire Marshal. Final safety design would follow applicable standards and would be specific to the battery

technology chosen, including, but not limited to, National Fire Protection Association 855 (standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code.

If applicable, the BESS would be certified to UL 9540, the standard associated with control, protection, power conversion, communication, controlling the system environment, air, fire detection and suppression system related to the functioning of the energy storage system. The battery would be tested to UL 9540A, a test method intended to document the fire characteristics associated with thermal event or fire and would confirm that the system would self-extinguish without active fire-fighting measures. The system would be designed, such that, during a fire event, the results of the UL 9540A test would show that any internal fire is contained within the enclosure and not spread to the other parts of the facility. The results of this test are used to inform facility safety system design and emergency response plans which would be shared with first responders. If applicable, the system would use a chemical agent suppressant-based system to detect and suppress fires. If smoke or heat were detected, or if the system were manually triggered, an alarm would sound, horn strobes would flash, and the system would release suppressant, typically FM 200, NOVEC 1230 or similar from pressurized storage cylinders. Final safety design would follow applicable standards and would be specific to the technology chosen.

Large-scale BESS are commonly designed for high-powered and rapid-charge cycles that can generate heat quickly and affect the safe operation of the batteries (Conzen et al, 2022). BESS require a reliable and well-performing cooling system that either directly cools the battery cell/modules or cools the enclosure in which the battery packs are installed. Failures of the BESS cooling or fire prevention systems can result in fires and explosions within BESS containers. This can occur under a variety of scenarios (i.e., short circuit), in which the stored chemical energy is converted to thermal energy with the results of cell rupture and the release of large amounts of flammable and potentially toxic gases, which can lead to fire and explosion (Conzen et al, 2022). As of June 2021, approximately 30 global large-scale BESS have experienced failures and destructive fires.

A notable event that led to a shift in the industry in terms of hazard mitigation at BESS in the USA occurred in 2019 at a BESS unit owned and operated by Arizona Public Service Company. The facility experienced a thermal runaway event and, even though the BESS was equipped with a clean agent suppression system, it was not provided with deflagration venting or explosion prevention systems (i.e., the requirement for explosion control was not satisfied). When the HAZMAT team attempted to enter the BESS to survey the scale of the event, an explosion occurred, seriously injuring the firefighters. Five contributing factors that led to the incident were identified: Internal failure in the battery cell initiated thermal runaway; the clean agent fire suppression system was incapable of stopping thermal runaway; the facility lacked thermal barriers between battery cells, this lack of barriers allowed the thermal runaway event to cascade to adjacent cells, without a means to ventilate the enclosure, the flammable off-gases from the batteries concentrated to explosive levels; and the emergency response plan did not include extinguishing, ventilation, or entry procedures.

3.10.1.7. Wildland Fires

The Project is located in both Federal Responsibility Areas (FRAs) and Local Responsibility Areas (LRAs) (CAL FIRE, 2007; Riverside County, 2021). According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zones (FHSZ) Map and County of Riverside General Plan Safety Element, the Project would be in areas of FRA and LRA Moderate FHSZ (CAL FIRE, 2007; Riverside County, 2021). The Project is located adjacent to the Lake Tamarisk Community, which is within a Local Responsibility Area. Agencies that are likely to provide wildfire protection to the Project would be Riverside County Fire Department and BLM Fire and Aviation Program. Because the Project is not located in a State Responsibility Area, CAL FIRE would not have primary responsibility for fire management or suppression activities in this area. While individual fire agencies have primary responsibility for specific

geographic areas, under interagency cooperative and mutual aid agreements, fire agencies throughout the region aid each other as needed. Typically, when a wildland fire is reported, the nearest available firefighting units are dispatched, as it is not always immediately clear which wildland parcels are involved and which agency has jurisdiction. There is limited potential for wildfire on the site due to sparse vegetation. (See also Section 3.19, Wildfire, where wildfire hazards are discussed in more detail.)

3.10.1.8. Schools

There are no schools or learning centers located within a 0.25-mile radius of the proposed Project. As discussed in Section 3.16, Public Services and Utilities, the closest school to the proposed Project is the Eagle Mountain School, located approximately 6 miles northwest of the Project.

3.10.1.9. Airports and Airstrips

The closest airport to the Project is the private Desert Center Airport, located approximately 1 mile east of the proposed Project. (See Figure 2-1, Project Area). The airport has one runway and is part of the Chuckwalla Valley Raceway and is available for daily use for airplane, helicopter, and skydiving operations. No master plan has been prepared for the Desert Center Airport and because the airport activity level is very low, the outer edge of the FAR Part 77 horizontal surface serves to define the Airport Influence Area Boundary. The Project site is not located within the Airport Influence Area Boundary nor any of the Airport Compatibility Zones; the Airport Influence Area Boundary and the outer edge of Compatibility Zone E are located just east of the portion of the Project east of Highway 177 (RCALUC, 2004). Compatibility Zone E is defined as the area wherein 10 to 15 percent of near-airport accidents occur and where concern for risks applies to uses for which potential consequences are severe (e.g., very-high-intensity activities in a confined area).

The Blythe Airport is the nearest public airport serving Riverside County, located approximately 40 miles east of the Project. The airport has two runways and is mostly used for general aviation (AirNav, 2023a). Julian Hinds Pump Plant Airstrip, a private airstrip, and the Chiriaco Summit Airport, a public airstrip, are located about 14 and 18.5 miles west of the proposed Project (AirNav, 2023b).

The Project site is not within 4,000 feet of a military installation, within military special-use airspace, or beneath a military designated low-level flight path. Based on the California Military Land Use Compatibility Analyst (CMLUCA) database, the Project site is located within military training Visual Route (VR) flight paths (CMLUCA, 2023).

3.10.1.10. Electric and Magnetic Fields

Electric voltage and electric current from transmission lines create electric and magnetic fields (EMF). Possible health effects associated with exposure to EMF have been the subject of scientific investigation since the 1970s, and there continues to be public concern about the health effects of EMF exposure. However, EMF is not addressed here as an environmental impact under CEQA. EMF has repeatedly been recognized as not an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF does create a potential health risk, and (2) there are no defined or adopted CEQA standards for defining health risks from EMF.

3.10.2. Regulatory Framework

Hazardous materials are defined by federal and state regulations that aim to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered

hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases). Hazardous materials are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and also in the California Code of Regulations, Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

> *A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.*

For this analysis, soil that is excavated from a site containing hazardous materials would be considered a hazardous waste if it exceeded specific California Code of Regulations Title 22 criteria or criteria defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or other relevant federal regulations. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; it may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

3.10.2.1. Federal Laws, Regulations, and Policies

USEPA California Toxics Rule (Title 40 Code of Federal Regulations (CFR) 131). In 2000, the U.S. Environmental Protection Agency (USEPA) 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 USEPA requires states to adopt numeric water quality criteria for priority toxic pollutants for which the USEPA has issued criteria guidance, and the presence or discharge of which 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.

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6901 et seq.). The RCRA authorizes the USEPA to control hazardous waste from "cradle to grave" (generation, transportation, treatment, storage, and disposal). RCRA's Federal Hazardous and Solid Waste Amendments from 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. Under RCRA, decommissioned solar panels are treated as hazardous waste.

Toxic Substances Control Act (TSCA) (15 U.S.C. § 2601 2692). The TSCA authorizes the USEPA 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 U.S.C. § 9601 et seq.). CERCLA, including the Superfund program, was enacted by Congress on December 11, 1980, and is administered by the USEPA. 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 established 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 established 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 U.S.C. § 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972. As part of the CWA, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the Code of Federal Regulations, 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 the total above ground oil storage capacity exceeds 1,320 gallons, or 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 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 Code of Federal Regulations, 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 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.

Department of Transportation, CFR Title 49, Subtitle B. The United States Department of Transportation (USDOT) is the primary federal agency responsible for regulating the proper handling and storage of hazardous materials during transportation (49 CFR. §§ 171-177 and 350-399).

National Fire Protection Association (NFPA) 855. NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) provides minimum requirements for mitigation of hazards associated with Energy Storage Systems (ESS). The design, construction, and installation of ESS and related equipment shall comply with NFPA 855 Chapter 4 and as supplemented or modified by the technology-specific provisions in Chapters 9 through 13. Chapter 4 includes, but is not limited to, provisions regarding gas release, testing requirements, hazard mitigation analysis, availability of operation and maintenance manuals, and staff training. UL 9540 falls under the NFPA 855 and addresses key issues associated with energy storage including battery system safety, functional safety, environmental performance, containment, and fire detection and suppression. The UL 9540A test is a method to evaluate thermal runaway fire propagation in an ESS. ESS plans and specifications should be submitted to the jurisdictional agency.

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 Department of Defense 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.

With regard to aviation safety, Subpart B, Section 77.9 of the regulations indicates that for areas around airports having runways longer than 3,200 feet, if any construction that is more than 200 feet above ground level or results in an object penetrating an imaginary surface extending outward and upward at a ratio of 100 to 1 from a public or military airport runway out to a horizontal distance of 20,000 feet (approximately 3.78 miles), then an applicant is required to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area for review and approval of the Project (FAA, 2018).

Currently, there are no defined thresholds for project size, type, or distance from the airport available that automatically trigger FAA airspace review with respect to solar glare on aviation safety (FAA, 2018). However, proximity to the airport and solar technology are two indicators of likely FAA interest in a solar project (FAA, 2018). According to a FAA technical guidance document, it is the responsibility of local governments, solar developers, and other stakeholders in the vicinity of an airport to check with the airport sponsor and the FAA to ensure there are no potential safety or navigational problems with a proposed solar facility, especially if it is a large facility. Sponsors should notify the FAA when such activities are proposed, and the FAA needs to participate in public meetings or permitting processes.

Federal Land Policy and Management Act of 1978 (43 U.S.C. § 1701 et seq.) and Title 43 Code of Federal Regulations (43 CFR § 9212.2). BLM is authorized and required to manage federal lands, which includes providing funding, resources, and regulations for prevention and protection of wildland fires. In California, BLM establishes seasonal and year-round fire prevention orders and restrictions to assist with wildland fire prevention efforts throughout federal public lands within the California Desert District (CDD), which consists of Inyo, Imperial, Kem, Mono, Los Angeles, San Bernardino, San Diego and Riverside Counties.

Federal Wildland Fire Management Policy. On BLM-administered lands in the California Desert, the BLM implements Federal Wildland Fire Management policies and objectives in coordination with state and other federal agencies as part of the California Desert Interagency Fire Management Organization. The Federal Wildland Fire Management Policy was developed by a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. The policy acknowledges the essential role of fire in maintaining natural ecosystems, but also prioritizes firefighter and public safety first in every fire management activity and focuses on risk management as a foundation for all fire management activities. The policy promotes basing responses to wildland fires on approved Fire Management Plans and land management plans, regardless of ignition source or the location of the ignition.

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 deals with electric safety rules, including transmission wire clearance standards, whereas the applicable ANSI code deals with the practice of pruning and removal of vegetation.

3.10.2.2. State Laws, Regulations, and Policies

California Environmental Protection Agency. The California Environmental Protection Agency (Cal EPA) was created in 1991, which unified California's environmental authority in a single cabinet-level agency and brought the ARB, SWRCB, RWQCBs, Integrated Waste Management Board (IWMB), Department of Toxic Substance Control (DTSC), OEHHA, and DPR under one agency. These agencies were placed within the Cal/EPA "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, to ensure public health, environmental quality, and economic vitality.

California Hazardous Waste Control Law. The California Hazardous Waste Control Law (HWCL) is administered by Cal EPA 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 about 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). DTSC is a department of Cal EPA 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 waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Recent revisions to DTSC hazardous waste regulations (revisions in Cal. Code Regs tit. 22, div. 4.5, sections and articles in chapters 10, 11, and 23) allow PV solar panels in California to be managed as "universal waste" instead of under the HWCL, beginning on 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. The revised regulations also include requirements for reporting and notifications to DTSC, training, handling, response to breakage and releases, containment and record keeping.

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 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.

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 also 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 Project area. The Colorado River Basin RWQCB adopted its Basin Plan (Water Quality Control Plan for the Colorado River Basin Region) 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.

Unified Program. In 1993, the State (Cal-EPA) 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 Cal-EPA. These agencies, known as Certified Unified Program Agencies (CUPA), 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 which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which 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 § 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 which 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 required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337 340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Strategic 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 problem. The plans are required to be updated annually.

Assembly Bill 203. Adds section 6709 to the Labor Code regarding occupational safety and health related to Valley Fever. This section applies to a construction employer with employees working at work sites 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, or 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.

3.10.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan. The intent of the Safety Element of the Riverside County General Plan is to reduce death, injuries, property damage, and economic and social impact from hazards. The following policies included in the Safety Element generally relate to the proposed Project with respect to hazards and hazardous materials (Riverside County, 2021).

- **Policy S 5.1**. Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:
  - All proposed development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire and Building and Safety departments.
  - All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County 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.
  - In addition to the standards and guidelines of the California Building Code and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection 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.
  - Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County Ordinances.
  - 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.
  - Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, and constructed that provide adequate defensibility from wildfires.
- **Policy S 5.6.** Demonstrate that the proposed development can provide fire services that meet the minimum travel times identified in Riverside County Fire Department Fire Protection and EMS Strategic Master Plan.
- **Policy S 7.3.** 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 7.14.** Regularly review and clarify emergency evacuation plans for dam failure, inundation, fire and hazardous materials releases.
- **Policy S 7.15.** Develop a blueprint for managing evacuation plans, including allocation of buses, designation and protection of disaster routes, and creation of traffic control contingencies.

The proposed Project would be consistent with County policies and requirements for fire safety and handling of hazardous materials and would comply with the requirements of the applicable federal and State regulations.

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 Cal EPA 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.

3.10.3. Methodology for Analysis

The hazardous materials analyzed include those potentially existing on the site and those that would be used as part of Project construction, operations and maintenance, and decommissioning. Potential existing hazardous materials hazards were assessed based on review of information in state hazard databases and maps for 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 operations and maintenance. Therefore, this analysis examines the choice and amount of chemicals to be used, how the Applicant would use the chemicals, how they would be transported to the facility, and how the Applicant plans to store the materials on site.

Potential and existing physical hazards such as wildfire, aviation hazards, valley fever, and unexploded ordnance, are assessed based on review of information from online sources and from local and state agency databases and maps for the Project area and are analyzed based on proposed Project construction, operation and maintenance, and decommissioning footprints and potential areas of impact.

3.10.4. CEQA Significance Criteria

The criteria used to determine the significance of potential hazards and hazardous materials impacts are based on Appendix G of the CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to hazards and hazardous materials if the Project would:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (see Impact HAZ-1).*
- *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 (see Impact HAZ-2).*

- *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 (see Impact HAZ-3).*
- *Result in a safety hazard or excessive noise for people residing or working in the project area 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 (see Impact HAZ-4).*
- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (see Impact HAZ-5).*
- *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires (see Impact HAZ-6).*

The County of Riverside's Environmental Assessment Form includes additional significance criteria, which were also used in the analysis. Almost all of the County of Riverside criteria for the issue area of Hazards and Hazardous Materials are identical to existing the CEQA criteria for that issue area, except for several criteria related to airports and aviation hazards. The additional criteria differing from the above CEQA criteria that indicate that a project could have potentially significant impacts are:

- *It would result in an inconsistency with an Airport Master Plan (see Impact HAZ-4).*
- *It would require review by the Airport Land Use Commission (see Impact HAZ-4).*

The following CEQA significance criteria from Appendix G and County of Riverside were not included in the analysis and are not discussed further beyond this summary:

- *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 site. The proposed Project would not use acutely hazardous materials and the limited amounts of hazardous materials (such as fuels and greases) used during construction and operation and maintenance would be used, stored, transported, and disposed of following all applicable laws and regulations. Therefore, the Project would not result in hazardous materials impacts to existing or proposed schools.

- *For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?*

  There are no private airstrips or heliports in the vicinity of the Project, therefore, construction and operation of the Project would not result in adverse aviation safety hazards related to private airstrips or heliports.

3.10.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to hazards and hazardous materials. Public concerns raised during scoping involved health effects from the increase in wind-blown dust, which carries silica, pollens, and other chemicals/ pollutants (herbicides); concerns relating to Valley Fever; health hazards related to EMF; increased risk of wildfire due to presence of power lines; contamination from chemicals used for vegetation management; and concerns regarding hazardous materials releases if/when the solar panels are broken.

Project decommissioning impacts would be the same as those described under Project construction.

Impact HAZ-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. Construction of the Project would involve the use of small amounts of hazardous materials. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of Project construction. Hazardous substances would include fuels and greases to fuel and service construction equipment and small quantities of chemicals required for construction. Onsite fuel tanks no larger than 1,000 gallons may be used to fuel construction equipment and would comply with all applicable regulations. Trucks and construction vehicles would be serviced from off-site facilities. Helicopters may be used during construction; however, helicopter refueling will take place off site, likely at the Desert Center Airport. Hazardous materials storage, use, transportation, and disposal procedures would be dictated the HMMP developed prior to construction and by local, state, and federal regulations.

Hazardous liquids would be stored in secured areas (fenced or locked building on the solar site) and all hazardous material storage containers would be properly labeled to indicate the contents of the container. Hazardous materials would be stored only in designated areas on impervious surfaces, on plastic groundcovers, or with secondary containment, to prevent spills or leaks from infiltrating the ground. Material Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel. If quantities exceed regulatory thresholds, the Applicant would ensure that storage is undertaken in compliance with the SPCC Rule and a HMBP, which would be developed prior to construction. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with current applicable regulations and the Project-specific HMMP (IP Easley, 2023, Appendix W). Implementation of these procedures and plans and compliance with applicable local, state, and federal regulations would minimize the risk of adverse effects from use, disposal, and transport of hazardous materials to less-than-significant levels.

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. The chemicals within PV modules are highly stable and would not be available for release to or 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. At the end of the Project's useful life, solar panels would be decommissioned and dismantled per an agency-approved Closure and Decommissioning Plan. Upon ultimate decommissioning, the panels will be suitable for recycling or reuse, and Project decommissioning would be designed to optimize such salvage as circumstances allow and in compliance with all local, State, and federal laws and regulations in effect at the time of decommissioning. With current technology, although very expensive, approximately 90% of a PV system is recyclable with the glass, metallic, and PV film components separated by mechanical and chemical processes for remanufacturing into new panels or other products (Westcoast Solar Energy, 2023; Peplow, 2022). Currently, approximately 80% of a silicon panel's mass including the aluminum frame and glass covers is easily recycled (Peplow, 2022).

Throughout construction, waste materials would be sorted on site and transported to appropriate licensed waste management facilities. Non-hazardous construction materials that cannot be reused or recycled would be disposed of at county landfills. Hazardous waste and electronic waste would not be placed in a landfill but would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling). All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

During construction, herbicides may be applied to control weed growth. If needed, herbicides to control the spread of invasive weeds following construction disturbance would likely be part of an integrated pest management strategy. Weed management also would be performed in accordance with an approved Weed Management Plan. Use of herbicides would occur in accordance with all recommended application procedures as identified on product labels. If herbicides or pesticides are required to be used on BLM land, BLM-approved herbicides would be used to control weed populations. The process for treatments would be characterized in a Pesticide Use Proposal that would be approved by the BLM. Although the Project would not contain a residential or commercial component that would potentially directly expose people to herbicides, workers or people at nearby residences or businesses could be exposed to adverse effects due to herbicide use. Use of any herbicides for weed control would follow all local, state, and federal guidelines, and on BLM-administered land would follow the BLM-approved Weed Management Plan and Pesticide Use Proposal. 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 within the historic World War II DTC/C AMA training camp/maneuver area where military exercises with tanks and troops were conducted, including practice artillery fire, weapons training, and land mine placement and removal. During construction, maintenance, and closure and decommissioning activities associated with the proposed Project, ground disturbance could unearth unexploded World War II-era munitions (UXO and MEC), including conventional and unconventional land mines, personnel mines, shells, mortars, and bullets, the detonation of which would pose a safety risk to the workers. For example, surface and shallow sub-surface UXO could be disturbed by vehicles, walkers, and excavation using shovels or similar hand tools, and deeper sub-surface UXO could be disturbed by the earth movement and excavation processes required for development of the Project. Implementation of Mitigation Measure HAZ-1 (UXO Identification, Training and Reporting Plan) would formalize UXO training, investigation, removal, and disposal to ensure that potential UXO impacts would be less than significant.

Decommissioning impacts are anticipated to be similar to those occurring during construction as described above. The actual impacts would depend on the proposed decommissioning action and final use of the site.

LESS THAN SIGNIFICANT, OPERATIONS AND MAINTENANCE. During operation and maintenance of the proposed Project, small quantities of a variety of hazardous materials would be transported to the site and used and stored on site for miscellaneous, general maintenance activities. Chemicals would be stored in appropriate chemical storage facilities with secondary containment, if necessary. Hazardous materials would be transported, stored, and disposed of as required by the HMMP (IP Easley, 2023, Appendix W). Because each of the substation transformers would contain mineral oil, the substation would be designed to accommodate an accidental spill of transformer fluid by the use of containment-style mounting. Herbicides may be used for weed control. If quantities exceed regulatory thresholds, SPCC Plan and HMBP and associated emergency response plan and inventory would be prepared and implemented during operation. Preparation and compliance with the required SPCC and HMBP, if necessary, implementation of the HMMP, and compliance with applicable state and federal regulations would minimize the risk of damage or injury from use, disposal, and transport of hazardous materials ensure that impacts remain less than significant during the Project's operation and maintenance.

Mitigation Measures for Impact HAZ-1

MM HAZ-1 **UXO Identification, Training, and Reporting Plan.** See Section 3.10.9 (Mitigation Measures) for full text.

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact HAZ-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.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. As noted above, construction of the Project would involve the use of small amounts of hazardous materials, such as fuels and greases to fuel and service construction equipment, and small amounts of chemicals needed during construction. Improper handling and storage of these hazardous materials could result in the accidental release if not managed appropriately. The small quantities of chemicals to be stored at the Project during construction would be stored in their appropriate containers in enclosed and secured locations.

The HMMP includes and requires spill prevention and response training, and procedures to follow in the event of a spill (IP Easley, 2023, Appendix W). During construction, spill kits and materials that can be readily deployed would be stored at staging areas and mobile spill kits would be available for use in any fueling operations. Each construction crew would have sufficient supplies of absorbent and barrier materials on hand to allow the rapid containment and recovery of any spills. The construction contractor would immediately notify the Project operator, and the Project operator's Construction Supervisor and environmental monitor of any spills and/or clean-ups, regardless of the size of the spill. Small spills or leaks (less than 5 gallons) would be dealt with within 24 hours of the incident and would be documented in the spill report form. If a spill on BLM-administered land is between 5 and 50 gallons, the BLM contact would be given a courtesy call within a few hours of the incident. If the spill is larger than 50 gallons, the appropriate authorities/agencies would be notified. Should a major spill occur on BLM land, the Field Office would be notified within 24 hours. All incidents on BLM-administered land would be properly recorded and addressed in accordance with BLM requirements The Project operator would determine environmental reporting requirements and would notify appropriate environmental agencies.

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

The Project would implement the SWPPP (or SWPPP equivalent document) and the HMMP, and would comply with all applicable local, state and federal regulations to reduce the potential that spills or leaks of hazardous materials would occur. In addition, if quantities exceed regulatory thresholds, the Project would develop a SPCC Rule and a HMBP which would include additional hazardous material requirements. Implementation of these plans and compliance with local, state, and federal regulations regarding hazardous materials use, storage, and disposal reduces potential adverse effects form spills or leaks to a less-than-significant level.

As noted above in Section 3.10.1.2, Valley Fever (coccidioidomycosis) is considered endemic in California and *Coccidioides* fungus are present in the arid desert regions of California, including Riverside County. Riverside County has increasing numbers of cases and in 2021 reported 471 cases for and incidence rate of 19.2 per 100,000 population, which is approaching the criteria of 20 incidences per 100,000 required to be determined endemic. There is a potential that construction activities such as grading, excavation, and construction vehicle traffic, could loosen and stir up soil containing *Coccidioides* fungus spores,

exposing workers and the public to contracting Valley Fever. Construction activities for the Project would be subject to stringent dust control requirements (including SCAQMD Rules 402 and 403). Implementation of Mitigation Measures AQ-1 (Fugitive Dust Control Plan) and HAZ-2, (Worker Environmental Awareness Program) would reduce the potential for workers and the public to contract Valley Fever due to exposure to substantial concentrations of dust which may contain *Coccidioides* fungus spores to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION, OPERATIONS AND MAINTENANCE. If regulatory thresholds are exceeded for storage of hazardous materials during Project operation, a SPCC would be prepared and implemented, as required by the SPPC Rule. BMPs would be employed in the use and storage of all hazardous materials within the Project, including the use of containment systems in appropriate locations. Appropriately sized and supplied spill containment kits would be maintained on-site in the O&M area, and the Project's employees would be trained on spill prevention, response, and containment procedures. The chemical storage area would not be located immediately adjacent to any drainage. The Project HMMP requires spill prevention and response training for employees handling hazardous material, best management practices for handling and transporting liquids, requires spill clean-up equipment on site, and monitoring and inspecting of vehicles for leaks. In addition, if an HMBP if required, an associated emergency response plan and inventory would be prepared and implemented. 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 operation. The likelihood to overheat or ignite is increased if the batteries are poorly packaged, damaged, or exposed to a fire or a heat source.

The Project would include operation an up to 650 MW BESS that would consist of batteries housed in storage containers. Potential hazards related to the BESS could include fire, gaseous build up, explosion, and hazardous materials. Lithium metal batteries contain potentially toxic metals, such as copper and nickel, and organic chemicals, like toxic and flammable electrolytes. Once ignited, the resulting fires can be especially difficult to extinguish as temperatures can rapidly increase to up to 500 degrees Celsius (932 degrees Fahrenheit) as a result of interactions between a battery's cathodes and anodes, and water is an ineffective extinguisher. The likelihood to overheat or ignite is increased if the batteries are poorly packaged, damaged, or exposed to a fire or a heat source (79 Fed. Reg. 46011, 46032, Aug. 6, 2014).

As noted previously, the BESS would be designed, packaged, constructed, and operated in accordance with applicable industry best practices and regulatory requirements, including, but not limited to, National Fire Protection Association 855 (Standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code and if applicable, certified to UL 9540. The configuration of the safety system would be determined based on site-specific environmental factors and associated fire response strategy and would contain a safety system that would be triggered automatically when the system senses abnormal conditions and/or imminent fire danger. A fire safety system would be provided within each on-site battery enclosure. Components of the system could include a fire panel, aspirating hazard detection system, smoke/heat detector, strobes/sirens, and suppression tanks. If applicable, the BESS would be tested to UL 9540A, which would confirm that the system would self-extinguish without active fire-fighting measures. Additionally, Mitigation Measure FIRE-1 (Fire Safety) 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 MM FIRE-1 would reduce the impact to a less-than-significant level.

Mitigation Measures for Impact HAZ-2

MM AQ-1 **Fugitive Dust Control Plan.** See full text in Section 3.4, Air Quality.

MM FIRE-1 **Fire Safety.** See full text in Section 3.19, Wildfire.

MM HAZ-2 **Worker Environmental Awareness Program**. See full text in Section 3.10.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of mitigation.

Impact HAZ -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.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. As noted above, the Project site is located within the WWII DTC/C AMA where maneuvers included weapons training, firing exercises, and laying out and removing landmine fields. Therefore, there is a potential to encounter UXO, MEC, or MD during construction activities. Implementation of proposed Mitigation Measure HAZ-1 (UXO Identification, Training, and Reporting Plan) would require UXO training, investigation, removal, and disposal to ensure that potential UXO impacts would be less than significant.

No known hazardous material or environmentally contaminated sites have been identified at the site according to EnviroStor and GeoTracker, as of February 2023. However, there is current and historical agricultural use on properties immediately adjacent to the Project site. Pesticides used at these adjacent sites may have spread to the nearby Project areas due to improper application, overspray, or by surface runoff. Pesticide-contaminated soil may be encountered during Project ground-disturbing activities for solar components and associated facilities near current and former agricultural areas. Implementation of mitigation measures HAZ-2 (Worker Environmental Awareness Program) and HAZ-3 (Soil Management Plan) would ensure that workers and the public are not adversely affected by pesticide contaminated soil.

NO IMPACT, OPERATIONS AND MAINTENANCE. Operation and maintenance activities would not involve significant ground disturbance or excavation activities and would therefore have no potential to encounter UXO, MEC, or MD nor pesticide contaminated soils.

Mitigation Measures for Impact HAZ-3

MM HAZ-1 **UXO Identification, Training, and Reporting Plan.** See full text in Section 3.10.9 (Mitigation Measures).

MM HAZ-2 **Worker Environmental Awareness Program.** See full text in Section 3.10.9 (Mitigation Measures).

MM HAZ-3 **Soil Management Plan. Significance After Mitigation.** See full text in Section 3.10.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of proposed mitigation measures.

Impact HAZ-4. Result in a safety hazard or excessive noise for people residing or working in the Project area for a project 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.

LESS THAN SIGNIFICANT. The proposed Project is located within 2 miles of the Desert Center Airport. The Desert Center Airport was purchased by the Chuckwalla Valley Raceway and is no longer included in the Riverside County Circulation Element. The Project site is not located within the Airport Influence Area Boundary nor any of the airport Compatibility Zones; however, it is located just outside of these areas

(RCALUC, 2004). For uses in Compatibility Zone E, Riverside County Airport Land Use Commission review is required for objects greater than 100 feet tall. Because the Desert Center Airport is no longer part of the General Plan and the Project is not within the 2004 RCALUC influence areas, this review is not required.

Additionally, the only components of the solar facility that would be potentially over 100 feet tall are the gen-tie line structures, which would be on average 120 feet tall, with a maximum height of 199 feet. The gen-tie line structures would be approximately 2 to 2.5 miles south and southwest of the single east-west trending runway. The closest Project element would be approximately 1 mile northwest from the runway. Impacts to the airport due to the Project structures would be less than significant.

The PV solar panels for the proposed Project would not create significant adverse impacts from reflection and glare (see Section 3.2, Aesthetics). The Project would result in less-than-significant impacts associated with reflection and glare impacts to the Desert Center Airport. See Section 3.2, Aesthetics, for more information on glare.

The proposed Project would not include residential or commercials uses that would be affected by operations at the Desert Center Airport on those occasions when it is in use. Overall, any impacts to the safety for people residing or working in the Project area would be less than significant.

Mitigation Measures for Impact HAZ-4

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact HAZ-5. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

LESS THAN SIGNIFICANT, CONSTRUCTION AND DECOMMISSIONING. The proposed site is in a remote area with generally few rural residences; however, approximately 80 residences (primarily mobile homes) are located in Lake Tamarisk Desert Resort located just south of the Project site boundary. Access to the solar facility site would be provided from Rice Road/State Route 177 through up to five primary and three secondary driveway entrances via locked gates. None of these driveway entrances are near LTDR or on its access road and, therefore, construction traffic should not physically interfere with emergency access to LTDR. BLM open routes and agricultural roads would also be improved. Flagging operations at site access points may be implemented during construction if/when traffic control needs are indicated through either monitoring traffic operations during construction or determined to be required during construction stage planning. Construction of the solar facility is not expected to require any temporary lane closures that could restrict the movements of emergency vehicles or impair an emergency evacuation. The site would have controlled access points for ingress and egress into the solar facility. These access points would allow for emergency vehicle access into and through the site. Thus, construction of the proposed 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.

LESS THAN SIGNIFICANT, OPERATIONS AND MAINTENANCE. Operations and maintenance of the Project would generate very few vehicle trips with only 2 onsite staff and 8 remote Project operators. Once constructed, maintenance activities would occur as needed at the solar facilities but are not expected to require any temporary travel lane closures that could restrict emergency vehicle movements. The proposed gen-tie line would be located within the Oberon Energy Renewable Project and would not introduce a new obstruction that would adversely affect emergency access or evacuation efforts. See Section 3.17, Transportation, for detailed discussions regarding access in and around the area. Thus, operation of the

proposed 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.

Mitigation Measures for Impact HAZ-5

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact HAZ-6. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION AND DECOMMISSIONING. During construction and decommissioning, fires could be caused by a variety of factors, including vehicle exhaust, sparks associated with grading activities, welding activities, parking on dry vegetation, and the overall temporary increase in human activity. The Project site consists of undeveloped open space, with minimal native or ruderal vegetation with a few rural residences, a mobile home community (LTDR), agricultural, and commercial properties located adjacent to and near the Project. Pursuant to the Code of Federal Regulations, Title 29, Part 1926.24 (29 Code of Federal Regulations [CFR] 1926.24), the Project operator would be responsible for the development and maintenance of an effective fire protection and prevention program through all phases of construction, repair, alteration, or demolition work for the solar facility, BESS, Project substation, gen-tie line, and associated components. The Project Fire Management and Prevention Plant (FMPP) includes procedures for minimizing potential ignition, work restrictions on high fire hazard days, requirements for spark arrestors, prohibition of smoking near vegetated areas or near combustible materials, and requirements for firefighting equipment suitable for extinguishing small fires (IP Easley, 2023, Appendix V). The FMPP for the Project would be implemented during construction to ensure that hazards related to exposing people to wildland fires would be less than significant.

Implementation of Mitigation Measure FIRE-1 (Fire Safety) which provides additional required procedures and information to be included in the FMPP, and of a WEAP, as required under Mitigation Measure HAZ-2, would further reduce wildfire risks. Accordingly, the proposed Project is not expected to expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires during Project construction. Therefore, impacts would be less than significant with mitigation. See Section 3.18, Wildfire, for detailed discussions regarding wildfires and wildland fires in the Project area**.**

LESS THAN SIGNIFICANT WITH MITIGATION, OPERATIONS AND MAINTENANCE. As discussed in Section 3.19, Wildfire, the Project is located within both LRA and FRA areas of moderate fire severity. The Project site is not located within a high/very high fire hazard area, as determined by CAL FIRE. 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 arrays are fire-resistant, as they are constructed largely out of steel, glass, aluminum, or components housed within steel enclosures. Wires would be buried at a minimum of 18 inches below grade, minimizing the potential for faulty wiring to ignite a fire. All electric inverters and the transformer would be constructed on concrete foundation structures or steel skids and tested prior to use to ensure safe operations and avoid fire risks. In the event of a higher-than-normal temperatures (from events that could start a fire or during a fire events) units could be remotely shut down or generation curtailed remotely until corrective actions are taken. In a wildfire situation, the panels would be rotated and stowed in a panel-up position. Fire safety and suppression measures, such as smoke detectors and extinguishers, would be installed and available at the O&M facility. Implementation of

Mitigation Measure FIRE-1 (Fire Safety) which provides additional required procedures and information to be included in the FMPP, in addition to compliance with applicable regulations, would reduce wildfire risks to less-than-significant levels.

Thermal runaway or other system failures could lead to fire or explosion of the BESS. In order to minimize hazards related to fire and explosion, the BESS would be designed and constructed per all applicable design, safety, and fires standards for the installation of energy storage systems, including, but not limited to, National Fire Protection Association 855 (Standard for the Installation of Stationary Energy Storage Systems) and Section 1207 of the 2022 California Fire Code. These standards would require installation of fire suppression systems, thermal management, ventilation, and exhaust and deflagration venting systems in the BESS. A fire safety system would be provided within each on-site battery enclosure. Additionally, MM 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.

Mitigation Measures for Impact HAZ-6

MM FIRE-1 **Fire Safety.** See full text in Section 3.19, Wildfire.

Significance After Mitigation

This impact would be less than significant with mitigation.

3.10.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in the development of the solar facility and gen-tie line nor require new construction and/or operational activities, as described in Section 2.11.1. As such, the environmental impacts associated with the proposed Project, as described in Section 3.10.5, would not occur. The No Project Alternative would not result in any direct or indirect impacts related to hazardous materials, environmental contamination, triggering wildland fires, or aviation hazards. Therefore, the No Project Alternative would not have impacts related to hazards and hazardous materials.

However, in the absence of the proposed Project or an alternative to the Project, the purposes and goals for renewable energy generation that would be met by the proposed Project (or an alternative) would not be achieved. As a result, it is possible that another, similar energy generation project would be constructed in the future to meet the renewable energy generation goals in the Desert Center area. Such a project would likely introduce similar impacts related to hazards and hazardous materials that would be introduced through the proposed Project or an alternative.

3.10.7. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would remove approximately 30 acres of solar panels closest to the Lake Tamarisk Desert Resort and relocate the onsite substation and BESS to a location 0.7 miles further north of the LTDR. This relocation of the onsite substation would result in the 500 kV gen-tie line for this alternative being approximately 0.8 miles longer than the proposed 500 kV gen-tie line. Construction and operation activities for Alternative 2 would be the same as for the proposed Project. Impacts related to use and storage of hazardous materials, potential for spills or leaks of hazardous materials, and aviation hazards, would be the same as for the proposed Project and would be reduced to less than significant through compliance with local, State, and federal regulations.

The decrease in solar panel area would result in a slight decrease in construction activities and ground disturbance near the existing community of LTDR, resulting in a slight decrease in potential for wildland fires to impact the public, slightly decreased potential for exposure of the public to contracting Valley

Fever, slightly decreased potential for workers and the public to be exposed to pesticides or herbicides, and slightly decreased potential for workers to encounter unexploded ordnance. These decreases would be slight and would be reduced to less than significant by implementing of the same mitigation measures as for the proposed Project (MM AQ 1, MM FIRE 1, MM HAZ 1, MM HAZ 2, MM HAZ-3), as appropriate, and compliance with applicable local, State, and federal regulations.

3.10.8. Cumulative Impacts

Geographic Scope

The geographic scope considered for cumulative impacts from health, safety, and hazardous materials/ fire and fuels management is the area extending one mile from the boundary of the Project. One mile is the American Society of Testing and Materials (ASTM) standard search distance for hazardous materials. Tables 3.1 1 and 3.1 2 list existing and reasonably foreseeable projects in the region. The West-wide Section 368 Energy Corridors; SCE Red Bluff Substation; Devers–Palo Verde 1 Transmission Line; Palen Solar Project; Athos Renewable Energy Project; Oberon Renewable Energy Project; Sapphire Solar Project (proposed); and Arica and Victory Pass Solar Projects would all be within one mile of the boundary of the Project site and could therefore combine with the proposed Project and result in a cumulatively considerable impact to hazards and hazardous materials.

Cumulative Impact Analysis

The cumulative effect of transport, use, and disposal of hazardous materials during construction would be limited to the areas where concurrent construction is occurring or where concurrent roads are being used for construction traffic. Operation and maintenance of the proposed Project, including the proposed substations, shared switchyard, and O&M buildings, would involve periodic and routine transport, use, and disposal of minor amounts of hazardous materials, primarily petroleum products (fuels and lubricating oils) and motor vehicle fuel. The implementation of Mitigation Measure HAZ-2 (Worker Environmental Awareness Program) and agency regulations that address the handling of hazardous materials would ensure that the Project would not create a significant hazard to the public or the environment related to the handling or accidental release of hazardous materials. Past, present, and reasonably foreseeable future projects are also subject to existing agency regulations that address the handling and accidental release of hazardous materials, and all of the solar projects would have their own WEAPs for construction and operations. Therefore, existing regulations would ensure that the combined effects related to hazards and hazardous materials from the cumulative projects within the geographic scope of analysis would not be cumulatively significant, and that the proposed Project would not make a cumulatively considerable contribution to these effects.

Construction of the Project could encounter previously documented and undocumented hazardous materials sites within the area. Since the proposed site is located within an area with a history of WWII military use, there is a potential for UXO, MEC, and MD. The Project would be required to implement an UXO Identification, Training, and Reporting Plan (MM HAZ-1) which addresses the identification and treatment of UXO and munitions debris, a WEAP (MM HAZ-2) which addresses hazardous materials handling and disposal training and information, and a SMP (MM HAZ-3) to address potential pesticide contaminated soil. All the cumulative projects would also be located on former military land with a history of UXO and munitions debris, so may have a similar potential for encountering UXO and munitions debris, and would also likely require an UXO Identification, Training and Reporting Plan and a WEAP and/or similar measures to minimize impacts to minimize impacts on and off the site. Because of the history of UXO in this area, the projects collectively could help reduce the overall impacts due to UXO hazards once they are operational and have potentially cleared areas of UXO hazards. Under cumulative conditions,

implementation of the Project would not make a cumulatively considerable contribution to public health and safety hazards.

Construction of the Project could result in mobilization of *Coccidioides* fungus spores in airborne dust. If inhaled, this could expose workers and the public to contracting Valley Fever. Implementation of stringent dust control regulations, Mitigation Measures HAZ-2 (Worker Environmental Awareness Program) and AQ-1 (Fugitive Dust Control Plan) minimizes the risk of workers or the public contracting Valley Fever. Past, present, and reasonably foreseeable future projects are also subject to existing agency regulations that address fugitive dust and would likely have similar mitigation to prepare a fugitive dust control plan. Therefore, existing regulations and mitigation would ensure that the proposed Project would not make a considerably contribution to the potential for contracting Valley Fever.

The Easley Renewable Energy Project and other cumulative solar projects would all involve the storage, use, disposal, and transportation of hazardous materials to varying degrees during construction and operation. Impacts from these activities would not result in a considerable contribution to cumulative impact because the storage, use, disposal, and transportation of hazardous materials are extensively regulated by various federal, state, and local laws, regulations, and policies. It is foreseeable that the Project and other cumulative projects would implement and comply with these existing hazardous materials laws, regulations, and policies.

Construction and operation of the Project could introduce a risk of wildland fire through accidental ignition of the sparse native vegetation during construction or operation activities, including equipment or BESS malfunction-related fires. The proposed Project would be required to comply with applicable federal, state, and Riverside County requirements relating to fire safety and fire hazards, the FMPP, and Mitigation Measures FIRE-1, minimizing the risk of wildland fire occurring. In addition, projects in the cumulative scenario would similarly be required to comply with fire safety and fire hazard guidelines and policies. Therefore, the Project would not make a cumulatively considerable contribution to potential wildland fire impacts. In addition, the proposed Project would not make a considerable contribution to impact 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 (e.g., construction is not expected to require any temporary lane closures that could restrict the movements of emergency vehicles).

Mitigation Measures for Cumulative Impacts

MM AQ-1 **Fugitive Dust Control Plan**. See full text in Section 3.4, Air Quality.

MM FIRE-1 **Fire Safety.** See full text in Section 3.19, Wildfire.

MM HAZ-1 **UXO Identification, Training, and Reporting Plan**. See full text in Section 3.10.9 (Mitigation Measures).

MM HAZ-2 **Worker Environmental Awareness Program.** See full text in Section 3.10.9 (Mitigation Measures).

MM HAZ-3 **Soil Management Plan.** See full text in Section 3.10.9 (Mitigation Measures).

Significance After Mitigation

The Project's incremental contribution to hazard and hazardous materials impacts would not be cumulatively considerable.

3.10.9. Mitigation Measures

MM AQ-1 **Fugitive Dust Control Plan**. See full text in Section 3.4, Air Quality.

MM FIRE-1 **Fire Safety.** See full text in Section 3.19, Wildfire.

MM HAZ-1 **UXO Identification, Training, and Reporting Plan.** Where ground disturbance work is involved, contractor(s) shall be OSHA HAZWOPER-trained in accordance with standard 29CFR1910.120 and hold a current certification. The Applicant shall prepare a UXO Identification, Training, and Reporting Plan to properly train all site workers in the recognition, avoidance and reporting of military waste debris and ordnance. The Applicant shall submit the plan to the County and BLM for review and approval 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; and
- Identification of available trained experts that will respond to notification of discovery of any ordnance (unexploded or not); and
- Work plan to recover and remove discovered ordnance, and complete additional field screening, possibly including geophysical surveys to investigate adjacent areas for surface, near surface or buried ordnance in all proposed land disturbance areas.

MM HAZ-2 **Worker Environmental Awareness Program**. The WEAP prepared for the Project shall include a personal protective equipment (PPE) program, an Emergency Action Plan (EAP), and an Injury and Illness Prevention Program (IIPP) to address health and safety issues associated with normal and unusual (emergency) conditions. It will be reviewed and approved by the County and BLM prior to construction. Construction-related safety programs and procedures shall include a respiratory protection program, among other things. Construction Plan documents shall relate at least to the following:

- Environmental health and safety training (including, but not limited, to training on the hazards of Valley Fever, including the symptoms, proper work procedures, how to use PPE, and informing supervisor of suspected symptoms of work-related Valley Fever)
- Site security measures
- Site first aid training
- Site fire protection and extinguisher maintenance, guidance, and documentation
- Furnishing and servicing of sanitary facilities records
- Trash collection and disposal
- Disposal of hazardous materials and waste guidance in accordance with local, state, and federal regulations

MM HAZ-3 **Soil Management Plan.** Prior to issuance of demolition or grading permits, the Applicant shall prepare a Soil Management Plan (SMP) to guide activities during construction that will disturb potentially pesticide contaminated soils to ensure that potentially contaminated soils are identified, characterized, removed, and disposed of properly. The SMP shall be submitted to the County and BLM for approval prior to Project construction. The purpose of the SMP is to establish appropriate management practices for handling impacted soil or other materials that may be encountered during construction activities.

The SMP shall be implemented during Project construction and shall include, but shall not be limited to, the following components:

- Description of soil testing, which shall include (but not be limited to) the collection of shallow soil samples and analyses for pesticides to verify presence or absence of unknown pesticide soil contamination. This soil profiling shall be performed prior to initiation of Project construction.
- Protocols for sampling of in-place soil to facilitate the profiling of the soil for appropriate off-site disposal or reuse, and for construction worker safety, dust mitigation during demolition and construction and potential exposure of contaminated soil to future users of the site prior to Project construction.
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered prior to or during Project construction.
- Sampling and laboratory analyses of any excess soil requiring disposal at an appropriate off-site waste disposal facility.
- Procedures and protocols for the safe storage, stockpiling, and disposal of any contaminated soils.

If contaminants are identified at concentrations exceeding applicable screening levels, the Applicant shall submit the SMP sampling results to the County DEH and BLM and obtain oversight from the appropriate regulatory agencies. Copies of the approved SMP shall be kept at the Project site.

Any contaminated soils identified by testing conducted in compliance with the SMP 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.

3.11. Hydrology and Water Quality

This section presents the existing local and regional water resources baseline for the Easley Renewable Energy Project (Project), the regulatory framework for water resources, and an assessment of the effects of the Project on groundwater and surface water sources. The Project area relevant to the analyses of water resources is the underlying Chuckwalla Valley Groundwater Basin (CVGB) and adjacent groundwater basins for groundwater resources and the Chuckwalla Valley Drainage Basin for surface water resources. The Easley Solar Project Hydrology Study by Westwood Professional Services (Westwood, 2023) is used as a primary source the surface water information in this section.

3.11.1. Environmental Setting

This section refers to certain laws and regulations that apply to water resources in this area. These laws and regulations are described in more detail in Section 3.11.2.

3.11.1.1. Surface Water

Drainage Characteristics

The Project site is in the Chuckwalla Valley of Riverside County near the community of Desert Center, California. Although in the Mojave Desert Geomorphic Province, the Project lies within the Sonoran Desert ecoregion consisting of isolated mountain ranges separated by expanses of desert plains. The site is within an interior enclosed drainage system, meaning there is no outlet to the ocean. Drainage is to shallow lake beds which, being dry most of the time, are known as dry lakes or playas. Figure 3.11-1 (Project Topography) shows the topography of the Project site.

The Project lies on wide, flat alluvial fans emanating from the Chuckwalla Mountains to the south and from the Eagle Mountains to the east. Alluvial flows from these two mountain ranges form a series of numerous shallow, inter-braided, small washes which enter along the western boundary of the Project and traverse the Project from southwest to northeast. The Big Wash originates in the Eagle Mountains and crosses along the north side of the Project to join with the Pinto Wash, originating from the Eagle Mountains and from the area north of the Eagle Mountains. The Pinto Wash passes northwest to southeast adjacent to the north and east side of the Project site. All these washes are similar in character (numerous shallow inter-braided washes flowing over a wide area).

The elevation of the Project site ranges from about 550 feet above mean sea level (amsl) on the northeastern boundary of the site to 740 feet amsl at the southwestern edge. The surrounding mountains rise to over 3,000 feet amsl. The Project's site is relatively flat to gently sloping to the northeast.

Climate and Precipitation

The Chuckwalla Valley is characterized by high aridity, low precipitation, hot summers, and cool winters. Average maximum temperature at the nearby Eagle Mountain Climate Station is 104.9 degrees Fahrenheit (ºF) in July. Average minimum temperature is 46.2ºF in December (WRCC, 2023). Average annual precipitation is approximately 3.67 inches at Eagle Mountain Climate Station and 3.39 inches at the Blythe Climate Station (NOAA, n.d.[a]; NOAA, n.d.[b]; WRCC, 2023). Most rainfall occurs during the winter months, or in association with summer tropical storms which tend to be of shorter duration and higher intensity than winter storms. Eastern Riverside County is currently (February 2023) classified by the U.S. Drought Monitor as being in a moderate drought (U.S. Drought Monitor, 2023). Due to the aridity of the region, natural surface water within the Project area is ephemeral. Natural drainage courses (the washes

described above) remain dry most of the time, carrying flows only after rainfalls sufficient to produce runoff.

Flooding

At the location of the Project, the ephemeral desert watercourses exhibit characteristics of alluvial fans. Water from mountain canyons and drainages discharges onto the alluvial desert floor and spreads into a series of relatively unconsolidated channels and sheet flow which can inundate wide areas. Flood depths are generally (though not always) shallow resulting from the inability of the small, braided drainage channels to contain large flows. Flow patterns, as exhibited by visible watercourses, can shift over time, even within the duration of a single flood, as existing channels fill in and new channels are made.

The Federal Emergency Management Agency (FEMA) has not prepared flood insurance rate maps for the Project site; however, nearly all the site is within California Department of Water Resources (CDWR) Flood Awareness zones (Westwood, 2023) as shown in Figure 3.11-2 (DWR Flood Zones). These zones are approximate, for general information only, and are not intended as regulatory floodplains.

Westwood Professional Services (Westwood, 2023) has prepared a flood analysis appropriate for unconsolidated alluvial fan flooding on the Project site. Because of the complex and distributary nature of the flow path upstream and throughout the Project site, the Westwood study analyzed major sources of flooding in the area on a fixed-boundary terrain using a two-dimensional model grid with 50-foot cells. This study showed that much of the Project site would be subject to 100-year flooding as follows:

Flood depth < 0.5 feet = 64.9% of the Project site.
Flood depth 0.5 feet to 1 foot = 31.9% of the Project site.
Flood depth 1.01 feet to 1.5 feet = 2.5% of the Project site.
Flood depth 1.51 feet to 2 feet = 0.3% of the Project site.
Flood depth 2.01 feet to 2.5 feet = 0.1% of the Project site.
Flood depth 2.51 to 6+ feet <= 0.3% of the Project site.

Based on the above flood depths, and the nature of the alluvial terrain as already described, it is concluded that nearly every portion of the Project site could be subject to flooding, but most flood depths would be shallow (less than one foot). Figure 3.11-3 shows areas expected to be subject to flooding of more than one foot, which amount to roughly 3.2 percent of the site.

Flow velocities over most of the site range from 1 to 1.5 feet per second for the 100-year flood, with a few areas as much as 3 to 4 feet per second. Expected scour is mostly 1 to 1.5 feet. Highest velocities and scour would be associated with the deepest depths roughly shown in Figure 3.11-3.

The 100-year flood, used as a regulatory flood by FEMA and Riverside County, has a one percent chance of occurring in any year. Although the probability of occurrence remains the same (1 percent) for any given year, on average, a flood of this magnitude can be expected to occur once every 100 years. The flood limits shown in Figure 3.11-3 and described above are not regulatory floodplains. The purpose of the figure is to show the most-likely areas of worst-case 100-year flooding under current (year 2023) conditions. Because the flood model used a 50-foot grid, and because natural flow channels can shift through avulsion (the rapid abandonment of and the formation of new channels), there is a potential for the flood pattern shown in Figure 3.11-3 to change at some point in the future. Most flood depths over the Project site are likely to remain less than 1 foot as indicated in the Westwood study.

Water Quality

Historical beneficial uses of water within the Colorado River Basin Region have been determined by the Colorado River Basin Regional Water Quality Control Board (RWQCB) and are largely 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 (Basin Plan) (RWQCB, 2019) lists specific beneficial uses for surface waters and groundwater. The surface waters on the Project site would be classified in the Basin Plan as washes (ephemeral streams) which have the following beneficial uses: Groundwater Recharge (GWR), Non-Contact Water Recreation (REC II), Warm Freshwater Habitat (WARM) (to be established on a case-by-case basis), and Wildlife Habitat (WILD).Beneficial uses of the groundwater in the CVGB are Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), and Agriculture Supply (AGR).

None of the waters in or near the proposed Project are currently listed as impaired on the Clean Water Act (CWA) Section 303(d) list of impaired waters (SWRCB, 2020).

Jurisdictional Waters

Jurisdictional waters were delineated for the Project site in the Jurisdictional Waters Report by Ironwood Consulting (Ironwood, 2023; see EIR Appendix F). Potential areas of jurisdiction include waters of the U.S., administered by the U.S. Army Corps of Engineers (USACE) under the CWA, waters of the State, administered by the RWQCB, and waters subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW).

The Ironwood report concluded that there were 398.38 acres of unvegetated ephemeral wash and 0.6177 acres of anthropogenic wetlands which are unlikely to be jurisdictional under the Clean Water Act. There are 742.38 acres of dry desert wash woodland and 0.4495 acres of non-native riparian vegetation which are not jurisdictional under the Clean Water act. All these resources are either subject to or likely subject to RWQCB jurisdiction. All are subject to CDFW jurisdiction, necessitating approval of a Streambed Alteration Agreement.

Springs and seeps in the area include Corn Springs, Box Spring, Crystal Spring, Old Woman Spring, Cove Spring, Mitchell Caverns Spring, Bonanza Spring, Agua Caliente Spring, Kleinfelter Spring, Von Trigger Spring, Malpais Spring, and Sunflower Spring (RWQCB, 2021). All these springs are in the surrounding mountains, and none are located such that they could serve as water supply for or be affected by the Project.

3.11.1.2. Groundwater

The information presented below for groundwater resources and the CVGB is primarily from the Project's Water Supply Assessment (WSA), which is included as EIR Appendix G (GSI, 2024). References used are cited in the WSA (EIR Appendix G).

Groundwater Overview

The Project is located within the California Department of Water Resources (DWR) Bulletin 118 CVGB (Basin No: 7-5), which is in eastern Riverside County and encompasses an area of approximately 940 square miles (DWR, 2004) (see GSI, 2024, Figure 3 in Appendix G). Groundwater has been identified as the primary source of water in the CVGB. DWR has categorized the CVGB as a low-priority basin under the Sustainable Groundwater Management Act (SGMA) (DWR, 2020).

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 (DWR, 2004; CEC, 2010).

There are no perennial streams in Chuckwalla Valley. Drainage in the CVGB is to the Palen and Ford Dry Lakes located in topographic low points (DWR, 2004). All surface water in the western portion of the CVGB, which includes the Project area, flows to Palen Dry Lake, located approximately 10 miles east of the community of Desert Center and roughly 7 miles east of the Project area. Surface water in the eastern portion of the Chuckwalla Valley flows to Ford Dry Lake, located approximately 10 miles southeast of the Palen Dry Lake (RWQCB, 2021). Documented springs and seeps in the area are in the surrounding mountains, and none are located such that they could serve as a water supply for the Project (Aspen, 2021).

The CVGB underlies the Palen and Chuckwalla Valleys. The CVGB is bounded 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 (DWR, 2004).

Water-bearing units of the CVGB include Pliocene to Quaternary age continental deposits divided into Quaternary alluvium, the Pinto Formation, and the Bouse Formation (DWR, 2004). Bedrock is as deep as 5,000 feet below ground surface in the eastern portion of the CVGB. Wells in the vicinity of the Project extend to depths of approximately 550 to 875 feet below ground surface, with water levels approximately 100 to 150 feet below ground surface (RWQCB, 2021; Shen et al., 2017).

The CVGB is located within the jurisdiction of the Colorado River Basin RWQCB and is subject to management direction of the Water Quality Control Plan for the Colorado River Basin (Region 7) (RWQCB, 2019). 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 an unadjudicated groundwater basin. Owners of property overlying the CVGB have the right to pump groundwater from the CVGB for reasonable and beneficial use, provided that the water rights are neither severed nor reserved. Groundwater production in the CVGB is not managed by a specific entity and a groundwater sustainability plan has not been prepared nor is required, per SGMA, to be submitted to DWR based on its basin prioritization (low priority) (DWR, 2020). An Urban Water Management Plan and an Integrated Regional Water Management Plan have not been developed for the area.

Groundwater Trends

The following sections summarize available groundwater level and groundwater quality data for the CVGB.

Groundwater Levels

Depths to groundwater are as deep as about 400 feet below ground surface in many parts of the CVGB (RWQCB, 2019). Based on groundwater contour data from 1961, 1979, and 1992 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 (AECOM, 2010a; DWR, 2004). Available data indicate groundwater levels were stable as of 1963 and that a total groundwater extraction of 9,100 AFY was obtained in 1966 (DWR, 2004).

The direction of groundwater movement is not expected to have changed since 1992, but there have been changes in groundwater levels, especially localized around areas of increased extraction. For example, data from wells within 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 AFY, which is well above historical water usage for the Desert Center area of the CVGB (AECOM, 2011; GEI, 2010).

The National Park Service has noted that groundwater levels throughout the CVGB appear to have been trending downward for several decades (BLM, 2012). Most wells in the CVGB have not been used for collecting monitoring data such as groundwater level trends since the 1980s. However, groundwater data collected from several wells for the past 25 years indicate that groundwater level trends have remained largely stable in the eastern CVGB, and that groundwater levels have risen gradually back towards pre-agricultural pumping groundwater levels in the western CVGB (where the Project is located), while dropping steadily in the central CVGB (Aspen, 2021). In 2012, the U.S. Geological Survey (USGS) installed monitoring wells in the eastern CVGB. Available water level data from these wells indicate generally rising groundwater levels over the period of data collection (USGS, 2023).

In general, historical groundwater level data show relatively stable groundwater levels in the CVGB, interrupted in the Desert Center area in the past mainly by relatively intensive agricultural pumping. Historical groundwater level data from the Desert Center area indicate rising, or recovering, groundwater levels following the cessation of most agricultural usage since the 1980s (AECOM, 2010a).

Groundwater Quality

The Project is located in the jurisdiction of the Colorado River Basin RWQCB. The Water Quality Control Plan developed by the RWQCB establishes water quality objectives, including narrative and numerical standards, to protect the beneficial uses of surface and ground waters 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) lists specific beneficial uses for groundwater. Beneficial uses of the groundwater in the CVGB are Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), and 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 northwest portions of the CVGB, arsenic concentrations have ranged from 9 micrograms per liter (ug/L) to 25 ug/L (GEI, 2010). Water quality 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).

Recent available water quality data near the proposed Project is limited to four wells, with nitrate being the only constituent analyzed in three of the four wells. Reported nitrate concentrations in all four wells were below the federal and California Maximum Contaminant Level of 10 mg/L (nitrate measured as nitrogen).

Groundwater Storage Capacity

Total groundwater storage capacity of the CVGB is estimated to be from 9,100,000 AF to 15,000,000 AF (DWR, 2004). A project-specific 2013 analysis estimated the storage capacity of the CVGB to be about 10,000,000 AF (SWRCB, 2013).

Groundwater Recharge

Recharge to the CVGB occurs from subsurface inflow from other groundwater basins, infiltration of precipitation, irrigation return flow, and wastewater return flow. Leakage from the Colorado River Aqueduct has also been identified as a possible source of inflow.

Subsurface Inflow and Mountain Front Recharge

Groundwater in the CVGB generally flows west to east. Subsurface inflow originates from the Pinto Valley and Orocopia Valley Groundwater Basins, which are west of the CVGB (DWR, 2004; BLM, 2011). The amount of inflow from the Pinto Valley and Orocopia Valley Groundwater Basins is highly uncertain, and there have been a wide range of estimates from different publications ranging from a low of 372 AFY to a high of 6,575 AFY (Aspen, 2021; Fang et al., 2021).

Two groundwater budgets were developed for the Project WSA (GSI, 2024). The first (Table 3.11-1) is a best estimate using data that have been widely reported and used in previous WSA studies (see Section 3.11.1.2 and GSI, 2024, Sections 5.7 and 5.8). The second water budget analysis (Table 3.11-2) uses lower input estimates (see Section 3.11.1.2 and GSI, 2024, Sections 5.7 and 5.8). The first, or "normal conditions" groundwater budget developed for the Project WSA uses 877 AFY as established in Fang et al. (2021) as the amount of natural groundwater recharge from subsurface inflow. This was the upper range of the groundwater inflow estimates from the Pinto Valley Groundwater Basin. Groundwater budgets in WSAs for nearby projects in the recent past have used 3,500 AFY (RWQCB, 2021), which is approximately in the middle of the range of estimates. The second, or "reduced recharge", groundwater budget uses 372 AFY as the amount of natural groundwater recharge from subsurface inflow, which was developed by Fang et al. (2021). These mountain front recharge volumes represent the upper and lower bounds in Fang et al. (2021).

Mountain front recharge is recorded as lateral subsurface flow that passes from thin mountain soil to the aquifer at the mountain foot (Fang et al., 2021). The Project WSA (GSI, 2024) groundwater budget uses 210 AFY for mountain front recharge. The analysis also applies the 107 AFY for the reduced groundwater recharge scenario. These mountain front recharge volumes represent the upper and lower bounds in Fang et al. (2021).

Infiltration of Precipitation

Groundwater recharge to the CVGB by precipitation is difficult to assess due to data quality and the aridity of the region. The CVGB receives a total precipitation of approximately 205,376 (Fang et at., 2021) to 258,000 AFY (CEC, 2010). Recharge from precipitation has been estimated by previous CVGB studies as a percentage of total precipitation. The California Energy Commission (CEC) recommended using 8,588 AFY (about 3.3 percent of total precipitation) for a conservative groundwater budget analysis (CEC, 2010). These results are supported by the findings of a study included in a USGS report on groundwater recharge in the arid and semiarid southwestern U.S. (USGS, 2007) which identified a range of approximately 3 to 7 percent of total precipitation for the Mojave Desert, depending on the amount of precipitation received. Fang et al. (2021) (using the CVGB precipitation estimate of 205,376 AFY) estimates a range of approximately 3.4 percent to 5.6 percent of precipitation that falls within the Chuckwalla Valley watershed contributes to groundwater; resulting in a groundwater recharge from precipitation range of approximately 6,983 AFY to 11,501 AFY.

The groundwater budget developed for the Project WSA (GSI, 2024) uses 8,846 AFY of groundwater recharge from precipitation. The recharge from precipitation estimate is approximately 4.3 percent of the Fang et al. (2021) estimated annual CVGB watershed precipitation. Because of the uncertainties of water budget components included in the Fang et al. (2021) water balance (see GSI, 2024, Section 5.7.1), the 5.6 percent recharge from precipitation from Fang et al. (2021) could not be used in conjunction with all of the inflow water budget components included the Project WSA. The resulting groundwater inflow estimate would have exceeded the upper bounds of the total recharge estimated by Fang et al. (2021).

For the reduced groundwater recharge scenario, 4,997 AFY of recharge from precipitation is used for the groundwater budget, representing approximately 2.4 percent of average annual precipitation (Fang et al., 2021). Similarly, because of the uncertainties of water budget components included in the Fang et al. (2021) water balance (see GSI, 2024, Section 5.7.1), the 3.4 percent recharge from precipitation from Fang et al. (2021) could not be used in conjunction with all of the inflow water budget components included the Project WSA. The resulting groundwater inflow estimate would have exceeded the lower bounds of the Fang et al. (2021) total recharge estimate.

Irrigation and Wastewater Return Flow

Irrigation water applied to crops within the CVGB has the potential to infiltrate to groundwater depending on the amount and method of irrigation, soil, crop type, and climate. The CEC estimated irrigation return recharge as 10 percent of total irrigation volume as determined by a 2009 study (WorleyParsons, 2009), and determined that 800 AFY would reach the CVGB (CEC, 2010).

Wastewater return flow within the CVGB originates from the Chuckwalla State Prison, the Ironwood State Prison, and the Lake Tamarisk development near Desert Center (CEC, 2010; WorleyParsons, 2009). The prisons use an unlined pond to dispose of treated wastewater, and it is estimated that 795 AFY infiltrates to the CVGB (WorleyParsons, 2009). Another 36 AFY is estimated to originate from Lake Tamarisk, for a total of 831 AFY (WorleyParsons, 2009).

Colorado River Aqueduct

Leakage from the Colorado River Aqueduct, which runs across the western edge of the CVGB, has not been documented, but was hypothesized by the Argonne National Laboratory (Argonne) in a 2013 study of the Riverside East Solar Energy Zone (Argonne, 2013). Argonne estimated a 2,000 AFY contribution to the CVGB from the aqueduct based on measured leakage rates from the Central Arizona Project in Arizona (Argonne, 2013). This recharge component is not well documented and, if it does occur, the use of it would require a corresponding entitlement; therefore, it is not used in the Project WSA.

Groundwater Demand/Outflow

Groundwater outflow from the CVGB occurs as subsurface flow, groundwater pumping, and evapo-transpiration. The three outflow components are summarized below.

Subsurface Outflow

Subsurface outflow from the CVGB is to the Palo Verde Mesa Groundwater Basin and has been estimated as ranging from 400 to 1,162 AFY (CEC, 2010). The Argonne 2013 study of the CVGB assumed zero subsurface outflow; however, justification was not well documented. Using gravity data, Wilson and Owens-Joyce (1994) found that the area through which discharge is suspected to occur is significantly more limited than previously thought due to the presence of a buried bedrock ridge. Given that this discovery was made after the 1,162 AFY estimate was reported (which was in 1990), the lower estimate of 400 AFY outflow was adopted for the Project WSA.

Groundwater Extraction

Current and historical groundwater extraction in the CVGB includes agricultural water use, pumping for Chuckwalla and Ironwood State Prisons, pumping for the Lake Tamarisk development and golf course, domestic pumping, and a minor amount of pumping by Southern California Gas Company (CEC, 2010). Using data from 2005 to 2010, DWR (2015) estimated the total amount of pumping at 5,000 AFY for the entire CVGB. Argonne (2013), using DWR data, estimated 5,100 AFY. Other recent studies have calculated higher estimates. Specifically, the Palen Solar Project Environmental Impact Study and CEC staff assessment for the Palen Solar Project, both used 10,361 AFY (BLM, 2011; CEC, 2010). AECOM, in a WSA for the Palen Solar Power Project (AECOM, 2010a), estimated 5,745 AFY to 7,415 AFY, with no source identified. For the purposes of this analysis, the most-recent estimate of 10,361 AFY is used as a reasonable upper estimate of total extraction, as was used by the BLM (2011) and the CEC (2015).

Since the reporting of the studies related to the Palen Solar Project, an additional approximately 340 AFY of groundwater extraction occurs within the CVGB for qualifying projects located within the Development Focus Area (RWQCB, 2021).[10] Therefore, the total baseline groundwater extraction amount determined for purposes of the Project WSA is 10,700 AFY.

Evapotranspiration

The groundwater table at the Palen Dry Lake was identified at a depth of 8 feet below the ground surface (WorleyParsons, 2009). This suggests that groundwater could be close enough to rise through capillary action and be lost through evaporation (CEC, 2010).

The CEC (2015) estimated groundwater discharge rates from Palen Dry Lake using measured evaporation rates at Franklin Lake Playa in Death Valley, adjusted for differences in the characteristics of the two dry lakes, as a reference. The result was 0.0583 feet of evapotranspiration per month, for 3 months of the year. Over the 2,000-acre area considered susceptible to groundwater evapotranspiration, this amounts to 350 AFY (CEC, 2010).

Baseline Groundwater Budget

The baseline groundwater budget is the groundwater budget for the CVGB in the absence of the Project and all other known cumulative projects not already in place. For the purposes of this analysis, agricultural uses and existing cumulative projects are considered as part of the baseline budget. There are no manufacturing water uses in the area.

Normal (Average) Year

Table 3.11-1 provides a baseline groundwater budget during normal climatic conditions for the CVGB based on the adopted information presented in Section 3.11.1.2 and the Project WSA (GSI, 2024). The baseline basin yield for the CVGB is estimated at 100 AFY (budget balance from Table 3.11-1).[11] This budget would be for a normal (average) year, in terms of precipitation and water use. Assuming a 100 AFY average year yield, the CVGB would have a surplus of approximately 5,200 AF at the end of the 52-year

[10] Qualifying completed projects (i.e., operational groundwater uses only) contributing to the baseline groundwater extraction include Genesis Solar Electric Plant (218 AFY), Desert Sunlight Solar Farm (0.3 AFY), Desert Harvest Solar Project (40 AFY), Athos Renewable Energy Project (40 AFY), and Palen Solar Project (41 AFY) (RWQCB, 2021).

[11] Basin Yield is the volume of pumping that can be extracted from the basin on a long-term basis without creating a chronic and continued lowering of groundwater levels and the associated reduction in the volume of groundwater in storage. Basin yield is not a fixed constant value but a dynamic value that fluctuates over time as the balance of the groundwater inputs and outputs change. Basin yield is not the same as sustainable yield. Sustainable yield is defined in SGMA as "the maximum quantity of water, calculated over a period representative of long-term conditions in the basin and including any temporary surplus that can be withdrawn annually from a groundwater supply without causing an undesirable result" (California Water Code 10721).

period, meaning groundwater levels and groundwater in storage in the CVBG would gradually recover from deficit that may have been created during past periods of increased agricultural pumping.[12]

Table 3.11-1. Estimated Normal Baseline Groundwater Budget for Chuckwalla Valley Groundwater Basin

Budget Components	Acre-Feet per Year
Inflow	
Recharge from Precipitation[1]	8,846
Underflow from Pinto Valley and Orocopia Valley Groundwater Basins[2]	877
Mountain Front Recharge[3]	210
Irrigation Return Flow[4]	800
Wastewater Return Flow[5]	831
Total Inflow[9]	11,600
Outflow	
Groundwater Extraction[5]	–10,700
Underflow to Palo Verde Mesa Groundwater Basin[7]	–400
Evapotranspiration at Palen Dry Lake[8]	–350
Total Outflow[9]	–11,500
Budget Balance (Inflow – Outflow)[9]	100

Notes
[1] Fang et al., 2021
[2] Fang et al., 2021
[3] Fang et al., 2021
[4] CEC, 2010
[5] WorleyParsons, 2009
[6] Based on RWQCB, 2021, plus extractions of existing cumulative projects.
[7] CEC, 2010
[8] CEC, 2010
[9] Due to rounding, the total does not correspond to the exact sum of all figures shown.

Dry Year

Because of the uncertainties involved and to provide a range of values, two groundwater budgets were developed for the Project WSA. The first (Table 3.11-1) is a best estimate using data from recently developed numerical groundwater models for the CVGB and data used in previous WSA studies (see Section 3.11.1.2 and Project WSA Section 5.7 and 5.8). The second water budget analysis (Table 3.11-2) uses lower input estimates (see Section 3.11.1.2 and GSI, 2024, Sections 5.7 and 5.8). Specifically, the second budget uses a recharge from precipitation estimate of 4,997 AFY, and an underflow from the Pinto Valley Groundwater Basin of 372 AFY. All other inflow/outflow estimates are the same for both budgets. The two groundwater budgets together provide insight into a range of potential outcomes related to groundwater use in the CVGB.

Using the lower estimates of precipitation and underflow recharge, the baseline budget indicates the CVGB to be in deficit, with a loss of approximately 4,400 AFY, resulting in a cumulative deficit of approximately 228,800 AFY over the 52-year period. Groundwater levels would be expected to lower and the volume of groundwater in storage would decrease.

[12] The 52-year period is equivalent to the Project's approximate 2-year construction period, assumed 48-year operational period, and estimated 2-year decommissioning period.

Table 3.11-2. Estimated Normal Baseline Groundwater Budget for the Chuckwalla Valley Groundwater Basin Using Reduced Estimates of Precipitation and Subsurface Inflow

Budget Components	Acre-Feet per Year
Inflow	
Recharge from Precipitation[1]	4,997
Underflow from Pinto Valley and Orocopia Valley Groundwater Basins[2]	372
Mountain Front Recharge[3]	107
Irrigation Return Flow[4]	800
Wastewater Return Flow[5]	831
Total Inflow[9]	7,100
Outflow	
Groundwater Extraction[6]	–10,700
Underflow to Palo Verde Mesa Groundwater Basin[7]	–400
Evapotranspiration at Palen Dry Lake[8]	–350
Total Outflow[9]	–11,500
Budget Balance (Inflow – Outflow)[9]	–4,400

Notes
[1] Fang et al., 2021
[2] Fang et al., 2021
[3] Fang et al., 2021
[4] CEC, 2010
[5] WorleyParsons, 2009
[6] Based on RWQCB, 2021, plus extractions of existing cumulative projects.
[7] CEC, 2010
[8] CEC, 2010
[9] Due to rounding, the total does not correspond to the exact sum of all figures shown.

3.11.2. Regulatory Framework

3.11.2.1. Federal Laws, Regulations, and Policies

Clean Water Act (CWA) (33 USC § 1251 et seq.). Formerly the Federal Water Pollution Control Act of 1972, the CWA was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA authorizes the USEPA to implement federal water pollution control programs such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling point and nonpoint source pollution. At the federal level, the CWA is administered by the U.S. Environmental Protection Agency (USEPA) and USACE. However, the CWA gives states the primary responsibility for protecting and restoring surface water quality. At the state and regional levels, the Act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine RWQCBs. The Project site is located within the Colorado River Basin Region, over which area the Colorado River Basin RWQCB has primary responsibility for the protection of water quality.

Section 303 of the federal CWA (as well as the Porter-Cologne Water Quality Control Act, discussed further below) requires that states adopt water quality standards. Water quality standards consist of designated beneficial uses, numeric and narrative water quality criteria (also referred to as “water quality objectives” under state law) that protect beneficial uses, as well as the state and federal antidegradation policies. Each RWQCB has a Water Quality Control Plan (Basin Plan) that designates beneficial uses, establishes

water quality objectives to protect the beneficial uses, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan.

The RWQCB sets water quality objectives to ensure the protection of beneficial uses and the prevention of nuisance, although it is understood that water quality can be changed to some degree without unreasonably affecting beneficial uses (RWQCB, 2019). Current objectives for surface water in the area include those for aesthetic qualities, tainting substances, toxicity, temperature, pH, dissolved oxygen, suspended and settleable solids, dissolved solids, bacteria, biostimulatory substances, sediment, turbidity, radioactivity, chemical constituents, and pesticide wastes. Groundwater objectives include those for taste and odors, bacteriological quality, chemical and physical quality, brines, and radioactivity. The RWQCB has objectives for groundwater overdraft for several specific groundwater basins, but the CVGB is not listed among these (RWQCB, 2019).

Section 402 of the CWA provides that the discharge of pollutants to Waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. 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. Amendments to the CWA added a framework for regulating municipal and industrial stormwater discharges, as well as stormwater discharges from construction sites. In California, the SWRCB and the nine RWQCBs have been delegated permitting authority for discharges regulated by NPDES permits.

The RWQCB administers the NPDES stormwater permitting program. Construction activities disturbing one acre or more of land are subject to the permitting requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit, Order 2009 0009 DWQ as amended by Orders 2010 0014 DWQ and 2012 0006 DWQ), as described further below. Additionally, the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial General Permit, Order 2014 0057 DWQ as amended in 2015 and 2018) regulates discharges of stormwater associated with certain industrial activities, excluding construction activities.

Section 404 of the CWA authorizes the USACE to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Filling of waters of the U.S. must be avoided where possible and minimized and mitigated where avoidance is not possible. Permits are issued by the USACE.

Section 401 of the CWA requires that any applicant for a federal license or permit to conduct an activity that may result in a discharge into waters of the U.S. obtain a certification from the State in which the discharge originates that the discharge will comply with the applicable provisions of CWA Sections 301, 302, 303, 306, and 307. This certification ensures that the proposed activity complies with state water quality standards.

Because the USACE has determined that waters on the Project site are not jurisdictional Waters of the United States under the CWA, no NPDES permits under Section 402 or 404 are required, nor is a water quality certification under Section 401. Water quality impacts from the Project will be addressed under state law through Waste Discharge Requirements.

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 (USGS, 2009). The accounting-surface method was developed in the 1990s by the U.S. Geological Survey, in cooperation with the U.S. Bureau of Reclamation, 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 water 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 United States Supreme Court in Arizona v. California. The method is based on the concept of a river aquifer and an accounting surface within the river aquifer. Wells within the CVGB that draw water from below the accounting surface require an entitlement for the use of that water (USGS, 2009). Within the Project area, the accounting surface is at elevation 238 to 240 feet (USGS, 2009). Extractions of water below that elevation are prohibited without an entitlement. Entitlements to extract and use the groundwater below the accounting surface are granted by the U.S. Bureau of Reclamation (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.

3.11.2.2. State Laws, Regulations, and Policies

California Streambed Alteration Agreement

Sections 1600–1616 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 CDFW. If CDFW determines the proposed alteration will impact a jurisdictional river, stream or lake, a Lake or Streambed Alteration Agreement (LSAA) will be prepared. The LSAA applies to any stream, including ephemeral streams and desert washes.

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code § 13000 et seq.) establishes the SWRCB and each RWQCB as the principal state agencies with primary responsibility to coordinate and control water quality in California, in accordance with Section 303 of the CWA. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs' operations. The RWQCBs have jurisdiction over specific geographic areas that are defined by watersheds. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the State could cause pollution or nuisance, including impacts to public health and the environment. Waters of the State is defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the State."

Actions that involve or are expected to involve discharge of waste to waters of the State (other than into a community sewer system) may be subject to Water Discharge Requirements (WDRs) under the Porter-Cologne Act. The Act requires anyone proposing to discharge waste that could affect the quality of the waters of the State to submit an application to the appropriate RWQCB. The RWQCB staff will review the application and determine whether to propose adoption of WDRs to regulate the discharge, prohibit the discharge, or waive the WDRs. The Porter-Cologne Act also provides a variety of civil and criminal enforcement tools.

State Wetland Procedures. WDRs under the Porter-Cologne Act are issued for discharges of dredged or fill material to waters of the State that are outside federal jurisdiction and not regulated under CWA Section 401. On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to Waters of the State (Procedures), which became effective May 28, 2020, and were revised April 6, 2021. Applicants proposing to discharge dredged or fill material are required to comply with the Procedures and obtain WDRs from the appropriate RWQCB unless an exclusion applies, or the discharge qualifies for coverage under a separate order.

The Procedures provide that unavoidable temporary and permanent adverse impacts to waters of the State authorized by WDRs should be offset through compensatory mitigation. Compensatory mitigation means the re-establishment, establishment (creation), rehabilitation, enhancement, and in some circumstances, preservation, of aquatic resources. The permitting authority must determine the compensatory mitigation to be required in the WDRs, based on what would be environmentally preferable.

SWRCB Construction General Permit

The Construction General Permit, issued pursuant to the federal CWA, regulates stormwater runoff from construction sites of one acre or more in size. The permit is a statewide, general order issued by the SWRCB and implemented and enforced by the RWQCBs. For all new qualifying projects, applicants must electronically file permit registration documents using the Stormwater Multiple Application and Report Tracking System (SMARTS) and must include a Notice of Intent (NOI), risk assessment, site map, and Storm Water Pollution Prevention Plan (SWPPP) to be covered by the Construction General Permit prior to beginning construction. The risk assessment and SWPPP must be prepared by a State-qualified SWPPP Developer.

The Construction General Permit requires the preparation and implementation of a SWPPP, which must be prepared before construction begins. At a minimum, a SWPPP includes the following:

- A description of construction materials, practices, and equipment storage;
- A list of pollutants likely to contact stormwater and site-specific erosion and sedimentation control practices;
- A list of provisions to eliminate or reduce discharge of materials to stormwater;
- Best Management Practices (BMPs) for fuel and equipment storage;
- Non-stormwater management measures such as installing specific discharge controls during activities such as paving operations and vehicle and equipment washing and fueling; and
- A commitment that equipment, materials, and workers will be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs will be performed as soon as possible, depending upon worker safety.

The SWPPP provides specific construction related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented at a typical construction site could include but would not be limited to physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. Post-construction requirements require that construction sites match pre-Project hydrology to ensure that the physical and biological integrity of aquatic ecosystems are sustained in their existing condition.

The Construction General Permit prohibits the discharge of pollutants other than stormwater and authorized non-stormwater discharges and prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 CFR §§ 117.3 and 302.4 (pursuant to CWA Section

311). In addition, the Construction General Permit incorporates discharge prohibitions contained in water quality control plans. Discharges to Areas of Special Biological Significance are prohibited unless covered by an exception that the SWRCB has approved. Authorized non-stormwater discharges must be infeasible to eliminate; comply with BMPs as described in the SWPPP; filtered or treated using appropriate technology; meet the established numeric action levels for pH and turbidity; and not cause or contribute to a violation of water quality standards. Discharges to stormwater that cause or threaten to cause pollution, contamination, or nuisance are prohibited. Pollutant controls must utilize best available technology economically achievable (BAT) for toxic pollutants and non-conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants.

The CWA provides definitions for the types of controls that can be used to satisfy BAT and BCT requirements. Specific BAT and BCT pollution controls and BMPs 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.

SWRCB Industrial General Permit

The Industrial General Permit regulates discharges of stormwater to surface waters associated with certain broad categories of industrial activities. The Industrial General Permit requires the implementation of management measures that will achieve the performance standard of BAT for toxic pollutants and non-conventional pollutants and BCT for conventional pollutants. The Industrial General Permit also requires the development of a SWPPP and a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce stormwater pollution are described. The monitoring plan requires sampling of stormwater discharges during the wet season and visual inspections during the dry season.

BMPs may include, but not be limited to, spill and overflow protection, stormwater control, covering of fueling areas, proper clean-up methods, spill prevention, preventative maintenance on equipment, inspections, and training. Specific BMPs vary by situation and site.

SWRCB Policies

The State Antidegradation Policy (Resolution No. 68 16). Discharges of waste to high quality waters must comply with SWRCB Resolution No. 68 16, Statement of Policy with Respect to Maintaining High Quality of Waters in California, which generally requires that high quality waters be protected. Any change in water quality from the discharge of waste must be consistent with maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses, and not result in water quality less than that described in SWRCB or RWQCB policies. Any activity which discharges waste to existing high-quality waters must meet waste discharge requirements and implement the best practicable treatment or control of the discharge necessary to assure that: (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained (RWQCB, 2019).

The State Antidegradation Policy also incorporates the federal antidegradation policy which requires the maintenance and protection of existing uses and water quality conditions necessary to support such uses. In addition, the federal antidegradation policy maintains and protects water quality in outstanding national resource waters.

Sources of Drinking Water Policy (Resolution No. 8863). This policy designates all groundwater and surface waters of the States as potential sources of drinking water, worthy of protection for current or future beneficial uses, except where: (a) the total dissolved solids are greater than 3,000 milligrams per liter, (b) the well yield is less than 200 gallons per day (gpd) from a single well, (c) the water is a geothermal

resource, or in a water conveyance facility, or (d) the water cannot reasonably be treated for domestic use using either best management practices or best economically achievable treatment practices (RWQCB, 2019).

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, and supports two kinds of 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 as 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 that provides water service whose service area includes a groundwater basin or portion thereof that is not subject to groundwater management pursuant to a judgment or other order, to adopt and implement a groundwater management plan (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 in excess of 25 acre-feet (AF) of water in any one year must file a "Notice of Extraction and Diversion of Water" with the SWRCB. (California Water Code §§ 4999 et seq.)

The Project is located on land that overlies the CVGB, for which a method was developed by the USGS, in cooperation with the 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 the USBR. However, wells placed into the groundwater beneath and within the Project's vicinity that extract groundwater may, depending on whether the groundwater surface is above or below the accounting surface, be considered as drawing water from the Colorado River and require an entitlement to extract groundwater.

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 city and county decisionmakers prior to approval of specified large development projects. SB 610 requires that a project be supported by a Water Supply Assessment if the project is subject to the California Environmental Quality Act, and would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling-unit project. According to SB 610 Guidelines, one dwelling unit typically consumes 0.3 to 0.5 acre-feet per year (AFY), which would amount to 150 to 250 AFY for 500 units.

3.11.2.3. Local Laws, Regulations, and Policies

Riverside County Ordinance No. 682 (As Amended Through 682.4)

This ordinance regulates the construction, reconstruction, abandonment, and destruction of wells and incorporates by reference Ordinance No. 725 (Penalties for Violations of Riverside County Ordinances). The purpose of this ordinance is to provide minimum standards for construction, reconstruction, abandonment, and destruction of all wells to: (a) protect underground water resources; and (b) provide safe water to persons within Riverside County. The provisions of this ordinance within its jurisdiction are enforced by the Riverside County Department of Environmental Health.

Ordinance No. 650 (As Amended Through 650.6)

Ordinance 650 regulates the discharge of sewage in the unincorporated areas of the County of Riverside and incorporating by reference the Riverside County Local Agency Management Program (LAMP) for Onsite Wastewater Treatment Systems. This ordinance protects water quality and public health by establishing regulations for the installation, replacement, and performance of Onsite Wastewater Treatment Systems. This ordinance provides minimum standards for construction, operation, and abandonment of Onsite Wastewater Treatment Systems (OWTSs). An OWTS is any individual on-site wastewater treatment, pretreatment and dispersal system including, but not limited to, a conventional or alternative OWTS having a subsurface discharge. The LAMP presents County of Riverside OWTS policy, regulations, and standards.

The development and operation of the proposed Project would be done in compliance with County ordinances regulating wells and sewage discharges and protecting water resources.

3.11.3. Methodology for Analysis

The impact analysis analyzes potential direct, indirect, and cumulative impacts of the proposed Project on water resources, including the Project's potential to adversely affect groundwater supplies, alter geomorphic features/processes, modify drainage and flooding conditions, induce erosion and sedimentation, and degrade water quality. The analysis also considers the potential for incremental impacts of the Project to combine with impacts of other projects and activities to adversely affect water resources. Mitigation measures to avoid or reduce potential impacts are identified, and the potential for residual impacts is evaluated.

3.11.4. CEQA Significance Criteria

The criteria used to determine the significance of potential hydrology and water quality impacts are based on Appendix G of the State CEQA Guidelines. The Project would result in a significant impact under CEQA related to hydrology and water quality if the Project would:

- *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (See Impact HWQ-1).*
- *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin (See Impact HWQ-2).*
- *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
  - *result in substantial erosion or siltation on- or off-site (See Impact HWQ-3A);*

- *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite (See Impact HWQ-3B);*
- *create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (See Impact HWQ-3C); or*
- *impede or redirect flood flows (Impact HWQ-3D).*

- *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (See Impact HWQ-1).*

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:

- *Cause changes in absorption rates or the rate and amount of surface runoff (See Impact HWQ-3);*
- *Cause changes in the amount of surface water in any water body (See Impact HWQ-3 and HWQ-3);*
- *Substantially degrade water quality (See Impact HWQ-1); or*
- *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (See Impact HWQ-4).*

The following CEQA significance criteria from Appendix G were not included in the analysis:

- *In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?*

  There is no body of water in the area that could produce a tsunami or seiche. There is therefore no impact related to seiche or tsunami.

The following CEQA significance criterion from the County's Environmental Assessment Form were not included in the analysis:

- *Include new or retrofitted Storm Water Treatment Control BMPs (e.g., water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (i.e., increased vectors and/or odors).*

  No new or retrofitted Storm Water Treatment Control BMPs are included in the proposed Project. Therefore, this criterion is not applicable to the Project.

3.11.5. Applicable Best Management Practices

A Stormwater Pollution Prevention Plan (SWPPP) or SWPPP-equivalent document would be prepared by a qualified engineer or erosion control specialist, and once approved by the State Water Resources Control Board and a BLM hydrologist, would be implemented before and during construction. The SWPPP 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.

3.11.6. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to hydrology and water quality. Regarding surface water, concerns were raised about the potential for floods due to the modification of washes and removal of vegetation, creating impacts to

stormwater runoff. The public also expressed concerns that flash floods could cause undetermined changes in erosion patterns.

Issues related to water resources, hydrology, and water quality raised during scoping include the quantity of water needed for the Project and the source of the groundwater. Comments included specific questions regarding groundwater availability and water quality in the CVGB, such as groundwater pumping, pollution, and the effect on regional aquifers and existing community and domestic water supply infrastructure and project maintenance operations (e.g., weed abatement) impacting groundwater quality. Commenters also recommend that BLM require all applicable Conservation and Management Actions (CMAs) from the Desert Renewable Energy Conservation Plan (DRECP) to prevent groundwater overdraft.

Commenters recommended that the impacts of changing precipitation patterns due to climate change should be analyzed, and this should be considered regarding groundwater availability and when developing a stormwater plan. The placement of panels within and adjacent to washes should be analyzed and designed to minimize impacts. Multiple commenters suggested that there would be impacts to jurisdictional Waters of the U.S. and Waters of the State of California, and surface hydrology on the site. The California Department of Fish and Wildlife (CDFW) recommended micro-siting the Project to avoid and protect ephemeral drainages or desert washes and dry wash woodlands. The U.S. EPA recommends a revised site plan to avoid critical habitat, as prescribed by CMAs.

These concerns are addressed in the analysis below. Note that the purpose of the Water Supply Assessment (EIR Appendix G) according to the DRECP LUPA is to determine whether over-use or overdraft conditions exist within the project basin(s), and whether the project creates or exacerbates these conditions. Compliance with DRECP CMAs will be determined by BLM during the NEPA process and is outside of the scope of CEQA.

Groundwater Budget with the Project in Place

In June 2023, BLM issued a Proposed Rule to amend its existing ROW regulations, issued under authority of the Federal Land Policy and Management Act (FLPMA), and is considering issuing Right-of-Way (ROW) grants for durations of up to 50 years (BLM, 2023). To prepare for potential issuance of a 50-year ROW grant by the BLM and to determine whether there are sufficient supplies to sustain the Project, the Easley WSA (EIR Appendix G) conservatively extends the total projected period of the Project to 52-years. For the purpose of the CVGB water budget (see GSI, 2024 Section 6) and predictive Project water demand impacts analysis (see GSI, 2024 Sections 5.4 and 7) presented herein, 52 years is equivalent to the projected total duration of the Project, including construction (20 months), operations (48 years), and decommissioning (20 months).[13]

The CVGB is assumed to be the water source for all groundwater demand (i.e., groundwater would not be imported from outside of the CVGB). Total water use by the Project would be up to 1,000 AF during the planned 20-month construction period and up to 50 AFY during the Project's operational and decommissioning periods.[14] Based upon these quantities of water demand, a total of approximately 3,500 AF of water would be used by the Project over the Project's construction, operational, and decommissioning periods (52 years [i.e., 2-year construction period, 48-year operational period, and 2-year decommissioning period]).

[13] Although the estimated Project construction period and decommissioning period described in the EIR Chapter 2 (Project Description) is 20 months, the water budgets (see GSI, 2024 Section 6) and Cone of Depression and Cumulative Drawdown Analysis (see GSI, 2024 Section 7), were developed in 1-year time steps, and therefore, assume the same overall water usage but over Project construction and decommissioning periods of 2 years.

[14] It is assumed that Project decommissioning would take approximately 20 months, similar to the construction duration, and have the same water use as Project operations (approximately 50 acre-feet per year). Project decommissioning would occur in accordance with an agency-approved Closure and Decommissioning Plan. The Project Closure and Decommissioning Plan will include an evaluation of alternate water sources and impacts, if any, in accordance with the DRECP LUPA.

Based on the budget balance given in Table 3.11-1, the CVGB under average-year conditions would have a cumulative surplus of 5,200 AF during the 52-year period. The net CVGB surplus with the Project in place would therefore be 1,700 AF, or 33 percent of the surplus that would exist without the Project. By contrast, using the reduced recharge rates for precipitation and underflow (Table 3.11-2), the 52-year deficit without the Project would be 228,800 AF, increased to 232,300 AF by the Project. The Project would contribute about 2 percent to this cumulative deficit.

According to SB 610 guidelines, a dry year can be considered a year with a precipitation amount that is at 10 percent probability of occurrence. A critical dry year would be a year with 3 percent probability. The historical precipitation data at Blythe, California, approximately 35 miles east of the Project and at a similar elevation with similar climate, was used as a reference. Historical precipitation data for Blythe, dating from 1893 to 2014, was obtained from the U.S. Historical Climatology Network (NOAA, n.d.[b]). A nearby station at the Blythe Airport (NOAA, n.d.[a]) was used to supplement additional data for up to the year 2021.

The baseline groundwater budgets for a dry year and critical dry year are expected to have a deficit of approximately 5,900 AF for a dry year, increasing to 7,100 AF for a critical dry year. Using the reduced estimates of precipitation and underflow recharge, each scenario, dry year and critical dry year, would have annual groundwater deficits, amounting to 8,000 AFY and 8,700 AFY, respectively. For a single dry year and single critical dry year with the Project in place, the worst-case scenario is for one of those year types, dry or critical dry, to occur during the construction period of the Project (assumed to be 2024 to 2025) in which up to 1,000 AF of water would be used. If a dry year or critical dry year occurs during this period, the CVGB annual deficit would be approximately 6,400 AF and 7,600 AF, respectively. The Project would increase the dry year and critical dry year deficit by 8 and 7 percent, respectively, if one of those year types were to occur during the construction period of the Project. Assuming normal precipitation returns, this total deficit (dry year plus Project use) would not be recovered during the 52-year period, with or without the Project.

The longest consecutive series of years with below average precipitation on record at Blythe was 12 years, from 1893 to 1904. During this period, the average annual precipitation was 1.42 inches, or about 42 percent of the overall average. This period was considered to be representative of a series of multiple dry years for the Project WSA. Development of a 12-year groundwater budget, assuming a repeat of the 1893 to 1904 drought at Blythe, without Project conditions, indicates the cumulative groundwater deficit would be approximately 60,950 AF at the end of the 12-year period. Using the reduced estimates of precipitation and subsurface recharge, at the end of the 12-year period the cumulative groundwater deficit would be approximately 87,570 AF.

The precipitation record indicates that a series of dry years has typically been followed by a series of years with above-average precipitation. To assess the probable effect of this over the 52-year life of the Project, a 52-year running average analysis was made of the 129-year precipitation period of record. The driest 52-year period was the period beginning in 1893 and ending in 1944. Average annual precipitation during this period was 3.44 inches, or about 1 percent greater than normal. If a repeat of this 52-year period occurs under current (no qualifying projects not already in place) conditions, at the end of the 52-year period the CVGB would have a deficit of approximately 21,060 AF assuming adopted precipitation and infiltration conditions (see Tables 3.11-1 and 3.11-2). The greatest groundwater deficit during the repeated drought period would occur during 2039, in which the total deficit would be approximately 64,170 AF. Using reduced recharge data, the same analysis results in a groundwater deficit totaling approximately 214,020 AF after 52 years.

The same analysis with the Project in place gives similar results as the one without Project conditions, with a total groundwater surplus of approximately 17,530 AF at the end of 52 years. Using reduced

recharge data, the same analysis, with the Project in place, results in a groundwater deficit totaling approximately 217,520 AF after 52 years.

Impact HWQ-1. Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Surface Water

LESS THAN SIGNIFICANT WITH MITIGATION. Construction of the Project would require ground-disturbing activities (excavation, grading, and compaction) of a minority of the ground surface (about 2.7 percent) of the project site for access roads, buildings, substation, and other features. In addition, approximately 54 percent of the project site would be levelled and smoothed for the solar facility. These ground-disturbing activities, describe in more detail in Tables 2-2 and 2-3 of Section 2, could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local ephemeral streams. Downstream beneficial uses could be adversely affected through violation of RWQCB water quality standards and objectives for suspended solids, total dissolved solids, sediment, and turbidity.

Accidental spills or disposal of harmful materials used during construction of the Project could wash into and pollute surface waters. Materials that could contaminate the construction area or spill or leak include diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, anti-freeze, transmission fluid, lubricating grease, and other fluids. Downstream beneficial uses could be adversely affected through violation of RWQCB water quality objectives for toxicity and chemical constituents. Likely downstream beneficial uses in the Project area include GWR and WILD.

The dry nature of most of the surface streams is such that should harmful material spills occur during construction, these could easily be cleaned up prior to surface water being contaminated. Storage procedures for hazardous materials during construction would be dictated by the Hazardous Materials Plan (HMP) that would be prepared prior to construction. Trucks and construction vehicles would be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and county regulations. Other construction wastes would be collected and recycled or disposed of in municipal county landfills.

The Applicant has committed to development and adherence to an SWPPP or SWPPP-equivalent document, 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.

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. The Project would include electrical transformers, modifications to an existing electrical substation, an operations and maintenance building, and battery storage systems (BESS). 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 HMP would be prepared to provide protocols for containment and clean-up of spills.

Alterations to site topography due to the site preparation would affect both RWQCB and CDFW jurisdictional waters of the State that traverse the Project site. Surface flow patterns would be affected by alteration to jurisdictional waters of the State (unvegetated ephemeral washes and desert wash woodland) on the site which could result in increased siltation or downstream erosion. Drainage controls,

including berms and potentially channels, would be required in some areas to capture and direct stormwater flow around Project facilities such as the BESS.

Construction of the Project would avoid most desert dry wash woodland in accordance with BLM's CMA LUPA-BIO-RIPWET 1. Changes to streambeds classified as RWQCB and CDFW jurisdictional waters of the State would require the Applicant to obtain a LSAA from the CDFW and a waste discharge (WDR) permit from the Colorado River Basin RWQCB. The LSAA and WDR may require compensatory mitigation for impacts to waters of the State. Impacts related to surface water degradation due to alterations to waters of the State would be minimized or prevented through compliance with CDFW and RWQCB regulations and permits and implementation of Mitigation Measures (MM) BIO-3 (Minimization of Vegetation and Habitat Impacts), MM BIO-5 (Vegetation Resources Management Plan), MM BIO-13 (Streambed and Watershed Protection), MM HWQ-1 (Drainage Erosion and Sedimentation Control Plan (DESCP)), and MM HWQ-5 (Project Drainage Plan).

Existing State and federal water quality regulations, including the proposed SWPPP, are intended to ensure that water quality standards and waste discharge standards not be violated during construction or operations. However, portions of the site would be subject to flooding. Although mass grading is not proposed, some ground disturbance is expected, and some of the solar panels and other proposed structures would be placed in areas that are subject to flooding, creating a potential for erosion and sedimentation leading to potential water quality impacts during operations. Mitigation Measure HWQ-1 requires the development of a Drainage Erosion and Sedimentation Plan that would address and mitigate erosion impacts during construction and operations.

Decommissioning of the Project is expected to result in adverse 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.

Groundwater

LESS THAN SIGNIFICANT WITH MITIGATION. Groundwater quality impacts could occur during construction if contaminated or hazardous materials used during construction were to be released and allowed to migrate to the groundwater table. Given adherence to the Project Hazardous Materials Business Plan and the NPDES General Permit for Construction Activities, the potential for such impacts to groundwater quality are low.

The Project would produce sanitary wastewater from the O&M building, which would be treated and disposed of at the Project using a septic disposal system. The federal (EPA), state (RWQCB) and local (Riverside County Department of Environmental Health) governments have requirements for septic system design, including requirements for percolation, vertical distance from the groundwater table, and setback from the nearest groundwater well. The use and application of septic fields is an established practice as a method of wastewater treatment. The use of a septic system within the designed system capacity is not anticipated to cause groundwater quality degradation.[15]

DWR has categorized the CVGB as a low-priority basin under the SGMA (DWR, 2020). Per SGMA, due to the CVGB classification as a low-priority basin, a Groundwater Sustainability Plan (GSP) is not required to be developed for the CVGB. As of this writing, no GSP has been developed for the CVGB.

The Project is located in the jurisdiction of the Colorado River Basin RWQCB. The Water Quality Control Plan developed by the 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

[15] Use of a septic system is subject to regulatory approval and issuance of an applicable permit.

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. The Water Quality Control Plan for the Colorado River Basin Region (RWQCB, 2019) lists specific beneficial uses for groundwater. Beneficial uses of the groundwater in the CVGB are Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), and 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 northwest portions of the CVGB, arsenic concentrations have ranged from 9 micrograms per liter (µg/L) to 25 µg/L (GEI, 2010). Water quality 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).

Recent available water quality data near the proposed Project is limited to four wells, with nitrate being the only constituent analyzed in three of the four wells. Reported nitrate concentrations in all four wells were below the federal and California Maximum Contaminant Level of 10 mg/L (nitrate measured as nitrogen).

Pursuant to BLM (2016a and 2016b) requirements, a WSA must include an analysis of "estimates of the total cone of depression considering cumulative drawdown from all potential pumping in the basin, including the project, for the life of the project through the decommissioning phase." To evaluate the potential cone of depression induced by proposed Project groundwater pumping and cumulative drawdown from all cumulative projects (see GSI, 2024 Table 12), a predictive MODFLOW groundwater model (Model) was developed and projected for the 52-year duration of the Project. The Model incorporated estimated inflow and outflow terms consistent with the Project water budget presented in Section 6 of GSI (2024) as well as hydrogeological properties used in the Fang et al. (2021) numerical groundwater model.

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 (500 AFY) is an approximately 4.5-mile radius cone of depression out to 0.5 feet of drawdown. Project operational and decommissioning pumping (50 AFY) for 50 years has a cumulative drawdown with an approximately 15-mile radius out to 0.5 feet of drawdown. This zone of influence also includes pumping from cumulative projects.

The modeling results indicate that impacts to groundwater levels as a result of Project and cumulative project pumping are confined to the northwestern part of the CVGB. Although most of the non-cumulative project pumping (see GSI, 2024 Section 5.8.2) in the CVGB occurs in the northwestern part of the CVGB, total agricultural, municipal, and domestic pumping is limited and the magnitude of the simulated drawdown is not anticipated to adversely affect existing water users and water rights claimants in the CVGB.

Based on the simulated drawdown due to Project and cumulative project pumping, and the size and storage capacity of the CVGB, the Project is not anticipated to result in changes in water quality that affect other beneficial uses.

Mitigation Measures (MMs) to reduce Impact HWQ-1 include MM HWQ-1 (Drainage Erosion and Sedimentation Plan) and MM HWQ-2 (Septic System Review and Permitting) which would enable the Riverside County Department of Environmental Health to ensure that the Project is compliant with Riverside County, RWQCB, and EPA regulations and protective of water quality. Mitigation Measure

HWQ-3 (Palo Verde Mesa Groundwater Basin Protection) would implement a Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP) for the Project in coordination with the RWQCB and BLM to ensure that groundwater wells surrounding Project supply well(s) are not adversely affected (i.e., chronic lowering of groundwater levels and degradation of groundwater quality) by Project activities.[16]

Mitigation Measures for Impact HWQ-1

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan.** See full text in Section 3.5 (Biological Resources).

MM BIO-13 **Streambed and Watershed Protection.** See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan (DESCP).** See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-2 **Septic System Review and Permitting**. See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-3 **Palo Verde Mesa Groundwater Basin (PVMGB) Protection**. See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-5 **Project Drainage Plan**. See full text in Section 3.11.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with the implementation of recommended mitigation measures.

Impact HWQ-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?

LESS THAN SIGNIFICANT WITH MITIGATION. In June 2023, BLM issued a Proposed Rule to amend its existing ROW regulations, issued under authority of the Federal Land Policy and Management Act (FLPMA), and is considering issuing ROW grants for durations of up to 50 years (BLM, 2023). To determine whether there are sufficient supplies to sustain the Project, the Easley WSA (EIR Appendix G) extends the total projected period of the Project to 52-years. For the purpose of the CVGB water budget (see GSI, 2024 Section 6) and predictive Project water demand impacts analysis (see Sections GSI, 2024 5.4 and 7), 52 years is equivalent to the projected total duration of the Project, including construction (20 months), operations (48 years), and decommissioning (20 months).[17] Based upon these quantities of water demand, a total of approximately 3,500 AF of water will be used by the Project over the Project's construction, operational, and decommissioning periods (52 years [i.e., 2-year construction period, 48-year operational period, and 2-year decommissioning period]).

Water for construction, operation, and decommissioning would be obtained from several potential sources, including an on-site groundwater well, an off-site groundwater well, and trucked from an off-site

[16] Groundwater quality thresholds are pursuant to federal and state regulations, including the Water Quality Control Plan for the Colorado River Basin Region (RWQCB, 2019).

[17] Although the estimated Project construction period and decommissioning period described in the EIR Chapter 2 (Project Description) is 20 months, the water budgets (see GSI, 2024 Section 6) and Cone of Depression and Cumulative Drawdown Analysis (see GSI, 2024 Section 7), were developed in 1-year time steps, and therefore, assume the same overall water usage but over Project construction and decommissioning periods of 2 years.

water purveyor. However, it is assumed all Project water needs would be sourced from the CVGB. Groundwater has been identified as the primary source of water in the CVGB. DWR has categorized the CVGB as a low-priority basin under SGMA (DWR, 2020).

In accordance with SB 610 and the DRECP Land Use Plan Amendment (LUPA), and to determine whether there are sufficient supplies to sustain the Project, a 52-year water budget was developed for the Project. The water budget uses information summarized in Section 3.11 to provide a baseline normal-year groundwater budget for the CVGB. The water budget also includes a normal-year groundwater budget assuming the Project is in place. A second groundwater budget was developed for the Project WSA using lower input estimates (see Section 3.11.1.2 and GSI, 2024, Sections 5.7 and 5.8). The same approach was repeated for both water budgets for single and multiple dry-year scenarios. Details and the results of the analysis are summarized in Section 3.11.1.2 and presented in the Project WSA (GSI, 2024).

The CVGB under average-year conditions would have a cumulative surplus of 5,200 AF at the end of the 52-year period. The net CVGB surplus with the Project in place would therefore be 1,700 AF, or 33 percent of the surplus that would exist without the Project. By contrast, using the reduced recharge rates for precipitation and underflow (see Table 5), the 52-year deficit without the Project would be 228,800 AF, increased to 232,300 AF by the Project. The Project would contribute about 2 percent to this cumulative deficit.

Using the reduced estimates of precipitation and underflow recharge, for a single dry year and single critical dry year with the Project in place, the worst-case scenario is for one of those year types, dry or critical dry, to occur during the construction period of the Project (assumed to be 2024 to 2025) in which the Project would increase the dry year and critical dry year deficit by 8 and 7 percent, respectively. Assuming normal precipitation returns, this total deficit (dry year, or critical dry year, plus Project use) would not be recovered during the 52-year period (with or without the Project). Using reduced inflow data, these deficits would increase by 6 percent.

Using the driest 52-year period recorded at the Blythe Airport meteorological station, with the Project in place there would be a total groundwater surplus of approximately 17,530 AF at the end of 52 years. Using reduced recharge data, the same analysis, with the Project in place, results in a groundwater deficit totaling approximately 217,520 AF after 52 years.

CVGB recharge as a result of leakage from the Colorado River Aqueduct was considered in the Project WSA. Direct or indirect use of Colorado River water requires documented entitlement. Therefore, Project-related groundwater use inducing flow of Colorado River water (groundwater within an area referred to as the “accounting surface”) from the adjacent Palo Verde Mesa Groundwater Basin (PVMGB) into that CVBG was considered.

Groundwater use during the Project’s construction, operation, and decommissioning would cause draw-down in the immediate vicinity of the well(s) used to produce groundwater for the Project. Pursuant to BLM (2016a and 2016b) requirements, a WSA must include an analysis of “estimates of the total cone of depression considering cumulative drawdown from all potential pumping in the basin, including the project, for the life of the project through the decommissioning phase.” To evaluate the potential cone of depression induced by proposed Project groundwater pumping and cumulative drawdown from all cumulative projects (see GSI, 2024 Table 12), a predictive MODFLOW groundwater model (Model) was developed and projected for the 52-year duration of the Project. The Model incorporated estimated inflow and outflow terms consistent with the Project water budget presented in Section 6 of GSI (2024) as well as hydrogeological properties used in the Fang et al. (2021) numerical groundwater model.

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 (500 AFY) is an approximately 4.5-mile radius cone of depression out to 0.5 feet of drawdown. Project operational and decommissioning pumping (50 AFY) for 50 years has a cumulative drawdown with an approximately 15-mile radius out to 0.5 feet of drawdown. This zone of influence also includes pumping from cumulative projects.

The modeling results indicate that impacts to groundwater levels as a result of Project and cumulative project pumping are confined to the northwestern part of the CVGB. Although most of the non-cumulative project pumping (see GSI, 2024 Section 5.8.2) in the CVGB occurs in the northwestern part of the CVGB, total agricultural, municipal, and domestic pumping is limited and the magnitude of the simulated drawdown is not anticipated to adversely affect existing water users and water rights claimants in the CVGB.

Impact HWQ-2 would be reduced through the development of a Colorado River Water Supply Plan (CRWSP) to monitor groundwater extractions from the Project-operated on- or off-site well(s) and prevent, replace, or mitigate Project impacts that deplete the PVMGB groundwater budget to prevent impacts (MM HWQ-3, Palo Verde Mesa Groundwater Basin Protection). The CRWSP would be submitted to the U.S. Bureau of Reclamation and BLM prior to commencement of any Project construction activities. The CRWSP would be based on the results of the Project GMRMP. The GMRMP for the Project would be developed in coordination with the RWQCB and BLM to ensure that groundwater wells surrounding Project supply well(s) are not adversely affected (i.e., chronic lowering of groundwater levels) by Project activities.

Mitigation Measures for Impact HWQ-2

MM HWQ-3 **Palo Verde Mesa Groundwater Basin (PVMGB) Protection**. See full text in Section 3.11.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with the implementation of the recommended mitigation measure.

Impact HWQ-3A. 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 result in substantial erosion or siltation on- or off-site?

LESS THAN SIGNIFICANT WITH MITIGATION. Earthwork for Project construction would require the use of heavy machinery for vegetation grubbing, grading, and installation of roads, solar fields, transmission facilities, the O&M building, the BESS, the energy storage systems, and other facilities. Construction 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.

Grading effects that could lead to soil disturbance would be reduced by the proposed grading design that includes mowing and rolling of vegetation over large areas (as opposed to major grading), which would minimize the required volume of earth movement. It is therefore anticipated that existing drainage patterns would not be substantially altered.

Although significant grading or ground-disturbing activities would not occur, parts of the solar facility including roads, laydown areas and structures would cause some form of ground disturbance from grading, compaction, or excavation.

Because of the proposed plan for minimal grading, alteration of the existing drainage pattern and any associated erosion or siltation, should be minimal. The Applicant's proposed layout of solar panels and other facilities (pending final design) would largely maintain major existing hydrologic patterns with respect to runoff, avoiding washes, stream beds, and stream banks, where feasible. This includes mostly avoiding the largest desert washes that cross the site from the southwest to northeast. However, the site plans are not yet final, and there remains a potential for minor alteration of drainage patterns and the potential for erosion. Drainage alterations could occur through diversions by the proposed security fences, placement of structures in drainage areas, or grading to control high flow concentrations.

As noted above and in Impact HWQ-1, alternation to drainages/streambeds mapped as unvegetated ephemeral dry washes and desert dry wash woodland and classified as RWQCB and CDFW jurisdictional waters of the State may occur. Changes and alterations to these washes could change the flow patterns across the site and result in increased flow velocities, increased erosion, and increased downstream siltation. Alterations to the RWQCB and CDFW jurisdictional waters would require the Applicant to obtain a LSAA from the CDFW and a WDR permit from the Colorado River Basin RWQCB. The LSAA and WDR may require compensatory mitigation for impacts to waters of the State. Impacts related to surface water degradation due to alterations to waters of the State would be minimized or prevented through compliance with CDFW and RWQCB regulations and permits MM BIO-3 (Minimization of Vegetation and Habitat Impacts), MM BIO-5 (Vegetation Resources Management Plan), MM BIO-13 (Streambed and Watershed Protection), MM HWQ-1 (Drainage Erosion and Sedimentation Control Plan (DESCP)), and MM HWQ-5 (Project Drainage Plan).

Erosion protection management would be required by adherence to a SWPPP that the Applicant has committed to preparing. Compliance with these measures is generally sufficient to reduce erosion impacts to a minimum. A DESCP is proposed in MM HWQ-1 to further address potential Project-related water erosion impacts. This plan would include applicable measures, such as BMPs, to reduce erosion and siltation impacts. With MM HWQ-1 in place, Impact HWQ-3a would be less than significant.

Impact HWQ-3B. 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

LESS THAN SIGNIFICANT WITH MITIGATION. 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. The proposed parking area and roadways would be compacted, which would increase the runoff potential. Together, these features are anticipated to be only a small portion (about 3 percent) of the 3,735-acre site. Additionally, drainage patterns would remain relatively intact. Therefore, the increase in overall site runoff is expected to be minimal (approximately 3 percent), though a local impact potential remains, especially in the vicinity of new impervious areas. Depending on final engineering analysis of postconstruction hydrology, retention basins may be necessary to reduce increased discharges created by the Project.

Alteration of the existing drainage pattern should be minimal because of the minimal grading proposed. Some alterations could occur through diversions by the proposed security fences, which could become

barriers to flow by the accumulation of debris, in which case substantial diversions of off-site sheet flow could occur. Security fencing with desert tortoise fencing along the bottom would enclose the developed portions of the facility site, including the across the desert washes. Portions of the security fence may leave a 6- to 8-inch gap between the lower fence margin (rail or mesh) and the ground to allow for passage of desert tortoise. Structures placed in drainage areas, or grading to control high flow concentrations, could also lead to flow diversions which could adversely affect the flood potential within or outside the property.

Although minimal alteration of drainage patterns is expected, there remains a potential for the Project to cause flooding either of adjacent property or within the site itself. Mitigation Measure HWQ-1 requires the development of a DESCP which would address erosion-related impacts. The Westwood study (2023) presents a preliminary assessment of the flood potential in the Project area. As the site designs are completed, additional drainage information would be required to ensure that the designs address drainage and flooding conditions on the Project site. Mitigation Measure HWQ-5 (Project Drainage Plan) requires a Project drainage report and plan to address on-site flooding and the potential for the Project to induce flooding on adjacent property. With MMs HWQ-1 and MM HWQ-5 in place, Impact HWQ-3b would be less than significant.

Impact HWQ-3C. 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 create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

LESS THAN SIGNIFICANT WITH MITIGATION. 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 DESCP (MM HWQ-1) and detention regulations. With MMs HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) and MM HWQ-5 (Project Drainage Plan) in place, this potential impact from runoff would be less than significant.

Impact HWQ-3D. 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 impede or redirect flood flows?

LESS THAN SIGNIFICANT WITH MITIGATION. The Project would include perimeter security fencing which, if clogged with debris normally carried by natural flood flows in the desert, could divert flood flows and substantially increase the flood potential on other property. Fence-induced diversions along drainage entry points could cause flooding of adjacent properties. Fencing is not proposed across existing drainages and fencing would be a long linear element unlikely to become completely blocked by debris accumulations along the entire length of the fence.

The exact nature of fence-induced diversions is not determined at this time, though a qualitative assessment of their likely impact can be made. The flood depths described in the Westwood study (Westwood, 2023) are mostly minor for the Project, with depth estimated at up to 0.5 to 1 foot in most areas of the site. Since most major washes would be avoided, fencing at property entry points would be limited. Further, a 6-to-8-inch gap may be left at the bottom of the fence to allow tortoises to pass underneath. Fence-related flow diversion is therefore likely to be minimal. Mitigation Measure HWQ-5 (Project

Drainage Plan) is proposed to ensure that fence-related diversions of flow would be less than significant by creating fence openings sufficient to allow pass-through flow in places where there are no demonstrable existing flood diversions.

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 at least 4 feet above the ground and would offer minimal obstruction to flows. The substation, BESS and O&M building are in an area that would be subject to flooding of approximately 1 foot. These 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 potential. Mitigation Measures HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) and MM HWQ-5 (Project Drainage Plan) would ensure that the site design include consideration of flood flows and diversions. With these mitigation measures in place, this potential impact from runoff would be less than significant.

Potential impact of impervious areas is addressed in Impact HWQ-3B.

Mitigation Measures for Impact HWQ-3

MM BIO-3 **Minimization of Vegetation and Habitat Impact**s. See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan**. See full text in Section 3.5 (Biological Resources).

MM BIO-13 **Streambed and Watershed Protection**. See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan (DESCP).** See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-5 **Project Drainage Plan.** See full text in Section 3.11.9 (Mitigation Measures).

Significance After Mitigation

These impacts would be less than significant with the implementation of recommended mitigation measures.

Impact HWQ-4. Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

LESS THAN SIGNIFICANT WITH MITIGATION. Most of the Project would be subject to flooding at varying depths mostly less than one foot. Any structures placed in those areas would have the potential to be flooded. The solar panels would be installed on posts/piles and at least 4 feet above the ground and would be above the anticipated flood depth but would be subject to scour as the flood flows pass the support posts. The substation, BESS and O&M building are in an area that would be subject to flooding of up to 1 foot. These would be protected by berms or other drainage features. The access roads, being at-grade, would require maintenance after a flood event. The internal power lines would be protected from flooding by burying or being installed on poles, but if on poles could be subject to flood-related scour. The gen-tie line would have similar potential for flood-related scour.

As there would be few people on the site at most times, flow depths shallow, and the building structures and other Project features would be protected from flooding or not easily susceptible to flood damage,

there would be little chance of flood-related injury or death, or substantial damage to structures. Mitigation Measures HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) and MM HWQ-5 (Project Drainage Plan) would ensure that the site design include consideration of flood flows. Mitigation Measure HWQ-6 (Flood Protection) is proposed to ensure that all structures are protected from flooding and flood-related scour.

Mitigation Measures for Impact HWQ-4

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan (DESCP).** See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-5 **Project Drainage Plan**. See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-6 **Flood Protection**. See full text in Section 3.11.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with the implementation of recommended mitigation measures.

Mitigation Measures for Impact HWQ-5

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan.** See full text in Section 3.5 (Biological Resources).

MM BIO-13 **Streambed and Watershed Protection.** See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan (DESCP).** See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-2 **Septic System Review and Permitting**. See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-3 **Palo Verde Mesa Groundwater Basin (PVMGB) Protection**. See full text in Section 3.11.9 (Mitigation Measures).

MM HWQ-5 **Project Drainage Plan**. See full text in Section 3.11.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with the implementation of recommended mitigation measures.

3.11.7. Alternative 1: No Project Alternative

There would be no construction under the No Project alternative. Therefore, no impacts to hydrology and water quality would result. The area's water quality would remain in the existing condition, as would flood patterns. There would be no potential for increasing flood potential either on-site or off-site. By comparison, the proposed Project would result in impacts that would be less than significant with mitigation.

3.11.8. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. In addition, the onsite substation and BESS would be moved at least 0.7 miles to the northeast. The length of the 500 kV gen-tie line under the Lake Tamarisk Alternative would be approximately 0.8 miles longer than the proposed 500 kV gen-tie line. All other Project features would

be the same as the proposed Project. Surface water impacts would remain the same as for the proposed Project, but slightly reduced in magnitude due to the reduced footprint. The Lake Tamarisk 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 Alternative 2 would result in less than significant impacts with adherence to all applicable regulations and mitigation measures, impacts related to hydrology and water quality from Alternative 2 would be similar to those of the proposed Project.

The footprint of the proposed Project would be reduced by approximately 30 acres under the Lake Tamarisk Alternative; however, the corresponding reduction in estimated water demand for Project construction and operation is anticipated to be de minimis.

In June 2023, BLM issued a Proposed Rule to amend its existing ROW regulations, issued under authority of the Federal Land Policy and Management Act (FLPMA), and is considering issuing Right-of-Way (ROW) grants for durations of up to 50 years (BLM, 2023). To prepare for potential issuance of a 50-year ROW Grant by the BLM (outside of CEQA) and to determine whether there are sufficient supplies to sustain the Project, the Easley WSA conservatively extends the total projected period of the Project to 52-years. For the purpose of the CVGB water budget (see GSI, 2024 Section 6) and predictive Project water demand impacts analysis (see GSI, 2024 Sections 5.4 and 7) presented herein, 52 years is equivalent to the projected total duration of the Project, including construction (20 months), operations (48 years), and decommissioning (20 months).[18]

The Project would use up to 1,000 AF during the planned 20-month construction period and up to 50 AFY during the Project's operational and decommissioning periods. The Project would use a total of approximately 3,500 AF over the assumed 52-year life of the Project. If the estimated water demand for the Project was used equally per acre (the Project is proposed on approximately 3,735 acres), the Project would use approximately 0.27 AF per acre during construction and 0.01 AF per acre per year during the operational phase of the Project. Assuming the equal water use per acre, the Lake Tamarisk Alternative would also require approximately 0.27 AF per acre during the construction phase and 0.01 AF per acre per year during the operational phase of the Project. Therefore, the potential impacts on groundwater under the Lake Tamarisk Alternative would be consistent with those discussed in Section 3.11.5 for the proposed Project.

3.11.9. Cumulative Impacts

3.11.9.1. Geographic Scope

Surface Water. The Project is in the Chuckwalla Hydrologic Unit which drains entirely to the Palen and Ford Dry Lakes. There is no natural outlet for this flow to other hydrologic units. Therefore, the area for cumulative hydrology and water quality analysis is confined to this hydrologic unit. Existing, proposed, and reasonably foreseeable projects from Tables 3.1-2 and located within this same hydrologic unit consist of eight solar energy projects (Desert Sunlight, Desert Harvest, Palen, Athos, Oberon, Victory Pass, Redonda and Arica), five power transmission projects (Red Bluff Substation, Devers-Palo Verde Transmission Line, Devers-Colorado River Transmission Line, Blythe Energy Project Transmission Line, and Desert Southwest Transmission Line), and two other projects (Eagle Mountain Pumped Storage Project and Skybridge-Eagle Mountain Hydrogen Project).

[18] Although the estimated Project construction period and decommissioning period described in the EIR Chapter 2 (Project Description) is 20 months, the water budgets (see GSI, 2024 Section 6) and Cone of Depression and Cumulative Drawdown Analysis (see GSI, 2024 Section 7), were developed in 1-year time steps, and therefore, assume the same overall water usage but over Project construction and decommissioning periods of 2 years.

Groundwater. A cumulative impact scenario on groundwater was completed in the Project WSA. The cumulative impact scenario uses the CVGB baseline groundwater budget presented in the Project WSA using normal and reduced recharge assumptions (see Tables 3.11-1 and 3.11-2). The cumulative impact scenario accounts for all existing water and estimated water use from known qualifying projects. Pursuant to SB 610, the Project WSA is only required to consider existing water use and estimated water use from known qualifying projects within the CVGB. Qualifying projects included in the Project WSA cumulative impact scenario are displayed on Figure 3.1-1 and Project WSA Figure 3 in EIR Appendix G.

3.11.9.2. Cumulative Impact Analysis

Surface Water

Cumulative impacts to hydrology and water quality include the impacts of the Easley Project together with those listed above, most of which are similar solar power projects. These cumulative projects have the potential to contribute to cumulative hydrologic and water quality impacts in the Chuckwalla Valley Hydrologic Unit. These cumulative projects have the potential to introduce new or exacerbate existing pollutant generation associated with construction and operation. These projects could contribute to increased runoff due to increases in impervious surfaces. All cumulative projects are crossed by water-courses that could generate flooding, with similar flooding impacts as described for the proposed Project.

All foreseeable future projects in the Chuckwalla Valley Hydrologic Unit would be subject to similar measures as the proposed Project when obtaining the required permits that implement compliance with state and federal clean water regulations and Riverside County floodplain development regulations. As all projects would go through an environmental review process, they would be subject to similar mitigation measures as those proposed to address potential water quality impacts for the proposed Project. Many of the projects (Arica, Victory Pass, Palen, and Desert Harvest) do or would likely avoid major drainages that cross their sites. Because the Project is in a similar hydrologic setting and most of the cumulative projects are similar projects, individual project impacts are expected to be reduced to less than significant through compliance with regulations and mitigation. Therefore, the combined effects to water quality from the cumulative projects within the geographic scope would not be considered cumulatively significant and the proposed Project would not have a considerable contribution to the cumulative impact.

Groundwater

In June 2023, BLM issued a Proposed Rule to amend its existing ROW regulations, issued under authority of the Federal Land Policy and Management Act (FLPMA), and is considering issuing Right-of-Way (ROW) grants for durations of up to 50 years (BLM, 2023). To prepare for potential issuance of 50-year ROW Grant by the BLM and to determine whether there are sufficient supplies to sustain the Project, the Easley WSA conservatively extends the total projected period of the Project to 52-years. For the purpose of the CVGB water budget (see GSI, 2024 Section 6) and predictive Project water demand impacts analysis (see GSI, 2024 Sections 5.4 and 7) presented herein, 52 years is equivalent to the projected total duration of the Project, including construction (20 months), operations (48 years), and decommissioning (20 months).[19] The Project would use up to 1,000 AF during the planned 20-month construction period and up to 50 AFY during the Project's operational and decommissioning periods.

A cumulative impact scenario on groundwater was completed in the Project WSA. The results indicate the Project contributes approximately 2 percent of the total cumulative operational extractions for all

[19] Although the estimated Project construction period and decommissioning period described in the EIR Chapter 2 (Project Description) is 20 months, the water budgets (see GSI, 2024 Section 6) and Cone of Depression and Cumulative Drawdown Analysis (see GSI, 2024 Section 7), were developed in 1-year time steps, and therefore, assume the same overall water usage but over shorter Project construction and decommissioning periods of 2 years.

qualifying projects not already in place (cumulative projects; see GSI, 2024, Table 12). Development of a 52-year (equivalent to the total Project duration) groundwater budget projection, assuming average precipitation and the Project and all cumulative projects in place, indicates there would be an initial groundwater deficit of 6,960 AF in the year 2024 (first year of Project construction). The cumulative groundwater deficit would increase to approximately 118,420 AF by the end of the 52-year period. Without the Project and all other cumulative projects in place, there would be a surplus of 5,200 AF at the end of the 52-year period.

The same analysis using reduced infiltration and underflow estimates results in a total cumulative project deficit of about 352,760 AF, to which the Project would contribute about 1 percent, or 3,500 AF. Using these inflow estimates, the CVGB would not recover the groundwater deficit with or without the Project.

Using the driest 52-year period recorded at the Blythe Airport meteorological station, with the Project and all cumulative projects in place, the CVGB total groundwater deficit at the end of the 52-year period would be approximately 112,560 AF. Using reduced recharge data, the 52-year deficit would total approximately 347,640 AF.

Pursuant to BLM (BLM, 2016a and 2016b) requirements, a WSA must include an analysis of "estimates of the total cone of depression considering cumulative drawdown from all potential pumping in the basin, including the project, for the life of the project through the decommissioning phase." To evaluate the potential cone of depression induced by proposed Project groundwater pumping and cumulative drawdown from all cumulative projects (see GSI, 2024 Table 12), a predictive MODFLOW groundwater model (Model) was developed and projected for the 52-year duration of the Project. The Model incorporated estimated inflow and outflow terms consistent with the Project water budget presented in Section 6 of GSI (2024) as well as hydrogeological properties used in the Fang et al. (2021) numerical groundwater model.

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 (500 AFY) is an approximately 4.5-mile radius cone of depression out to 0.5 feet of drawdown. Project operational and decommissioning pumping (50 AFY) for 50 years has a cumulative drawdown with an approximately 15-mile radius out to 0.5 feet of drawdown. This zone of influence also includes pumping from cumulative projects.

The modeling results indicate that impacts to groundwater levels as a result of Project and cumulative project pumping are confined to the northwestern part of the CVGB. Although most of the non-cumulative project pumping (see GSI, 2024 Section 5.8.2) in the CVGB occurs in the northwestern part of the CVGB, total agricultural, municipal, and domestic pumping is limited and the magnitude of the simulated drawdown is not anticipated to adversely affect existing water users and water rights claimants in the CVGB.

The Project's contribution to cumulative impacts on groundwater would be actively monitored through the development and implementation of a GMRMP for the Project in coordination with the RWQCB and BLM to ensure that groundwater wells surrounding Project supply well(s) are not adversely affected (i.e., chronic lowering of groundwater levels and/or degradation of groundwater quality) by Project activities (MM HWQ-4). The Project's contribution to cumulative impacts would also be monitored through the development of a Colorado River Water Supply Plan (CRWSP) to monitor groundwater extractions from the Project operated on- or off-site well(s) and prevent, replace, or mitigate Project impacts that deplete the PVMGB groundwater budget to prevent impacts (MM HWQ-3). The CRWSP would be submitted to the U.S. Bureau of Reclamation and BLM prior to commencement of any Project construction activities. The CRWSP would be based on the results of the Project GMRMP. The GMRMP for the Project would be

developed in coordination with the RWQCB and BLM to ensure that groundwater wells surrounding Project supply well(s) are not adversely affected (i.e., chronic lowering of groundwater levels) by Project activities. With the implementation of these mitigation measures, the Project would not make a considerable contribution to potential cumulative reductions in groundwater supplies.

The proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument, if adopted, would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would contribute to cumulative impacts. By excluding development within these areas, the potential need for a water supply for such development would be avoided.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM BIO-3, MM BIO-5, MM BIO-13, and MMs HWQ-1 through MM HWQ-6 would be implemented to address potential hydrology and water quality impacts for the proposed Project. No additional mitigation is required.

Significance After Mitigation

The Project's incremental contribution to hydrology and water quality impacts would not be cumulatively considerable.

3.11.10. Mitigation Measures

MM BIO-3 **Minimization of Vegetation and Habitat Impacts.** See full text in Section 3.5 (Biological Resources).

MM BIO-5 **Vegetation Resources Management Plan.** See full text in Section 3.5 (Biological Resources).

MM BIO-12 **Streambed and Watershed Protection.** See full text in Section 3.5 (Biological Resources).

MM HWQ-1 **Drainage Erosion and Sedimentation Control Plan (DESCP).** At least 60 days prior to site mobilization, the Applicant shall submit to the Regional Water Quality Control Board, the BLM, and Riverside County for review and approval a DESCP for managing stormwater during Project construction and operations. The DESCP can be included in the Stormwater Pollution Prevention Plan (SWPPP) and must ensure proper protection of water quality and soil resources, address disturbed soil stabilization treatments in the Project area for both road and non-road surfaces, and identify all methods used for temporary and final stabilization of inactive areas. The plan must also cover all linear Project features such as the proposed gen-tie line and any other Project component subject to disturbance. The DESCP shall contain, at a minimum, the elements presented below that outline site management activities and erosion and sediment-control Best Management Practices (BMPs) to be implemented during site mobilization, excavation, construction, and post-construction (operating) activities.

- *Vicinity Map*. A map(s), at a minimum scale 1 inch to 500 feet, shall be provided indicating the location of all Project elements with depictions of all significant geographic features including swales, storm drains, drainage concentration points and sensitive areas.
- *Site Delineation*. All areas subject to soil disturbance (including mowing, grubbing, grading, excavation or any other soil disturbing activity) for the Project shall be delineated showing boundary lines of all construction areas and the location of all existing and proposed structures and drainage facilities.

- *Clearing and Grading Plans*. The DESCP shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections, or other means. The locations of any disposal areas, fills, or other special features shall also be shown. Existing and proposed topography shall be illustrated by tying in proposed contours with existing topography.
- *Clearing and Grading Narrative*. The DESCP shall include a table with the estimated quantities of material excavated or filled for the site and all Project elements, whether such excavation or fill is temporary or permanent, and the amount of such material to be imported or exported. All areas subject to soil disturbance shall be included in the table.
- *Erosion Control*. The plan shall address treatments to be used on exposed soil during construction and operation including specifically identifying all chemical-based dust palliatives, soil bonding, and weighting agents appropriate for use that would not cause adverse effects to vegetation. BMPs shall include measures designed to provide temporary stabilization of inactive disturbed areas and will be applied as soon as possible consistent with SCAQMD (Rule 403) and SWRCB Construction General Permit requirements. The timing of suppressant or binder application will occur as soon as possible and consistent with dust and stormwater permit requirements. Any soil stabilizers proposed shall be approved for use by the Project's Restoration Specialist to ensure that the products shall not impede restoration goals.
- *Best Management Practices Plan*. The DESCP shall identify on the topographic site map(s) the location of the site specific BMPs to be employed during each phase of construction (initial grading, Project element excavation and construction, and final grading/ stabilization). BMPs shall include measures designed to control dust, stabilize construction access roads and entrances, and control stormwater runoff and sediment transport.
- *Best Management Practices Narrative*. The DESCP shall show the location, timing, and maintenance schedule of all erosion- and sediment-control BMPs to be used prior to initial grading, during excavations and construction, final grading/stabilization, and operation. Separate BMP implementation schedules shall be provided for each Project element for each phase of construction. The maintenance schedule shall include post-construction maintenance of structural-control BMPs, or a statement provided about when such information would be available.
- The DESCP shall be prepared, stamped, and sealed by a professional engineer or Qualified SWPPP Developer. The DESCP shall include copies of recommendations, conditions, and provisions from the Regional Board and/or BLM.
- The DESCP may be part of the SWPPP and shall be kept onsite, kept updated, and readily available on request. The DESCP and SWPPP must demonstrate compliance with other water quality permits (WDR and LSAA), which may have restrictions on types of erosion or sedimentation control materials used. SWPPP inspection reporting will be consistent with the requirements of the SWRCB Construction General Permit.

MM HWQ-2 **Septic System Review and Permitting.** Before the start of construction, the Applicant shall submit to Riverside County Department of Environmental Health an evaluation of the Project septic system to ensure that the proposed use of the system is consistent with federal, state, and local requirements for septic system design, including requirements

for percolation, vertical distance from the groundwater table, and setback from the nearest groundwater well.

MM HWQ-3 **Palo Verde Mesa Groundwater Basin (PVMGB) Protection.** If water for the Project, to be obtained from on- or off-site well(s) within the Chuckwalla Valley Groundwater Basin (CVGB), is extracted from on- or off-site well(s) that is/are owned and/or operated by the Applicant, the Applicant shall develop a Colorado River Water Supply Plan (CRWSP) to monitor groundwater extractions from the Applicant owned and/or operated on- or off-site well(s) and prevent, replace, or mitigate Project impacts that deplete the PVMGB groundwater budget to prevent impacts to the adjacent PVMGB related to groundwater extraction below the Colorado River Accounting Surface.

The CRWSP shall be submitted to the U.S. Bureau of Reclamation and BLM for review and approval at least 60 days prior to the initiation of construction and is required to be implemented at any time during the life of the Project that groundwater withdrawals reach the Accounting Surface, based on the results of the Groundwater Monitoring, Reporting, and Mitigation Plan (required under MM HWQ-4). No pumping of groundwater below the accounting surface shall occur without compensatory mitigation according to the approved CRWSP. A copy of the CRWSP shall also be submitted to the Metropolitan Water District of Southern California for review and comment.

The amount of PVMGB depletion requiring mitigation shall be equal to the amount of withdrawals from below the Colorado River Accounting Surface. Toward ensuring that no allocated water from the Colorado River is consumed without entitlement to that water, the CRWSP shall identify measures that will be taken to reduce and replace water on an acre-foot by acre-foot basis should the Project consume any water from within or below the Colorado River Accounting Surface.

The CRWSP shall describe groundwater monitoring activities and quarterly data reports to be closely reviewed for depth to groundwater information, and proximity of the depth of Project-related groundwater pumping to the Colorado River Accounting Surface. The CRWSP shall further describe that if Project-related groundwater pumping draws water from below the accounting surface the following shall occur:

(a) Based on groundwater monitoring data, the quantity of groundwater pumped from below the Accounting Surface shall be recorded; and

(b) The Applicant shall implement water conservation/offset activities to reduce the amount of water withdrawn from within or below the Colorado River Accounting Surface and to replace Colorado River water on an acre-foot by acre-foot basis. To effectively implement this requirement, the CRWSP shall include the following information:

    (i) Identification of water conservation/offset activities that reduce/replace the quantity of water diverted from the Colorado River;

    (ii) Identification of any required permits or approvals and compliance of conservation/offset activities with CEQA and NEPA;

    (iii) An estimated schedule of completion for each identified activity;

    (iv) Performance measures to evaluate the amount of water reduction and replacement by each identified activity; and

(v) Monitoring and reporting protocol to ensure that water conservation/offset activities are effectively implemented and achieve the intended purpose of reducing and replacing Colorado River water diversions.

MM HWQ-4 **Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP).** Before the Project uses groundwater pumped from any Applicant owned and/or operated well (on site or off site) that extracts water from the CVGB, the Applicant shall retain a BLM-approved qualified hydrogeologist to develop a GMRMP, in coordination with the RWQCB and BLM, to ensure that groundwater wells surrounding Project supply well(s) are not adversely affected by Project activities. The Applicant shall submit the GMRMP to the RWQCB and BLM for review and approval. Additionally, although no Groundwater Sustainability Agencies (GSAs) have been established for the CVGB, in the event that such agencies have been established when the GMRMP is developed, the Applicant also shall submit the GMRMP to those GSAs. The Applicant shall implement the approved GMRMP throughout any Project phase that pumps groundwater for consumptive use.

The GMRMP shall provide a detailed methodology for monitoring site groundwater levels and comparisons for levels within the CVGB including identification of the closest private wells to the Project's well(s). Groundwater level data from wells at adjacent and nearby solar facilities and other Projects on BLM-administered public lands shall be provided by the BLM for review and comparison. Monitoring shall be performed during pre-construction, construction, and operation of the Project, to establish pre-construction and Project-related groundwater level and water quality trends that can be quantitatively compared against observed and simulated trends near the Project's pumping well(s) and near potentially impacted existing wells. The GMRMP shall include a schedule for submittal of quarterly data reports by the Applicant to the GMRMP designated agencies and the GSA(s) (if established), for the duration of the construction period. These quarterly data reports shall be prepared and submitted for review and shall include water level monitoring data and effect on the nearest off-site private wells. The designated agencies shall determine whether groundwater wells surrounding the Project supply well(s) are adversely affected by Project activities in a way that requires additional mitigation and, if so, shall determine what measures are needed. Examples of additional mitigation, if approved by the designated agencies, could include:

- Cessation or reduction of pumping at the Project well(s) until groundwater levels return to levels that allow nearby wells to resume pre-Project pumping levels;
- Compensation for whatever additional equipment is necessary to lower nearby 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; or
- Compensation for increased energy cost due to Project-related well drawdown.

After the completion of construction, the Applicant and the BLM shall jointly evaluate the effectiveness of the GMRMP and determine if monitoring and reporting frequencies or procedures should be revised or eliminated.

MM HWQ-5 **Project Drainage Plan.** The Applicant shall provide the RWQCB, Riverside County and BLM with a drainage plan for review and approval prior to construction, which includes the following information:

- Hydrologic assessment of flood discharges affecting each parcel.

- A detailed on-site hydraulic analysis utilizing FLO 2D or similar two-dimensional hydraulic model which models pre- and post-development flood conditions for the 10- and 100-year storm events. The post-development model must include all proposed Project features, contours, and drainage improvements. Graphical output must include depth and velocity mapping as well as mapping which graphically shows the changes in both parameters between the pre- and post-development conditions.
- The Drainage Plan shall show the location of all watercourses, drainage concentration points and drainage ditches as they enter, cross, and exit the site. It shall include pre-development and post-development peak flow estimates. It shall include hydraulic calculations to determine flood conditions, floodplain limits, flood depths and velocities. It shall show the relationship of drainage and flood features to the features of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports, demonstrating adequate design to protect from flooding, erosion and scour, and to do so without adversely affecting adjacent property, inducing erosion, or concentrating or diverting flows.
- The Plan shall show how drainage will be conveyed through the site without adversely affecting other property, either through increased flood hazard or increased potential for scour and erosion. Proposed fencing shall allow runoff to traverse the Project site unencumbered, as feasible. The Plan shall include an assessment of existing diversion berms and channels around parcel perimeters and the magnitude and frequency of flood that would be diverted by these existing features, and the probable integrity of these features to withstand flows. It shall show how those that are on the Project site will be affected by grading. It shall include an assessment of flows approaching proposed perimeter fences, whether or not adjacent to existing berms, and make design recommendations to avoid flow diversions by these fences. Design recommendations may include creating fence openings large enough to allow the passage of debris-laden flows without the potential for diversions to other property.
- The Plan shall have detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates.
- Drainage of Project Site Narrative – The Plan shall include a narrative of the measures necessary to protect the site and Project features from flooding, erosion and sedimentation, and measures taken to prevent Project-induced erosion and flooding of adjacent property.

MM HWQ-6 **Flood Protection.** The O&M Building, BESS switchyard, and all other Project buildings shall either be situated outside of the 100-year floodplain or sufficiently protected against dislodgement by flooding where placement outside the floodplain is not practical. Flood protection shall consist of elevating the structures on fill to at least the highest anticipated adjacent flood level as measured from a horizontal stow position. Solar panels shall be situated at least one foot above the highest anticipated local flood level. All structures using posts or poles for foundations, including transmission poles or towers, shall be designed to protect against substantial scour from the 100-year flood event. The Project must comply with Riverside County Ordinance No. 458 for projects within a Special Flood Hazard Area or floodplain: electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities must be designed or located to prevent water from entering or accumulating within the components during flooding.

3.12. Land Use and Planning

This section describes existing land uses and land use plans and policies in the Project area on private and public land. Land use can be assessed by analyzing current land activities, land ownership, zoning, and consistency with existing land use plans, ordinances, regulations, and policies.

3.12.1. Environmental Setting

The Easley Project site is in eastern Riverside County, north of Interstate 10 (I-10) and approximately 2 miles north of the town of Desert Center, California. The site includes both private and public land under the jurisdiction of Riverside County and the BLM, respectively. Of the site's approximately 3,735 acres, approximately 2,050 acres would be developed by the solar and BESS facility, with the balance left as open space. Solar arrays would be fenced, with open areas between them. The Project site is immediately north and east of the community of Lake Tamarisk Desert Resort (LTDR) in Desert Center and is south of Joshua Tree National Park. LTDR is a 55-plus 150-space mobile home and RV resort that includes a clubhouse, nine-hole golf course, pool, and lake as well as year-round homes. RV sites are available for rent. Other development in the area consists of active and fallow agricultural fields, residences, solar developments, and electrical transmission lines. Surrounding areas also include undeveloped desert land that is largely under federal jurisdiction and administered by the BLM.

Two operating solar projects, Desert Sunlight and Desert Harvest, are north of the proposed Easley Project site and the Athos Renewable Energy Project is to the east. Nearby solar projects under construction include the Oberon Renewable Energy Project to the immediate south and the Arica and Victory Pass solar projects to the southeast of the Easley site. The Sapphire Solar Project, proposed by EDF Renewables, is adjacent to the northern area of the Easley Project site. Figure 2-4 (Desert Center Solar Projects & DRECP Context) shows the proposed Easley Project in relation to existing, approved, and proposed solar facilities in the region.

The Project is located within the County's Desert Center Area Plan (DCAP), a subset of the Riverside County General Plan. County land surrounding the Area Plan is designated as Open Space Rural. According to the Area Plan, much of the land west and south of Kaiser Road is designated desert tortoise reserve. The proposed Project is east of Kaiser Road, and east of the reserve. Little new development is envisioned within the Area Plan, except for infill and/or revitalization of the Eagle Mountain Townsite and contiguous expansion of the Desert Center and Lake Tamarisk communities, which are located outside of the Project site.

Under the Riverside County Zoning Ordinance, the lands within the Project site boundary subject to County jurisdiction are shown in Figure 3.12-1 County Zoning on Project Lands. The parcels subject to County jurisdiction in the project boundary are zoned as A-1-20 (Light Agriculture [20-acre minimum]), N-A (Natural Assets) or W-2 (Controlled Development Areas). Solar power plants on lots of 10 acres or larger are allowed in these zones under a Conditional Use Permit (Riverside County, 2023).

BLM-administered land comprises much of the Project site. These parcels are part of the lands designated as under the Desert Renewable Energy Conservation Plan (DRECP) as a Development Focus Area, which are areas with substantial energy generation potential, access to existing or planned transmission, and low resource conflicts.

Outside of the Project site boundary, a 500 kV gen-tie line from the proposed Easley Project substation would traverse the adjacent Oberon Project site in a transmission corridor on BLM-administered land, terminating at the Oberon substation, which is under construction.

3.12.2. Regulatory Framework

3.12.2.1. Federal Laws, Regulations, and Policies

Federal Land Policy and Management Act, 1976 As Amended. The U.S. Congress passed the FLPMA in 1976. Title V, "Rights-of-Way (ROW)," of the FLPMA establishes public land policy and guidelines for administration, provides for management, protection, development, and enhancement of public lands, and provides the BLM authorization to grant ROWs. 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, "[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 rights-of-way 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 FLPMA is to put public lands to their highest and best use.

The Applicant is requesting a grant of ROW approval from the BLM (Palm Springs-South Coast Field Office) for the solar and energy storage facility, gen-tie line, and associated components that are located on land under the jurisdiction of the BLM.

California Desert Conservation Area Plan (CDCA), 1980 As Amended. Section 601 of the FLPMA required preparation of a long-range plan for the 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 12 million acres (about half) of this total are public lands administered by the BLM on behalf of the CDCA.

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.

The Project's gen-tie line would be partially located within BLM Designated Utility Corridor K, as identified in the CDCA Plan. The CDCA Plan designated utility Corridor K for "multi-modal use," allowing for new electrical gen-tie towers and cables of 161 kV or above. Utility Corridor K is also designated as Section 368 Federal Energy Corridor 30-52 in the Record of Decision for the West-Wide Energy Corridor (WWEC) PEIS. Energy Corridor 30-52 is identified for "multi-modal use," which allows for electricity transmission and distribution facilities. Section 368 corridors are identified with a numeric designation and are often overlain on locally designated corridors, as is the case with the east-west Section 368 two-mile-wide Corridor 30-52 overlying BLM Designated Utility Corridor K.

Desert Renewable Energy and Conservation Plan Land Use Plan Amendment to the CDCA. The Desert Renewable Energy Conservation Plan (DRECP) is a collaboration between the Bureau of Land Management, California Energy Commission, California Department of Fish and Game, and the U.S. Fish and Wildlife Service. The Record of Decision for the DRECP Land Use Plan Amendment (LUPA), Phase I of the larger collaboration, was signed in 2016 and is intended to facilitate the development of utility-scale renewable energy and transmission projects on BLM-administered land 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 DRECP LUPA applies to nearly 10.8 million

acres of BLM-managed federal lands in 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.

3.12.2.2. State Laws, Regulations, and Policies

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.

3.12.2.3. Local Laws, Regulations, and Policies

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. The RCGP sets forth County land use policies and guidance for implementation. The RCGP is augmented by more detailed Area Plans covering specific selected areas within the County. Area Plans provide a clear and more focused opportunity to enhance community identity within the County and stimulate quality of life at the community level. The proposed Project is within the County's Desert Center Area Plan.

RCGP land use designation for the Project area is Open Space Rural. The Land Use Element of the RCGP states that the "*Open Space-Rural (OS-RUR) 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 and major roadways and that the Project does not detract from efforts to protect endangered species."* (Riverside County, 2021a)

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. The General Plan's policy goals that are potentially relevant to land use for the Project are provided below.

Land Use Element:

- **Policy LU 2.1.c.** The County shall provide a broad range of land uses, including a range of residential, commercial, business, industry, open space, recreation and public facility uses.
- **Policy LU 2.1.g.** Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.
- **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 7.1.** Require land uses to develop in accordance with the Riverside County General Plan (RCGP) and area plans to ensure compatibility and minimize impacts.
- **Policy LU 8.1.** The County shall accommodate the development of a balance of land uses that maintain and enhance the County's fiscal viability, economic diversity and environmental integrity (General Plan LU-26).

- **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 RCGP and federal and state regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.
- **Policy LU 10.1.** Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.
- **Policy LU 14.1.** The County shall preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.
- **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 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 LU 26.3** Ensure that development does not adversely impact the open space and rural character of the surrounding area. (AI 3)
- **Policy LU 26.4** Encourage parcel consolidation. (AI 29)
- **Policy LU 26.5** Provide programs and incentives that allow Open Space-Rural areas to maintain and enhance their existing and desired character. (AI 9)

Multi-Purpose Open Space Element

- **Policy 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.
- **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.

Desert Center Area Plan. The Project is located within the Desert Center Area Plan (DCAP). The DCAP envisioned little new development for the planning horizon (through 2020), except for infill and/or revitalization of the Eagle Mountain Townsite and contiguous expansion of the Desert Center and Lake Tamarisk communities. The DCAP was written in 2010 before widespread development of utility-scale renewable projects and as a result is largely silent on such development.

Riverside County Land Use Ordinance. Ordinance No. 348.4705 amends Ordinance No. 348 to authorize solar power plants on lots 10 acres or larger, subject to a conditional use permit in particular zone classifications. Among others, these zones include Light Agriculture (A-1), Controlled Development (W-2) and Natural Assets (N-A), which apply to County lands with the Project site.

The Development Standards of Zone N-A state that no building shall exceed 20 feet in height (Section 15.201). The Development Standards of Zones W-2 and A-1 state that no structure shall exceed 105 feet in height unless a variance is approved pursuant to Section 18.27 of the Land Use Ordinance.

The Project would require the following discretionary actions by the County to implement the Project:

- **Conditional Use Permit (CUP 220021)** is required for the construction, operation, and decommissioning of the proposed solar facility, electrical storage equipment, and any portion of the gen-tie line within the County of Riverside's jurisdiction.
- **Public Use Permit (PUP 230002)** is required for the portions of the 34.5 kV medium voltage collector lines and 500 kV gen-tie line that would cross roadways and be located within County jurisdiction.
- **Variance (VAR 230003)** would be necessary for any structures located within a Natural Assets (N-A) zone that would be higher than 20 feet, and in a Light Agriculture (A-1) or Controlled Development Area (W-2) zones that would exceed 105 feet.
- **Continuous Parcel Mergers.** The Applicant is planning to propose to vacate the facility's interior roadways and merge contiguous Project parcels within the Project area into a contiguous area. Roads along the Project perimeter on the solar facility lands would remain dedicated public access.

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.

The proposed Project would be consistent with County policies, including the Desert Center Area Plan. The DCAP envisions limited development, with most of the area designated as Open Space-Rural. (173,530 acres out of 185,720 acres). However, most of the land thus designated is under the jurisdiction of the BLM and not subject to County plans and ordinances.

On lands under County jurisdiction, the Area Plan identifies a land use classification of Rural Desert – 10-acre minimum but does not assign acreage within the Plan Area to this classification. This designation allows renewable energy uses including solar, geothermal and wind energy uses, as well as associated uses required to develop and operate these renewable energy sources, and compatible resource development and governmental and utility uses.

Those areas within the proposed Project site that are under County jurisdiction are designated as Rural Residential (RR)– 5-acre minimum. Among the uses allowed in these RR areas are "compatible resource development" and "associated uses and governmental uses."

Given the extensive existing solar development in the Project vicinity and the planned development of solar fields and associated equipment and facilities on BLM lands comprising most of the Project site, the use of the parcels under County jurisdiction for development solar facilities is considered a compatible resource development because such development would be similar in nature and intensity to the development proposed on adjoining BLM lands and already existing on nearby BLM lands.

3.12.3. Methodology for Analysis

Evaluation of potential land use conflicts of the proposed Project was based on a review of relevant planning documents, including, but not limited to, the RCGP, Riverside County Zoning Ordinance, the CDCA Plan, and a review of the proposed solar facility site 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. Land use compatibility is based on the intensity and patterns of land use to determine whether the Project would result in incompatible uses or nuisance issues. Potential land use conflicts or incompatibility (specifically during construction activities) are usually the result of other environmental effects, such as generation of noise or air quality issues resulting from grading activities. These types of conflicts are addressed in other sections of this document addressing various environmental resources. Land use conflicts that would result from the Project's construction, operation, maintenance, and decommissioning are evaluated in this section.

3.12.4. CEQA Significance Criteria

The criteria used to determine the significance of potential land use and planning impacts are based on Appendix G of the State CEQA Guidelines and the County of Riverside's Environmental Assessment Form.

The County of Riverside's Environmental Assessment Form includes significance criteria that are the same as CEQA Appendix G requirements.

Using these criteria, the Project would result in a significant impact to land use and planning if it would:

- *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.*

The following CEQA significance criterion from the County's Environmental Assessment Form was not included in the analysis:

- *Physically divide an established community.*

  The criterion was not included in the analysis because no part of the Project would divide an established community. The Project would be on undeveloped parcels and, while near the community of Lake Tamarisk Desert Resort, it would not physically divide a community.

3.12.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to land use and planning that are outside of the scope of the CEQA analysis and have been addressed below. Concerns related to property values and a request for a solar moratorium are discussed in Section 4.5 (Other Public Concerns).

Land Use and Planning Scoping Concern #1, ACEC Protection. Commenters noted that the BLM's Area of Critical Environmental Concern (ACEC) west of Kaiser Road needs to remain protected.

The proposed Project is east of Kaiser Road and would not impinge on the ACEC, located on BLM-administered land to the west of the road. The ACEC is setback from the west side of Kaiser Road and will remain protected desert tortoise habitat.

Land Use and Planning Scoping Concern #2, Future Golf Course. It was noted that original plans for Lake Tamarisk included a second 9-hole golf course.

Regarding a second golf course, the original plans for the Lake Tamarisk community were not provided and no information has been found about a planned second golf course plan on the Lake Tamarisk Desert Resort website. Regardless, if there were such a plan, it is assumed that it would be located within the Lake Tamarisk property. There is no known reservation of land for a golf course on the lands that are within the Easley Project site.

Land Use and Planning Scoping Concern #3, DCAP and DRECP. One commenter cited the Desert Center Area Plan, noting that the plan focuses on preserving the unique features found in the Desert Center area.

The commenter encouraged decisionmakers to move the Easley and Sapphire solar projects to the east. The commenter believes that the Project area is under Riverside County jurisdiction and the DCAP should apply, but that the DCAP is being ignored. The commenter believes that the DRECP LUPA states that project rights-of-way and permits can be denied if local planning and zoning conflicts with the proposed renewable project even if it is within a DFA.

*Desert Center Area Plan***.** The DCAP includes statements about future visions for the Desert Center area. These are aspirational descriptions based on what was known and envisioned at the time the plan was prepared (see Section 3.12.2.3). The descriptive aspects of the DCAP are generalized and not tied to any specific location within the plan area. Being presented geographically on maps, the land use categories included in the plan are more specific. In turn, all non-federal properties within the plan area fall under the County zoning code, which identifies what are allowed uses of the parcels and under what conditions the uses are approved. As shown in the DCAP mapping, outside the limits of the existing communities most of the plan area is designated as "Open Space Rural" (173,530 acres of the 185,720 acres in the plan area). Although they are not distinguished in the DCAP's land use designation map (DCAP Figure 3) most land within the DCAP is under BLM or National Park Service jurisdiction (as shown on DCAP Figure 6); these lands are not subject to local regulations and plans. In the Desert Center area, large-scale solar projects are allowed uses under both County zoning and BLM land use designations.

Desert Renewable Energy and Conservation Plan. Originally, the intent of the DRECP process was to include both federal and state lands in southeastern California under a single plan. However, the final DRECP LUPA and Record of Decision apply only to BLM-administered lands withing the plan boundary. As required, a Governor's Consistency Review was prepared on the LUPA that would implement the DRECP. The Governor's Office did not identify any inconsistencies between the proposed LUPA and any state or local plans, policies, or programs. The counties continue to administer solar development processes on lands under their jurisdiction, separate from federal administration of projects on federal land.

Land Use and Planning Scoping Concern #4, Existing Easements/ROWs. The Metropolitan Water District (MWD) expressed concerns about the Project being adjacent to its ROW and noted that MWD must be allowed to maintain the ROW and have unobstructed access to its facilities. Permission to use MWD land is required. MWD provided a map showing ROW and the proposed Project. A major MWD ROW is located north of any areas planned for Project facilities, including solar arrays.

A main MWD drainage ROW crosses the Project site; however, all Project facilities, including solar arrays, are located south of the ROW and would not encroach on it. The Applicant is in negotiations with the MWD, as well as other existing ROW holders, to ensure that there are no conflicts with existing or proposed easements across the Easley Project site.

Land Use and Planning Scoping Concern #5, Alternative Sites. Several commenters suggested that solar projects planned for sites west of SR-177/Rice Road should be shifted to lands east of SR-177 and away from the Lake Tamarisk community.

BLM-administered lands included in the Easley Project site between Kaiser Road and SR-177 have been designated as DFA, suitable for solar project development. Lands under County jurisdiction that are within the Project site allow for solar development. In addition to engineering constraints, several large solar projects exist, are planned, or are under development east of SR-177, limiting the feasibility of the Easley Project to be relocated. Consideration of alternative sites farther from the community of Lake Tamarisk is discussed in Section 2.9 (Alternatives Considered and Eliminated from Further Analysis).

Impact LU-1. The Project would cause a significant environmental impact due to a conflict with applicable land use plan, policies, policy, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Solar and BESS Facility

LESS THAN SIGNIFICANT. Construction, operations and maintenance, and decommissioning of the Project would be subject to the RCGP, Desert Center Area Plan, CDCA Plan as Amended, and County Ordinances. Table 3.12-1, Consistency with Regional and Local Land Use Plans, Policies, and Regulations, 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/Regulations/ Goals	Description	Consistency Analysis
Land Use Element		
LU 2.1.c	Requires a broad range of land uses, 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.
LU 2.1.g	Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.	**Consistent.** Solar arrays and structures would be situated on areas of the Project site that are not environmentally sensitive. Sensitive areas would be undisturbed. The Project would comply with applicable conservation and management actions (CMAs) from the DRECP LUPA.
LU 5.1	Requires development does not exceed the ability to adequately provide supporting infrastructure and services	**Consistent.** The Project would not result in a permanent increase in population or associated infrastructure or services.
LU 7.1	Require land uses to develop in accordance with the RCGP and area plans to ensure compatibility and minimize impacts	**Consistent.** The Project would be consistent with the RCGP and Desert Center Area Plan. With a Conditional Use Permit, the Project is an allowed use under the zoning ordinance.
LU 8.1	Develop a balance of land uses that maintain and enhance the County's fiscal viability, economic diversity and environmental integrity	**Consistent.** The Project would help maintain and enhance the County's fiscal viability by increasing the revenue of the County with little need for services. Environmentally sensitive areas of the site would be undisturbed.
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.** The Project is not within an area with important natural resources. Environmentally sensitive aeras would not be disturbed.
LU 9.2	Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the RCGP 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.
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 and would coordinate with the County for any additional public needs. Per acre annual fees would be paid to the County.

Policy/Regulations/ Goals	Description	Consistency Analysis
LU 14.1	Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public	**Consistent.** The Project would be located on lands that are near existing solar projects and existing electrical facilities. See Section 3.2, Aesthetics, of this EIR for more information.
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 gen-tie line would be visible from County-eligible scenic highway I-10; however, the gen-tie would parallel existing electrical lines and be located in an existing utility corridor.
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, solar power plants in the County of Riverside	**Consistent.** The Project is a renewable energy project and will be reviewed under CEQA to reduce significant environmental impacts.
LU 26.3	Ensure that development does not adversely impact the open space and rural character of the surrounding area.	**Consistent.** The Project is located near existing solar projects. The nature of the use is compatible with open space, and it would not impair the rural character of the surrounding area.
LU 26.4	Encourage parcel consolidation.	**Consistent.** The Project includes parcel consolidation.
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 would be located on near existing solar projects. Some open space areas will be impacted, open space areas not occupied by Project facilities would maintain their character.
Multi-Purpose 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 solar project.
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 solar project.
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 solar project.
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 solar project.
Desert Center Area Plan		
Desert Center Area Plan (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 would be located on some parcels that could be available for agricultural use, most of the parcels have not been actively farmed. At the conclusion of the Project, the land could be returned to agricultural use.
DCAP 4.1	When outdoor lighting is used, require the use of fixtures that would minimize effects	**Consistent.** Security lights around the substation, and other locations would be motion

Policy/Regulations/ Goals	Description	Consistency Analysis
	on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.	sensitive 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.** Increase traffic during construction can affect LOS. With implementation of mitigation in Section 3.18 (Traffic and Transportation), the Project is not anticipated to impact the County roadway level of service.
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.** An approved solar facility is under development between the Project and I-10. The Easley Project gen-tie would parallel the I-10 in an existing utility corridor with existing electrical facilities. See Section 3.2, Aesthetics, 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 existing solar projects and several proposed or approved solar projects. Environmentally sensitive areas within the Project site would remain open.
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 would not be located in Desert Tortoise Critical Habitat.
Riverside County Zoning Ordinance No. 348		
Section 13.1.d Uses Permitted in A-1 Zone (Light Agriculture)	This zone permits a solar power plant on lots 10 acres or larger upon issuance of a CUP.	**Consistent.** With approval of the CUP and a Variance, the Project would be an allowable use under this zone.
Section 15.1.d. (32) Uses Permitted in W-2 Zone (Controlled Development Areas)	This zone permits a solar power plant on lots 10 acres or larger upon issuance of a CUP.	**Consistent.** With approval of the CUP and a Variance, the Project would be an allowable use under this zone.
Section 15.200 Uses Permitted in N-A Zone (Natural Assets)	This zone permits a solar power plant on lots 10 acres or larger upon issuance of a CUP.	**Consistent.** With approval of the CUP and a height Variance, 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) and Natural Assets (N-A) with approval of a conditional use permit (CUP) and completion of an environmental review. Table 3.12-1 above describes how the Project would be consistent with the Land Use and Multi-Purpose Open Space Elements.

The Applicant is also seeking to merge contiguous Project parcels. Roads along the Project perimeter of the solar facility lands (Rice Road and Kaiser Road) would remain dedicated public access. Access on existing unimproved roads to private and public lands not included in the Project site would remain unimpeded. This merger of parcels would be consistent with LU 26.4, encourage parcel consolidation, and because the perimeter roads and unimproved access roads would remain open to the public, it would not result in a loss of access.

The existing and known planned land uses surrounding the Project are similar in nature to those identified for the Project, primarily Open Space Rural. The parcels in the vicinity of the solar facility are zoned N-A, W-2-10, A-1-20 (Light Agriculture [20-acre minimum]), C-P-S (Scenic Highway Commercial), M-H (Manufacturing Heavy), all of which allows solar power development on a lot 10 acres or larger with a CUP.

Although the Project is consistent with the surrounding zoning and land use, nearby residences expressed concerns regarding impacts to their lifestyle from noise, traffic and access, night lighting, and dust, as well the potential for a loss of property value. Noise is addressed in Section 3.13 (Noise), traffic and access are addressed in Section 3.18 (Traffic and Transportation), night lighting is addressed in Section 3.2 (Aesthetics), and dust is addressed in Section 3.4 (Air Quality). Potential effects on property value are addressed above in the introduction to Section 3.12.5. Where appropriate, these sections include mitigation to reduce the concerns expressed by the public including dust abatement, public notification, and traffic plans.

Desert Center Area Plan and Riverside County Zoning Ordinance

The proposed Project would be a conditionally permitted use under the A-1, W-2, and N-A zones. 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 would need to enter into a development agreement with the County following the guidelines noted in the regulatory setting. Once the agreement is enacted, the Project would comply with this policy.

Federal Policies, Regulations, and Goals

The solar and BESS facility would be largely located on federal land and would be subject to the federal policies, regulations, and goals. Some BLM-administered lands are designated as Development Focus Areas in the DRECP Land Use Plan Amendment (LUPA). These are areas where renewable energy generation is an allowable use, incentivized and could be streamlined under the DRECP LUPA. The Project would not conflict with this designation.

Existing or Planned Land Uses

The solar facility site would be crossed by or adjacent to a number of planned and existing land uses, including existing roads, existing distribution lines, a MWD property and rights-of-way, an existing Southern California Edison (SCE) 161 kV transmission line, and the proposed Eagle Mountain Project gen-tie line. By law, the Applicant would be required to coordinate with any legally existing rights-of-way or conflicting uses to ensure the Project does not adversely impact these uses, including bearing the cost of this coordination.

500 kV Generation-Tie Line

LESS THAN SIGNIFICANT. Most of the proposed gen-tie line between the proposed Easley Substation and the Oberon Substation (under construction) would be within the adjacent Oberon Renewable Energy Project on BLM-administered land. The line would cross over SR-177 (Rice Road). Construction, operations and maintenance, and decommissioning of the gen-tie line would not conflict with the Desert Center Area Plan or Riverside County Zoning Ordinance, see Table 3.12-1. The gen-tie line would be on federal property except at the point where it crosses over SR-177 (Rice Road) enroute to the Oberon Substation. This crossing would require a Caltrans encroachment permit and would be required to comply with Caltrans requirements for line clearances and for motorist safety during construction. Any overhead medium voltage collector line crossings would also require a Caltrans encroachment permit.

Federal Policies, Regulations, and Goals

The gen-tie line to the Oberon Substation would cross BLM-administered land designated as Development Focus Area (DFA) in the DRECP LUPA to the CDCA. The DFA designation allows for the development of renewable energy facilities and associated infrastructure including gen-tie lines without requiring a land use plan amendment. The gen-tie would all be consistent with the DRECP LUPA and CDCA. Most of the gen-tie line would be within a designated utility corridor. Designated utility corridors allow for transmission infrastructure without requiring a land use plan amendment. Therefore, the gen-tie line would not conflict with federal policies, regulations, and goals.

Because the proposed Project (solar and BESS facility and gen-tie line) 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 an area, or be inconsistent or incompatible with the site's existing, proposed or surrounding zoning or land use, there would be no impact.

Mitigation Measures for Impact LU-1

No mitigation would be required.

Significance After Mitigation

There would be no conflict with applicable land use plans, policies, or regulations. No impact would occur.

3.12.6. Alternative 1: No Project Alternative

Under the No Project Alternative, the Applicant would not develop the solar facility and gen-tie line nor require new construction and/or operational activities associated with such a facility. This alternative would not conflict with any existing or known future land use plans or zoning. Therefore, as with the proposed Project, the No Project Alternative would not have significant impacts related to land use.

3.12.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would be developed within the proposed Project site and was developed in response to concerns expressed by the Lake Tamarisk community during scoping. The Alternative would be similar to the proposed Project but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk, such that the closest solar panels to residential parcels would be 0.45 miles (2,350 feet) away. This would reduce land-use related impacts that might arise, such as loss of open space proximate to the community and moving construction disturbances farther from residences. With this relatively small reduction in acreage, the electrical output would not be appreciably reduced compared to the proposed Project. In addition, the onsite substation and BESS would be moved at least 0.7 mile to the northeast, on either BLM-administered land (Substation Alternative A) or private land (Substation Alternative B) closer to SR-177. The Applicant is in negotiations with all existing ROW holders, such as Metropolitan Water District and EDF Renewables, to ensure that there would be no conflicts with existing or proposed easements across the Easley Project site and gen-tie line ROW. At 7.5 miles, the length of the 500 kV gen-tie line under the Lake Tamarisk Alternative would be approximately 0.8 miles longer than the proposed 500 kV gen-tie line (6.7 miles).

As with the proposed Project, the Lake Tamarisk Alterative would not cause a significant impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.12.8. Cumulative Impacts

Geographic Scope

Impacts resulting from construction, operation, maintenance, and decommissioning of the Project could result in a cumulative effect on land use in combination with other past, present, or reasonably foreseeable future actions. The geographic scope of the cumulative effects analysis for land use consists of eastern Riverside County. This is based on the jurisdictional boundaries within which the impacts of land use decisions of the Easley Project and other projects described in Tables 3.1-1 and 3.1-2 and shown on Figure 3.1-1 could be additive or synergistic.

The timeframe refers to the duration over which impacts associated with land use would occur short-term or long-term. Short-term impacts to land use would occur during the construction and decommissioning period. Long-term impacts associated with land use would result from developing a solar facility in the Project area and the associated change in land use over its operational life (35 to 50 years or more).

Cumulative Impact Analysis

Past and planned development has increased human use of land in the geographic scope of the Project. Because of the limited availability of water, human development in the geographic scope has been limited to small, scattered communities set among large tracts of undeveloped land. Large tracts of federal land in the desert region are reserved for uses that preclude development. If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would contribute to cumulative impacts. If approved by Congress, the designated lands west, north, and south of the Project would not be available for development.

Past and present projects near the Project site on private lands primarily include agricultural operations with some rural residences. The resort community of Lake Tamarisk is to the immediate southwest of the Project. Past projects also include the Kaiser Mine, northwest of the Project. Public lands withing the proposed Project site and in the vicinity have been designated as suitable for renewable energy development and have been, continue to be, and are planned to be primarily developed with large-scale solar projects. Many solar renewable projects and the Eagle Mountain Pumped Storage Project have been proposed on both BLM-administered land and private land (see Table 3.1-2). The projects on public land are in DFAs and the ones on private land are primarily on land designated as agriculture or open space.

With appropriate permitting, each project would not result in impacts on land use. However, the Desert Center Area Plan did not anticipate the potential development of multiple solar projects within the plan area. If many of the projects are built, they could conflict with the goals of the Desert Center Area Plan and result in the loss of open space which the Area Plan and the General Plan strive to preserve. This would be considered a cumulatively significant impact on land use.

Potential land use impacts require evaluation on a case-by-case basis. The Easley Project would be consistent with the goals and policies of the Riverside County General Plan, and other applicable local land use plans, policies, and regulations and with the federal plans. 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. Therefore, the Project's incremental contribution to cumulative impacts to land use would not be considerable.

The cumulative impacts of the gen-tie line would be the same as for the solar facility because the gen-tie line would be within a solar field underdevelopment and adjacent to existing or planned transmission lines and would not result in an additive or cumulative impact with the other renewable energy development in eastern Riverside County.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

The Project's incremental contribution to impacts to land use would not be cumulatively considerable.

3.12.9. Mitigation Measures

All land use and planning impacts would be less than significant, and no mitigation would be required.

3.13. Noise and Vibration

This section evaluates the environmental impacts caused by the noise and ground-borne vibration levels resulting from implementation of the proposed Easley Project. The analysis in this section: presents the fundamentals of environmental noise; describes the applicable policies and ordinances; identifies the criteria used for determining the significance of environmental impacts; and describes the potential noise and vibration impacts of the proposed Project. Noise impacts to wildlife are separately addressed in this EIR in Section 3.5, Biological Resources.

3.13.1. Environmental Setting

3.13.1.1. Fundamentals of Community Noise

To describe environmental noise and to assess impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is used. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel (dBA) is cited in most noise criteria. Decibels are logarithmic units that can be used to conveniently compare wide ranges of sound intensities.

Community noise levels can be highly variable from day to day as well as between day and night. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all the time-varying sound energy in the measurement period, usually one hour. The L50, is the median noise level that is exceeded fifty percent of the time during any measuring interval. The Ldn, or day-night average sound level, is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m. Community Noise Equivalent Level (CNEL) is another metric that is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. To easily estimate the day-night level caused by any noise source emitting steadily and continuously over 24 hours, the Ldn is 6.4 dBA higher than the source's Leq. For example, if the expected continuous noise level from equipment is 50.0 dBA Leq for every hour, the day-night noise level would be 56.4 dBA Ldn.

Community noise levels are usually closely related to the intensity of human activity. Noise levels are generally considered low when below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports (OPR, 2017). Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse to public health.

Surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments tend to be higher than the nighttime noise levels in rural areas away from roads and other human activity. Areas with full-time human occupation and residency are often considered incompatible with substantial nighttime noise because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference. At 70 dBA, sleep interference effects become considerable (U.S. EPA, 1974).

3.13.1.2. Existing Noise Environment

Ambient noise measurements were not conducted for this analysis because the environmental setting can be described from information drawn from previous studies in the area. The noise environment of the Project area depends on the proximity of the receiver to noise from vehicular traffic on State Route 177 (SR-177) or Interstate 10 (I-10). Locations away from these highways experience very low levels of noise. Because few human-induced sources of noise occur around the Project area, the noise environment is generally serene and quiet apart from traffic on the area roadways. 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).

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, 2015a). Locations along SR-177 are exposed to less noise due to lower levels of traffic. Traffic data collected for SR-177 near the Project site shows roughly 2,200 vehicles daily and approximately 14 percent of the baseline vehicles are trucks (Caltrans, 2023). With this mix of baseline traffic, baseline noise levels would be approximately 63 dBA Ldn at 100 feet from the centerline of SR-177. For any location more than 400 feet from SR-177, baseline noise levels would be less than 55 dBA Ldn. (Calculations appear in EIR Appendix K.)

3.13.1.3. Noise Sensitive Receptors

In the Riverside County Noise Ordinance and Noise Element, “noise-sensitive” land uses include but are not limited to residences, passive recreation areas, schools, hospitals, rest homes, places of worship and cemeteries (Riverside County, 2015b). 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.

The description of noise-sensitive receptors focuses on noise sensitive land uses or inhabited dwellings within one-quarter mile of proposed activities because the County’s Ordinance No. 847 provides an exemption for construction noise that occurs one-quarter mile or more from the nearest inhabited dwelling.

The proposed Easley Project site is near the Lake Tamarisk community in unincorporated Riverside County and would develop land that is primarily used as open space. The site would be along the alignments of SR-177 or Rice Road and Kaiser Road.

The nearest sensitive land uses include the Lake Tamarisk community and occasional rural residences along SR-177 (Rice Road), such as near Black Binder Road. The Lake Tamarisk community and homes along Kaiser Road would be adjacent to the southwestern-most parcels of the proposed Easley Project. The nearest home in Lake Tamarisk on Shasta Drive would be approximately 0.05 miles (260 feet) from the boundaries of the Easley Project, although construction activity would be set back substantially, at least 200 meters (656 feet), from this residential land use.

3.13.1.4. General Information on Vibration

Vibration from objects in contact with the ground will propagate energy through the ground and can be perceptible by humans and animals in the form of perceptible movement or in the form of rumbling sound caused by the vibration of room surfaces. The latter is described as ground-borne noise. High levels of vibration can result in architectural damage and structural damage depending upon the amplitude of the vibration and the fragileness of the building or structure.

Vibration is an oscillatory motion through a solid medium, in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. When assessing damage potential, vibration is often measured and reported in terms of peak particle velocity (PPV) or ground acceleration. Vibration can be felt outdoors. However, the perception of vibration is much greater indoors, due to the shaking of the structure. Some of the most common sources of vibration come from trains and transit vehicles, construction equipment, airplanes, and large vehicles (Riverside County, 2015b).

3.13.2. Regulatory Framework

3.13.2.1. Federal Laws, Regulations, and Policies

Regulating environmental noise is generally the responsibility of local governments. The U.S. EPA published guidelines on recommended maximum noise levels to protect public health and welfare (U.S. EPA, 1974), and on-site noise levels are subject to federal protections for workers. To protect workers from excessive on-site noise levels, the Occupational Safety and Health Act of 1970 (OSHA) sets on-site occupational noise exposure levels, which are regulated in California via the California Occupational Safety and Health Administration (Cal/OSHA). The maximum time-weighted average noise exposure level of workers is 90 dBA over an eight-hour work shift (29 CFR § 1910.95).

3.13.2.2. State Laws, Regulations, and Policies

For the purpose of limiting population exposure to physically or psychologically significant noise levels, the State of California maintains recommendations for local jurisdictions in the General Plan Guidelines published by the Governor's Office of Planning and Research (OPR, 2017). The General Plan Guidelines suggest ranges of acceptability for a given land use within a range of noise exposures. For residences, an exterior noise level of up to 60 dBA CNEL is considered "normally acceptable," and a noise level of greater than 75 dBA CNEL is considered "clearly unacceptable." To protect the interiors of new multifamily residential units, State law requires the study of noise insulation measures when exterior noise levels exceed 60 dBA CNEL, according to the California building code (California Code of Regulations, Title 24).

3.13.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan Noise Element

Policies for Noise Compatibility of Land Uses

The County's General Plan, Noise Element (2015) provides the guidelines on Land Use Compatibility for Community Noise Exposure, which are used to evaluate potential noise impacts and to set the criteria for environmental impact findings and conditions for project approval. Land use compatibility defines the acceptability of a land use in a specified noise environment. The land use compatibility criteria adopted by Riverside County as part of the Noise Element of the General Plan appear in Table 3.13-1.

Table 3.13-1. Riverside County Land Use Compatibility Standards (CNEL or Ldn Noise Level)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low-density (single-family, duplex, mobile homes)	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

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
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 70 dBA	Category not used	67.5–75 dBA	Over 72.5 dBA
Golf courses, riding stables, water recreation, cemeteries	Up to 75 dBA	Category not used	70–80 dBA	Over 80 dBA
Office buildings, business commercial, professional	Up to 70 dBA	67.5–77.5 dBA	Category not used	Over 75 dBA
Industrial, manufacturing, utilities, agriculture	Up to 75 dBA	70–80 dBA	Category not used	Over 75 dBA

Source: General Plan, Noise Element Table N-1 (Riverside County, 2015b).

The following General Plan, Noise Element (2015) policies protect noise-sensitive land uses from noise emitted by outside sources and prevent new projects from generating adverse noise levels on adjacent properties.

- **Policy N 1.1**. 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.
- **Policy N 1.2**. 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 N 1.4.** Determine if existing land uses will present noise compatibility issues with proposed projects by undertaking site surveys.
- **Policy N 1.5**. Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
- **Policy N 1.6**. Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise-sensitive uses.
- **Policy N 1.8**. 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 N 3.2**. 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 N 3.3.** 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 N 3.5.** 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 N 3.6**. Discourage projects that are incapable of successfully mitigating excessive noise.

- **Policy N 3.7**. Encourage noise-tolerant land uses such as commercial or industrial, to locate in areas already committed to land uses that are noise-producing.

Policies for Temporary Construction Noise

The Noise Element of the General Plan includes numerous policies intended to minimize noise-related conflicts between adjacent types of land uses. Policies addressing "temporary construction" activities include:

- **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 13.4**. 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.

Policies for Mitigation of Stationary Sources of Noise

The Noise Element of the General Plan also identifies preferred noise standards for stationary noise sources that affect residential land uses and provides direction to mitigate stationary source noise. Policy N 4.1 of the Noise Element sets a stationary-source exterior noise limit to not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA Leq for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA Leq during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. For new stationary sources of noise, the Noise Element includes:

- **Policy N 2.3.** Mitigate exterior and interior noises to the levels listed in Table N-2 below to the extent feasible, for stationary sources. These standards are shown in Table 3.13-2.
- **Policy N 4.1.** Prohibit facility-related noise received by any sensitive use from exceeding the following worst-case noise levels:

    (a) 45 dBA-10-minute Leq between 10:00 p.m. and 7:00 a.m.
    (b) 65 dBA-10-minute Leq between 7:00 a.m. and 10:00 p.m.

- **Policy N 4.2.** Develop measures to control non-transportation noise impacts.
- **Policy N 4.3.** Ensure any use determined to be a potential generator of significant stationary noise impacts be properly analyzed and ensure that the recommended mitigation measures are implemented.

Table 3.13-2. Stationary Source Land Use Noise Standards

Land Use	Time of Day	Interior Noise Standard	Exterior Noise Standard
Residential	10:00 p.m. to 7:00 a.m.	40 Leq, 10 minute	45 Leq, 10 minute
Residential	7:00 a.m. to 10:00 p.m.	45 Leq, 10 minute	65 Leq, 10 minute

Source: General Plan, Noise Element Table N-2 (Riverside County, 2015b).
Note: The Noise Element of the General Plan indicates that these levels are preferred standards; final decision will be made by the Riverside County Planning Department and Office of Public Health.

Policies for Ground-borne Vibration

Ground-borne vibrations can be a source of annoyance to people or a source of structural damage to some types of buildings. The Noise Element of the Riverside County General Plan (2015) includes consideration of human reaction to ground-borne vibrations in terms of the peak particle velocity (PPV) measured in inches per second (in/sec). Residential areas, schools, and sensitive research operations are among the land uses that are vibration sensitive. Table 3.13-3 describes the typical human reaction in response to certain vibration levels.

Table 3.13-3. Human Reaction to Typical Vibration Levels

Vibration Level PPV (inches/second)	Human Reaction
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: Caltrans data in General Plan, Noise Element Table N 3 (Riverside County, 2015b).

Riverside County Noise Ordinance

The County Noise Ordinance allows for different levels of acceptable noise depending upon land use. The Noise Ordinance or Ordinance No. 847 (Regulating Noise) is incorporated in the County Code as Chapter 9.52 (Noise Regulation). The standards in Chapter 9.52.040 (also Section 4 of Ordinance No. 847) limit 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 in a low-density "Rural Community" shall not exceed 55 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) or 45 dBA Lmax during the nighttime hours (10:00 p.m. to 7:00 a.m.). These County standards protect the noise-sensitive receptors within the very low-density rural 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 0.25 mile or more from the nearest inhabited dwelling; and
- Private construction projects located within 0.25 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.

The proposed Project would be consistent with these County policies.

3.13.3. Methodology for Analysis

Analysis of noise and vibration levels was performed through quantitative estimates of expected noise levels, review of agency policies and regulatory requirements, and qualitative analyses for issues that do not readily lend themselves to quantitative evaluation. Quantitative analyses were prepared to address noise and vibration from use of construction equipment on site, noise from construction-related traffic, and noise from facility operations.

The area of interest for noise and vibration issues is typically localized. Airborne noise dissipates fairly rapidly with increasing distance from the noise source. The distances involved depend primarily on the intensity of the noise generated by the source, and partly on weather conditions such as wind speed and direction, the height and strength of temperature inversions, and the height of cloud cover. Sound is detectable somewhat further downwind than upwind of a noise source. Temperature inversions and cloud cover can reflect or refract sound that is radiated upwards; 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 miles (1,320 feet) from the noise source (County Noise Ordinance No. 847).

Ground-borne 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. 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).

3.13.4. CEQA Significance Criteria

The criteria used to determine the significance of potential noise and vibration impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to noise or vibration if the Project would result in:

- *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*
- *Generation of excessive ground-borne vibration or ground-borne noise levels.*

Neither Riverside County General Plan nor Noise Ordinance establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary noise increase. Therefore, the County identifies a numerical construction threshold based on the Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment Manual*, for this analysis of daytime and nighttime construction impacts. The FTA considers an exterior construction noise level of 80 dBA Leq as a reasonable daytime threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA Leq (FTA, 2018).

The following CEQA significance criterion from Appendix G was not included in the analysis and is not discussed further beyond this summary:

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

  The Project site is not located within an airport land use plan. The Desert Center Airport is a private airstrip approximately one mile east of the nearest Project components. Because the proposed Project includes no noise-sensitive uses, no airport land use noise compatibility criteria would apply. None of the Project components could expose residential land uses to excessive noise levels due to a public airport or public use airport.

3.13.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to noise and vibration. Public concerns expressed during the scoping process involved noise from construction, especially due to the close proximity of the proposed development to homes in the LTDR and nearby communities, as well as noise from increased traffic. As part of the effort to address scoping comments and disclose noise and vibration impacts, this analysis includes quantification noise levels attributable to the Project and construction traffic.

Some scoping comments identified possible increases in noise due to loss of vegetation and concerns about a constant “loud buzzing sound” that comes from solar developments. This analysis identifies the types of sources associated with the proposed solar facility, BESS, medium voltage collector and gen-tie lines, including the electrical equipment typical to these types of facilities.

The scoping comments raise the possibility of the proposed Project causing land use change on a large-enough scale to alter the natural effect of ground absorption. The effect could occur by removing vegetation and installing structures that may reflect noise from distant sources, such as highways, the Desert Center Airport, or Chuckwalla Valley Raceway. New structures in the setting of open space could also counter this effect by acting as barriers that shield receptors from distant noise sources or reflect noise unpredictably. To address this comment, this analysis quantifies sound propagation from Project sources to receivers by assuming that all sound propagation occurs over "hard" surfaces, which conservatively ignores the effects of ground absorption where, in fact, natural vegetation or revegetated areas may provide some attenuation over distance.

Applicant Proposed Measures

APM NOISE-1 **Construction Timing.** Applicant will avoid or minimize use of any impact hammer for pile driving or other equipment similarly capable of producing disruptive noise during construction activities within a one-mile radius from the residential parcel on the northeast corner of around the Lake Tamarisk Desert Resort community during the winter months of highest residency (November 1 to March 31). If based on the final construction schedule, use of such equipment is necessary within this geographic area during the aforementioned time period, the Applicant will avoid or minimize this construction activity prior to 7:00 a.m. and after 6:00 p.m. The Applicant will also avoid nighttime equipment deliveries between 10:00 p.m. and 7:00 a.m.

Impact N-1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.

LESS-THAN-SIGNIFICANT WITH MITIGATION, CONSTRUCTION OF THE SOLAR AND ENERGY STORAGE FACILITY. Increased ambient noise would occur during construction of the proposed Project. Heavy-duty construction equipment would be used on the site of the solar and energy storage facility and along the 500 kV gen-tie line, and trucks and vehicles would travel through the surrounding area for transporting equipment and materials to the site.

Construction of the Project is estimated to occur over an approximately 20 months. During these months, the range of construction activities would include pre-construction surveys, establishing staging areas and access points, mobilizing construction equipment, crews, and materials, installing the PV arrays and other electric facilities, and stabilizing and restoring disturbed areas. The types of construction equipment used on the Project site would include trucks, light-duty vehicles, backhoes, loaders, excavators or trenchers, forklifts, cranes, compactors, and drill rigs or augers.

Table 3.13-4 summarizes the typical noise levels for individual pieces of construction equipment.

Table 3.13-4. Typical Noise Levels for Individual Construction Equipment

Equipment	Noise Level at 50 ft (dBA Lmax)	Noise Level at 50 ft (dBA Leq)
Mounted impact hammer (hoe ram)	90	83
Scraper	84	80
Dozer	82	78
Forklift, man lift	75	68
Crane	81	74
Backhoe, loader	79	75
Excavator	81	77

Equipment	Noise Level at 50 ft (dBA Lmax)	Noise Level at 50 ft (dBA Leq)
Compactor	83	76
Generator	81	78
Drill rig, auger	84	77
Dump truck, haul truck, concrete mixer truck	76 to 79	73 to 76
Pickup truck, crew truck	75	62 to 71

Source: FHWA, 2006.
Lmax: Maximum noise level from Actual Measured in Roadway Construction Noise Model (RCNM).
Leq: Equivalent noise level for 1 hour incorporating the Acoustical Usage Factor.

The activity likely to cause the highest noise levels at the site would be installation of steel piles for supporting the PV module structures. Steel piles (e.g., cylindrical pipes, H-beams, helical screws, or similar structures) would be driven into the soil using pneumatic techniques, such as a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically would be spaced 10 feet apart along the axis of the PV panel arrays. The hydraulic rock hammer would be light-duty to avoid excessive noise levels that could be associated with a heavy-duty impact pile driver. Maximum intermittent noise levels near steel pile installation activities be up to 90 dBA Lmax and 83 dBA Leq at 50 feet. For activities than pile installation, typical maximum intermittent noise levels near individual equipment would vary up to 84 dBA Lmax and 80 dBA Leq at 50 feet.

The noise levels caused by typical activities within the site would be substantially lower when experienced at locations distant from the site boundaries. Because sound fades over distance, on-site noise would diminish over the additional distances separating noise sensitive receptors from the proposed activities. Assuming the standard spherical spreading loss (reduction of 6 dB per doubling of distance) and the highest unmitigated construction noise source of 83 dBA Leq at 50 feet, the noise level caused by a typical spread of construction equipment would be 62 dBA Leq at the nearest occupied residences in the Lake Tamarisk community, 200 meters (656 feet) from the nearest proposed construction. This demonstrates that the nearest receiver locations would not be exposed to noise levels exceeding the reasonable daytime 80 dBA Leq or the nighttime 70 dBA Leq thresholds during construction activities. (Calculations appear in EIR Appendix K.)

With respect to construction-related traffic noise, development activities would also cause offsite noise, primarily due to trucks needed to deliver and remove materials and from the traffic of commuting workers. Haul trucks would make trips to bring equipment, water, and materials to the site and remove waste. Access to the site would be from SR-177 (Rice Road) and Kaiser Road.

The instantaneous peak noise levels from passing trucks and commuting worker vehicles would be approximately 70 to 76 dBA at 50 feet (see Table 3.13-4). This noise would be concentrated at staging areas, along access roads, and the thoroughfares used by Project traffic, primarily SR-177 and Kaiser Road. Along SR-177, the traffic from construction-related workers and haul trucks would increase SR-177 day-night noise levels by 3 dBA over the baseline levels, from 63 dBA to approximately 66 dBA Ldn within 100 feet of the centerline or from 64 dBA to 67 dBA CNEL.

The construction-related traffic noise impacts would occur primarily but not exclusively during daytime conditions. For evening or nighttime construction-related traffic, the effects on day-night noise levels would be more pronounced than traffic confined to daytime hours because of the increased sensitivity during the evening and nighttime hours (between 7:00 p.m. and 7:00 a.m.). The Project could conflict with Riverside County General Plan policies to minimize the impacts of construction noise, if Project construction traffic along SR-177 and Kaiser Road would cause day-night noise levels to substantially increase during evening or nighttime hours. To reduce the impact of evening and nighttime construction traffic noise, this analysis recommends mitigation to restrict construction deliveries to daytime hours.

The Riverside County Noise Ordinance allows noise from construction activities, and designates this noise as exempt, when: (a) the construction project is located one-quarter (0.25) mile or more from the nearest inhabited dwelling, or (b) when the construction project is located within 0.25 mile of an inhabited dwelling and the activities are limited to certain daytime hours. The closest occupied residences in Desert Center would be within 0.25 mile of Project construction traffic and on-site construction activities within the proposed Project site.

The Project construction work schedule would involve evening and nighttime activity, and all activities would use best efforts to avoid or minimize impact hammer use for pile driving or other equipment similarly capable of producing disruptive noise, as described in APM NOISE-1.

The Riverside County Noise Ordinance allows construction noise to be exempt between the hours of 7:00 a.m. and 6:00 p.m. The work schedules of the proposed Project would need to adhere to the County exemption for construction noise where activities are within 0.25 miles of a sensitive receptor to comply with the ordinance. The Noise Element of the General Plan includes no threshold noise levels (in terms of dBA) for temporary construction, but the County's policies require the Project to follow established hours of operation and to implement acceptable practices to minimize the effects of adverse construction noise.

Mitigation Measure (MM) N-1 (Construction Restrictions) is recommended to ensure that any construction activities within 0.25 miles of a sensitive receptor outside of the schedule of the Noise Ordinance would be limited to light-duty equipment and vehicles.

Mitigation Measures N-2 (Public Notification Process) and N-3 (Noise Complaint Process) are also recommended to ensure that residents nearest to the Project site boundaries and access roads are provided advance notification of potentially adverse noise conditions and to ensure that complaints are resolved. With the recommended mitigation measures, construction 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. With the recommended mitigation measures, the impact of construction noise relative to applicable community noise standards would be less than significant.

In addition, the Applicant has stated in APM NOISE-1 that it will avoid or minimize use of any impact hammer for pile driving or other equipment similarly capable of producing disruptive noise during construction activities within a one-mile radius from the residential parcel on the northeast corner of the Lake Tamarisk Desert Resort community during the winter months of highest residency (November 1 to March 31). If based on the final construction schedule, use of such equipment is necessary within this geographic area during the aforementioned time period, the Applicant will avoid or minimize this construction activity in the early morning or late evening. Implementation of APM NOISE-1 will further reduce this less-than-significant impact.

LESS-THAN-SIGNIFICANT WITH MITIGATION, CONSTRUCTION OF THE 500 KV GEN-TIE LINE. Construction of the 500 kV gen-tie structures and installation of poles and conductors would involve a line truck, water truck, crane, backhoe, excavator, and helicopters. Gen-tie construction noise would result in a readily perceptible, but temporary, increase in daytime environmental noise. Gen-tie construction activities would only intermittently affect any one location as the construction crews move along the alignment.

Near each pole site, the equipment in the gen-tie construction spread and overhead helicopter operations would generate increase ambient noise during use of offroad equipment and during helicopter overflights, takeoffs, and landings. Helicopter operations could be expected to generate noise levels of approximately 92 dBA within about 100 feet to 450 feet of the source depending on payload capacity of the helicopter, and locations a few hundred feet from the source would experience less than 90 dBA (U.S. Forest Service, 2023). Using a helicopter for 15 minutes in a typical hour would result in approximately 83 dBA Leq at 200 meters (656 feet). (Calculations appear in EIR Appendix K.)

Gen-tie construction noise would occur along an alignment that is not within 0.25 mile of any inhabited dwellings. However, helicopter operations could conflict with Riverside County General Plan policies to minimize the impacts of construction noise if not limited to occur during daytime hours. Mitigation Measure N-1 (Construction Restrictions) would ensure that construction activities outside of the schedule of the Noise Ordinance would be limited to light-duty equipment and vehicles, and Mitigation Measures N-2 (Public Notification Process) and N-3 (Noise Complaint Process) would also ensure that nearby residents are provided advance notification of potentially adverse noise conditions and to ensure that complaints are resolved. For construction of the gen-tie, this impact with mitigation would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT, OPERATIONS AND MAINTENANCE. Operations-related activities that could cause minor levels of noise in the areas of the proposed Project include upkeep, maintenance, inspections, vegetation management, solar module washing, fire safety, and site security. The proposed Project would also include stationary sources of noise in the form of PV panel tracking system motors, the inverter-transformer stations that operate when the solar panels produce electricity in the daytime, BESS, and the 500 kV gen-tie line.

Throughout the solar field, the equipment that could generate the most prominent stationary source noise would be the pad-mounted inverter-transformer stations. The off-site noise levels produced by the individual inverters and transformers would depend on the final equipment selected and the ultimate locations of the individual inverter stations. The inverter-transformer stations would be centrally located within each 2 to 5 MW increment of generation. Auxiliary equipment for inverter-transformer stations may include cooling fans and pumps that operate depending on the internal temperature of the transformer cooling oil. This type of noise would have a broad-band spectrum and would not include simple tones or a "hum." The typical performance specification of a commercial or utility-scale inverter with cooling system and enclosure would be to achieve a design standard of 67 dBA at a distance of 32.8 feet (10 meters). With multiple units on each skid to achieve up to a 5,000 kilowatt output, the resulting noise level would be approximately 71 dBA at 50 feet and 45 dBA Leq at 1,000 feet from each inverter-transformer pad. (Calculations appear in EIR Appendix K.)

Within the solar field, other minor sources 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 5 minutes before operating again. This process would occur only during daylight hours, with a return to the starting position at sunrise. Although final design would determine the actual specifications for the motors, based on similar projects, noise from each motor and actuator would be about 62 or 63 dBA at the source or a distance of 3.28 feet (1 meter). Noise levels from the tracker motors throughout the solar field would not be discernable in the background conditions at any locations over 200 feet from the edges of the solar field.

The dominant stationary sources of noise near the proposed operation and maintenance (O&M) building would be related to the heating, ventilation, and air conditioning units (HVAC), if necessary for the O&M building and the BESS enclosures. The transformers and switchgear to within the onsite substation yards would also include cooling fans and pumps. Typical cooling systems for the BESS and transformers could generate 75 dBA at a distance of 32.8 feet (10 meters), which would result in 44 dBA Leq at 1,200 feet from the BESS equipment. (Calculations appear in EIR Appendix K.)

The proposed Project would also introduce the permanent stationary source of noise from the audible corona noise that occurs with normal and routine operation of the 500 kV gen-tie. Corona noise would occur along the alignments of the proposed gen-tie lines, and the typical resulting noise level near each gen-tie line with wet conductors would about 45 dBA Leq at the edge of the right-of-way. The noise from the gen-tie would not cause a substantial permanent increase in ambient day-night noise levels and would

be less than the most-stringent property line standards in the Noise Ordinance. Therefore, for operation of the gen-tie, this impact would be less than significant.

The proposed Project would be operated by up to 10 permanent staff on the site at any one time. Occasional vehicular noise would also be caused by crews for ongoing facility maintenance and repairs and for module washing and security patrols. These activities would normally involve only a small crew, and the Project-related O&M traffic would be sporadic.

The applicable standards in the Noise Ordinance (Chapter 9.52.040 and Section 4 of Ordinance No. 847) limits noise sources from causing excessive exterior noise on any nearby occupied property. The Noise Ordinance ensures that noise levels at any receiving land use that is a low-density "Rural Community" shall not exceed 55 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) or 45 dBA during the nighttime hours (10:00 p.m. to 7:00 a.m.). The stationary source noise standards set forth in the Noise Element, Policy N 2.3 and Policy N 4.1, of the General Plan are less stringent than those in the Noise Ordinance. All equipment within the Project site would be required to comply with the stationary source noise standards of the Noise Ordinance.

The solar generating facility would be primarily active and operational during daytime hours. However, the pad-mounted inverters-transformer stations' cooling systems and the battery storage equipment could operate outside of daylight hours. The overall noise levels caused by these units would be subject to the 45 dBA Lmax standard of the Noise Ordinance that applies at the boundary of any nearby occupied property. The proposed O&M building, BESS enclosures, and onsite substations would not be located within 1,200 feet of any occupied properties or residences and would not cause exterior noise of more than 45 dBA at any residential property boundary. As such, the noise from operation of the proposed Project would not exceed the Noise Ordinance standard of 45 dBA at night for any occupied "rural community" location. Likewise, the proposed Project operational noise levels of 44 dBA Leq at 1,200 feet from the BESS equipment would not exceed the General Plan Noise Element standard for stationary sources of 45 dBA Leq during the nighttime hours (10:00 p.m. to 7:00 a.m.). The impact of operation noise relative to applicable community noise standards would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT, DECOMMISSIONING. Decommissioning impacts would likely be similar to those that would occur during construction. The actual impacts would depend on the proposed decommissioning action and final use of the site.

Mitigation Measures for Impact N-1

MM N-1 **Construction Restrictions.** See full text in Section 3.13.9 (Mitigation Measures).

MM N-2 **Public Notification Process.** See full text in Section 3.13.9 (Mitigation Measures).

MM N-3 **Noise Complaint Process.** See full text in Section 3.13.9 (Mitigation Measures).

Significance After Mitigation

The increased noise levels that would occur with the proposed Project construction activities would be adverse after mitigation but not at significant levels. This impact would be less than significant during operation.

Impact N-2. Generation of excessive ground-borne vibration or ground-borne noise levels?

LESS-THAN-SIGNIFICANT IMPACT, CONSTRUCTION. Vibration from routine construction equipment and activities might be perceptible to people in the immediate vicinity of construction activities. Vibration sources that typically occur with construction activity or vehicle traffic have a region of influence that is limited to

approximately 200 feet. During construction, the impact or vibratory pile drivers used for installing posts would have the greatest radius of potential ground-borne vibration impacts.

The level of ground-borne vibration that could reach sensitive receptors depends on the distance to the receptor, the equipment type that is creating vibration (e.g., the frequency being produced), and the soil conditions surrounding the construction site. Because the use of construction equipment generating ground-borne vibrations would be localized around Project components, and construction activity would be set back substantially from property boundaries, no vibration sensitive structures or land uses would be near construction equipment or sources of vibration. The nearest home in Lake Tamarisk on Shasta Drive would be approximately 0.05 miles (260 feet) from the boundaries of the Easley Project.

When necessary to install posts near the proposed Project site boundaries, use of pile drivers could result in vibration that would be perceptible and potentially annoying within 100 feet of the source. The typical level of ground-borne vibration from an impact pile driver could exceed 0.6 in/sec PPV near the source, but at a distance of 100 feet the level would attenuate to below 0.1 in/sec, which is below the County threshold level that would be annoying to occupants of a building (0.1968 in/sec). Other construction activities would create lower levels of vibration and would not have the potential to create annoyance at distances of 50 feet or more from the equipment in use. (Calculations appear in EIR Appendix K.)

Because offsite vibration levels would be low enough to avoid causing an annoyance, they would be unlikely to cause structural damage. Impacts from vibration would be localized and temporary (i.e., infrequently recurring at any single location), and therefore, would not be excessive, resulting in a less than significant impact.

LESS-THAN-SIGNIFICANT IMPACT, OPERATIONS AND MAINTENANCE. Operation of the proposed solar facility, BESS, and gen-tie would not generate perceptible levels of vibration in the surrounding area. There would be no permanent source or potential to change vibration levels, except during circumstances where Project components require unscheduled maintenance or repair activities, during which the impact would be similar to that of construction. Because Project activities and facilities would not expose people to excessive ground-borne vibration, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT, DECOMMISSIONING. Decommissioning impacts would likely be similar to those that would occur during construction. The actual impacts would depend on the proposed decommissioning action and final use of the site.

Mitigation Measures for Impact N-2

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.13.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities (solar panel installation, substation and O&M building, and construction of access roads and gen-tie line). The No Project Alternative would cause no new noise sources or noise-generating activities. Accordingly, the No Project Alternative would represent no change to the environmental setting. Because no new sources of noise or vibration would occur with the No Project Alternative, this alternative would have no impact related to noise and vibration.

Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project. A different solar energy project would potentially result in similar noise and vibration impacts as those identified for the proposed Project.

3.13.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative (Alternative 2) would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. The reduction in acreage would increase the distances to sensitive receptors from the proposed Project sources of noise and vibration. The decrease in solar panel area would result in a slight decrease in the potential for sensitive receptors to be exposed to noise and vibration near the existing community of LTDR when compared with the impacts of the proposed Project.

Alternative 2 would reduce the noise and vibration levels experienced by sensitive receptors and reduce the noise and vibration impacts when compared to the proposed Project. Overall, the effects of Alternative 2 would be slightly reduced from the proposed Project, and mitigation identified for the proposed Project would be the same for under this alternative.

3.13.8. Cumulative Impacts

Geographic Scope

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 one mile of a project site including truck routes, but the region of greatest influence is typically within 0.5 miles from 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.

This geographic scope for cumulative noise and vibration effects includes the West-wide Section 368 Energy Corridors and the development activities of existing, past, present, and reasonably foreseeable future projects in the Desert Center area, as described in Section 3.1.2.

Cumulative Impact Analysis

The cumulative projects that occur in the geographic scope for noise and vibration include planning documents and the probable future solar energy projects that are similar in nature to the proposed Project. The planning efforts, proposed expansion of Joshua Tree National Park, and creation of Chuckwalla National Monument would not themselves create actions that increase noise or vibration levels. The noise and vibration effects of the equipment used for construction of other present and future cumulative projects would depend on the site-specific needs and schedules, and the impacts may or may not overlap spatially and temporally with those of the proposed Project.

Limited areas of cumulative project construction activities could be within 0.5 mile of the proposed Project. Simultaneous construction activity would have the potential to cause overlapping construction noise impacts with construction of the proposed Project. Active pieces of construction equipment normally cause no more than 85 dBA when measured 50 feet from the source. Construction-phase noise impacts would be short-term and limited in nature, with construction activities for all cumulative projects normally being limited to the daytime. The duration of construction work for the proposed Project would be approximately 20 months, and after that time, few notable permanent sources of noise would occur with the proposed solar facility, BESS, and gen-tie and the cumulative projects.

All cumulative project operations would generate noise from employee vehicles accessing the sites, and solar energy projects include power inverters and other power system infrastructure that are minor sources of noise. These sources may cause localized cumulative effects where multiple projects or shared transportation routes occur adjacent to a sensitive receptor.

Cumulative noise impacts would be reduced through compliance with local laws and regulations and implementation of typical mitigation to protect sensitive receptors from noise and implement feasible noise controls. Cumulative renewable energy projects and other development that is subjected to the environmental permitting process would have a detailed analysis of noise and land use conflicts as part of the project-level environmental review. The permitting process normally requires each project to comply with local standards and to avoid noise-related land use conflicts. This means that all projects, even if unrelated to the proposed Project, would need to comply with the local community noise standards, such as the Riverside County Noise Ordinance. Additional mitigation may be applied to the cumulative projects through environmental permitting by lead agencies. Although sources of noise associated with cumulative project operations, including employee vehicles accessing the sites, power inverters, and other power system infrastructure could impact residences that are near the proposed Project, the mitigation recommended in this analysis would ensure that the Project's incremental contribution to the cumulative noise impact would not be considerable.

Cumulative effects due to ground-borne vibration would occur only if there were sources of the vibration within approximately 200 feet from the boundaries between the proposed Project site and cumulative project sites. Boundaries of cumulative projects occur within 200 feet of the proposed Project site, but these shared boundaries are not within 200 feet of existing residences. The areas of potential overlap of cumulative project construction-related vibration would not be likely to create a cumulative vibration impact at residences near the proposed Project, and no cumulative effects would be likely from ground-borne vibration.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM N-1 to MM N-3 would be implemented to address potential noise and vibration impacts for the proposed Project. No additional mitigation is required.

Significance After Mitigation

The Project's incremental contribution to noise and vibration impacts would not be cumulatively considerable.

3.13.9. Mitigation Measures and Applicant Proposed Measures

APM NOISE-1 **Construction Timing.** Applicant will avoid or minimize use of any impact hammer for pile driving or other equipment similarly capable of producing disruptive noise during construction activities within a one-mile radius from the residential parcel on the northeast corner of around the Lake Tamarisk Desert Resort community during the winter months of highest residency (November 1 to March 31). If based on the final construction schedule, use of such equipment is necessary within this geographic area during the aforementioned time period, the Applicant will avoid or minimize this construction activity prior to 7:00 a.m. and after 6:00 p.m. The Applicant will also avoid nighttime equipment deliveries between 10:00 p.m. and 7:00 a.m.

MM N-1 **Construction Restrictions.** Heavy equipment operation, noisy construction work relating to any Project features onsite, and truck trips associated with materials and equipment deliveries shall be restricted to the times delineated below, unless a special permit has been issued by the County of Riverside: during June through September, between 6 a.m. to 6 p.m.; and during October through May, between 7:00 a.m. to 6:00 p.m.

Haul truck engines and other engines powering fixed or mobile construction equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

The construction contractor shall locate equipment staging in areas to create the greatest distance between construction-related noise sources and noise sensitive receivers nearest the Project site during Project construction. Where feasible, the construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site. No music or electronically reinforced speech from construction workers shall be audible at noise-sensitive properties.

MM N-2 **Public Notification Process.** At least 15 days prior to the start of ground disturbance, the Project owner shall notify all residents within one mile of the Project site and the linear facilities, by mail or by other effective means, of the commencement of Project construction. At the same time, the Project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the Project. If the telephone is not staffed 24 hours a day, the Project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the Project site during construction where it is visible to passersby. This telephone number shall be maintained until the Project has been operational for at least one year.

MM N-3 **Noise Complaint Process.** Throughout the construction and operation of the Project, the Project owner shall document, investigate, evaluate, and attempt to resolve all Project-related noise complaints. The Project owner or authorized agent shall:

(a) Use a Noise Complaint Resolution Form, or other documentation procedure acceptable to the County, to record and report the Project owner's response to resolving each noise complaint;

(b) Attempt to contact the person(s) making the noise complaint within 24 hours;

(c) Conduct an investigation to determine the source of noise in the complaint;

(d) If the noise is Project-related, take all feasible measures to reduce the source of the noise; and

(e) Submit a report to the County documenting the complaint and actions taken. The report shall include: a complaint summary, including the final results of noise reduction efforts and, if obtainable, a signed statement by the complainant stating that the noise problem has been resolved to the complainant's satisfaction.

3.14. Paleontological Resources

This section describes the existing local geology and paleontological resources, the regulatory framework for paleontological resources, and the possibility of discovery of paleontological resources within the area where the proposed Project and alternatives would be implemented. The Project area relevant to the analysis of paleontological resources is the physical footprint of Project construction, operation and maintenance, and decommissioning activities. Paleontological resources are any fossilized remains, traces, or imprints of organisms that are preserved in the Earth's crust and are of paleontological interest and provide information about the history of life on Earth. Fossil remains may include bones, teeth, shells, leaves, and wood. They are found in geological deposits within which they were originally buried. Paleontological resources include not only the actual fossils, but also the collecting localities and the geological deposits that contain the fossils. Paleontological resources are considered nonrenewable resources because the organisms they represent no longer exist. Thus, once destroyed, these resources can never be replaced. The information in this section is based on the *Paleontological Resource Survey Report for the Easley Renewable Energy Project*, Riverside County, California, prepared by PaleoWest (2023) (Paleontological Report; EIR Appendix E).

3.14.1. Environmental Setting

3.14.1.1. Paleontological Resource Classifications

BLM Instruction Memorandum IM 2009 011 provides guidelines for assessment and mitigation of potential impacts to paleontological resources (BLM, 2008). The Memorandum defines a significant paleontological resource as:

> *Any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has identified educational or recreational value. Paleontological resources that may be considered to not have paleontological significance include those that lack provenience or context, lack physical integrity because of decay or natural erosion, or that are overly redundant or are otherwise not useful for research. Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities.*

Due to the nature of the fossil record, paleontologists cannot know either the quality or the quantity of fossils present in a geologic unit prior to natural erosion or human-caused exposure. Therefore, in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce scientifically significant fossils elsewhere within the same geologic unit (both within and outside of the study area) or a unit representative of the same depositional environment. The proposed Project is on both BLM-administered and private land with the largest portion on BLM-administered land; therefore, it follows the Potential Fossil Yield Classification (PFYC) system for assessing paleontological resources. The PFYC system provides baseline guidance for assessing paleontological resources on BLM-administered land (BLM, 2016).

Potential Fossil Yield Classification (PFYC)

The PFYC system is based on mapped geologic units which are assigned a paleontological sensitivity class based on the relative abundance and significance of paleontological resources and their sensitivity to adverse impacts. Initial PFYC assignments based only on geologic mapping are considered as only a first approximation of the potential presence of paleontological resources and are subject to changes based on ground verification. The PFYC class rankings are summarized below (BLM, 2016):

Class 1 – Very Low. Geologic units that are not likely to contain recognizable fossil remains. This class usually includes units that are igneous or metamorphic, excluding reworked volcanic ash units; or units that are Precambrian in age or older. Management concern for paleontological resources in Class 1 units is usually negligible or not applicable. Overall, the probability of impacting significant paleontological resources is very low and further assessment of paleontological resources is usually unnecessary.

Class 2 – Low. Geologic units that are not likely to contain palaeontologic resources. Class 2 geologic units have the following characteristics: field surveys have verified that palaeontologic resources not present or are very rare; geologic units are generally younger than 10,000 years before present (bp); and sediments that exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely. Management concern for paleontological resources is generally low and further assessment or mitigation is usually unnecessary except in rare or isolated circumstances where localities containing paleontological resources are found.

Class 3 – Moderate (a) or Unknown (b). Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence. This class is often marine in origin with sporadic known occurrences of paleontological resources. Paleontological resources may occur intermittently, but abundance is known to be low. Significant paleontological resources may occur but would be widely scattered. The potential for authorized land use to impact significant paleontological resources is known to be low to moderate. Management concerns for paleontological resources are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.

Class 4 – High. Geologic units that are known to contain a high occurrence of paleontological resources. Significant paleontological resources have been documented 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. Illegal collecting activities may impact some areas. Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot checking may be necessary during land-disturbing activities. Avoidance of known paleontological resources may be necessary.

Class 5 – Very High. Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources. Significant paleontological resources have been documented and occur consistently. Paleontological resources are highly susceptible to adverse impacts from surface-disturbing activities. Unit is frequently the focus of illegal collecting activities. Management concern is high to very high. A field survey by a qualified paleontologist is almost always 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.

Class U – Unknown Potential. Geologic units that cannot receive an informed PFYC assignment. Geological units may exhibit features or preservational conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit

or area is known. Geologic units represented on a map are based on lithologic character or basis of origin but have not been studied in detail. Scientific literature does not exist or does not reveal the nature of paleontological resources. Reports of paleontological resources are anecdotal or have not been verified. Area or geologic unit is poorly or understudied. BLM staff has not yet been able to assess the nature of the geologic unit. Until a provisional assignment is made, geologic units that have an unknown potential have medium to high management concerns, and lacking other information, field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.

Society of Vertebrate Paleontology Criteria

The Society of Vertebrate Paleontology (SVP) has developed standard procedures for the assessment and mitigation of adverse impacts to paleontological resources which are intended to be applicable to both private and public lands under the jurisdiction of local, city, county, regional, state, and federal agencies SVP, 2010). Under the SVP criteria rock units are described as having (a) high, (b) undetermined, (c) low, or (d) no potential for containing significant paleontological resources (SVP, 2010).

The Project is located on both BLM-administered land and private land; however, much more of the proposed Project is located on BLM-administered land and therefore will use the BLM PYFC system for paleontological resource assessment. SVP has also established professional guidelines for paleontologists and provided definitions of significant paleontological resources (SVP, 2010). The SVP defines significant paleontological resources as 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).

Riverside County Criteria

Riverside County has been inventoried for geologic formations known to potentially contain paleontological resources. Lands with high, low, or undetermined potential for finding paleontological resources have been mapped in the County (Riverside County, 2015: Figure OS-8). Based on Riverside County Figure OS-8, the Project is underlain by areas mapped as unknown, low, and high (Ha) sensitivity (Riverside County, 2015). It should be noted that the map does not substitute for site-specific investigations, as deemed necessary.

High Potential. Sedimentary rock units with high potential for containing significant non-renewable paleontological resources include 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 which contain significant non-renewable 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):** 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. These include rocks of Silurian or Devonian age and younger that have potential to contain remains of fossil fish, and Mesozoic and Cenozoic rocks that contain fossilized body elements and trace fossils such as tracks, nests, and eggs.
- **High Sensitivity B (Hb):** Equivalent to High A but is based on the occurrence of fossils at a specified depth below the surface. This category indicates fossils that are likely to be encountered at or below 4 feet of depth and may be impacted during construction activities.

- **Low Potential.** Lands for which previous field surveys and documentation demonstrate as having a low potential for containing significant paleontological resources subject to adverse impacts. The mapping of low potential was determined based on actual documentation and was not generalized to cover all areas of a particular rock unit on a geologic map.
- **Undetermined Potential.** Areas underlain by sedimentary rocks for which literature or unpublished studies are not available have undetermined potential for containing significant paleontological resources. These areas need to be inspected by a qualified vertebrate paleontologist before a specific determination of high potential or low potential can be assigned.

3.14.1.2. Literature Review and Records Search

Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Therefore, in order to ascertain whether a particular study area has the potential to contain significant fossil resources at the subsurface, it is necessary to review relevant scientific literature and geologic mapping to determine the geology and stratigraphy of the area. Further, to delineate the boundaries of an area of paleontological sensitivity, it is necessary to determine the extent of the entire geologic unit because paleontological sensitivity is not limited to surface exposures of fossil material.

PaleoWest conducted a review of published geologic and paleontological literature and searches of pertinent local and regional museum repositories for paleontological localities at the Natural History Museum of Los Angeles County (NHMLAC), San Bernardino County Museum (SBCM), San Diego Natural History Museum (SDNHM), and Western Science Center (WSC) (PaleoWest, 2023).

The geologic literature review revealed that The Geologic Map of California – Salton Sea Sheet (Jennings, 1967) is the only published geological map covering the entire Project area; this is a regional scale map at a 1:250,000 scale and therefore less detailed than a larger scale, project area focused map. The Salton Sea Sheet identifies the Project site as primarily underlain by Quaternary alluvium (Qal), with approximately 30 acres of Quaternary nonmarine conglomerate (Qc, Qco) along the proposed gen-tie route. The Quaternary alluvial deposits of Chuckwalla Valley (Qal) are composed of late Pleistocene (2.6 million years ago to 11,700 years ago) to Holocene (11,700 years ago to present) terrestrial valley axis fill and valley margin deposits. The Quaternary alluvial deposits are widespread and are laterally and vertically variable with respect to lithology, grain size, and depositional environment. The nonmarine alluvial fan conglomerates (Qc and Qco) are described by Jennings (1967) as a coarse cobble conglomerate deposit derived from alluvial fans (PaleoWest, 2023). Recent excavations in the Chuckwalla Valley indicate that fine-grained Pleistocene playa deposits may underlie Quaternary alluvial fan valley axis deposits at shallow depth (PaleoWest, 2023).

The museum locality records searches from the NHMLAC, SDMHN, and the WSC did not identify any previously recorded vertebrate localities within the Project boundaries; however, the museums did identify several nearby localities from within similar Quaternary sedimentary deposits (PaleoWest, 2023). The nearby localities in the Chuckwalla Valley produced Quaternary vertebrate fossils of kangaroo rat, pocket mouse, rattlesnake, and horned lizard from Ford Dry Lake; horse, camel, bison, and muskox tribe from near the Eagle Mountains and Coxcomb Mountains; and catfish, desert tortoise, gopher snake, horned lizard, desert iguana, finch, grebe, saber-toothed cat, bighorn sheep, mule deer, kit fox, camel, llama, rabbit, gopher, kangaroo rat, ground squirrel, harvest mouse, and pocket mouse from the Desert Harvest and Desert Sunlight solar projects (PaleoWest, 2023). The SBCM did not have record of fossil localities in the Project area or within a 5-mile buffer.

3.14.1.3. Field Survey

A pedestrian survey was conducted for the Project between April 3–6 and April 10–13, 2023, by a PaleoWest BLM-permitted Paleontological Field Director with assistance from PaleoWest Staff Paleontologists. 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 may be necessary prior to or during Project development. The survey was conducted for the entire Project site and along the gen-tie route, covering approximately 3,867 acres, using evenly spaced, 10–30-meter (m) parallel transects. Project areas obscured by heavy vegetation, agricultural mulch, or developed roads were not comprehensively examined because of lack of visibility of the underlying geological unit.

Based on the field survey, the Project area is underlain by moderately consolidated, light brown to light tan Quaternary alluvium consisting predominantly of clay, silt, and coarse-grained sand with both remnant and active alluvial surfaces, which include periodically inundated wash channels. The. Field observations of the Quaternary nonmarine conglomerate unit (Qc, Qco), observed locally along the proposed gen-tie route, indicate the unit is likely not a true conglomerate but rather a developing desert pavement surface composed of coarse angular metamorphic and igneous clasts on top of a finer-grained alluvial fan deposit (PaleoWest, 2023).

A total of 31 paleontological localities were identified on the surface of the Project area during fieldwork. Four significant vertebrate fossils were documented and collected for curation at the WSC during the paleontological survey of the Project area. The significant fossils include specimens of rabbit and turtle. Also, 27 nonsignificant fossils were observed during the paleontological field survey. The nonsignificant fossils were poorly preserved unidentifiable vertebrate bone and ubiquitous turtle shell; therefore, they were documented but not collected. All of the identified localities were found within the Quaternary alluvium (Qal) geologic unit (PaleoWest, 2023).

The occurrence of fossil remains in the Project area from rabbits/hares (Lepus, Leporidae) and tortoises (Testudinidae) is expected for the Desert Center area as both are endemic taxa, and their tendency to burrow underground would increase their chances of preservation should they die in their dens. Remains of these taxa are common in Pleistocene deposits in the Mojave Desert, though remains of Lepus are rare north of Interstate 10 (PaleoWest, 2023). The presence of burrowing as an agent of preservation suggests more fossils may be preserved in the subsurface of the Project area and may be encountered during ground-disturbing activities.

3.14.1.4. Paleontological Sensitivity

Fieldwork results confirmed surface fossils are present in the Project area. All visible surface fossils were identified during the field survey and the significant fossils were collected and curated. Additional surface or near-surface fossils may be exposed by ongoing eolian and alluvial processes that rework or remove thin layers of sediment that may obscure fossils (PaleoWest, 2023). The Quaternary alluvium 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, PaleoWest recommended the paleontological resource potential for Quaternary alluvium be assigned **PFYC 4 (High).** The Quaternary nonmarine conglomerates (Qc, Qco of Jennings [1967]) have not produced any fossil resources in the Project area or vicinity; however, field observations indicate Quaternary nonmarine conglomerate (Qc, Qco) in the Project area is likely not a true conglomerate but rather a developing desert pavement surface on top of an alluvial fan deposit. The Quaternary deposits beneath the desert pavement are of an appropriate age to preserve fossil resources and similar lithologies have been known to yield significant paleontological resources elsewhere in the

Chuckwalla Valley (PaleoWest, 2023). PaleoWest recommended the areas mapped as Quaternary nonmarine conglomerates be assigned **PFYC 3a (Moderate).**

Regulatory Framework,

3.14.1.5. Federal Laws, Regulations, and Policies

Paleontological Resources Preservation Act (PRPA) of 2009. The PRP was part of the Omnibus Public Lands Management Act (OPLMA) of 2009. The PRPA requires the Secretary of the Interior to manage and protect paleontological resources on federal land using scientific principles and expertise and requires federal agencies to develop appropriate plans for inventorying, monitoring, and the scientific and educational use of paleontological resources, in accordance with applicable laws, regulations, and policies. Where possible, these plans should emphasize interagency coordination and collaborative efforts with non-federal partners, the scientific community, and the general public. The PRPA is the authority for federal land managing agencies for permits to collect paleontological resources, as well as curation of these resources in an approved repository. It provides authority for the protection of significant paleontological resources on federal lands including criminal and civil penalties for fossil theft and vandalism.

The PRPA defines a paleontological resource as any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth.

Antiquities Act of 1906. The Antiquities Act was the first law enacted to specifically establish that archaeological sites on public lands are important public resources. It obligated federal agencies that manage public lands to preserve the scientific, commemorative, and cultural values of such sites. This Act does not refer to paleontological resources specifically; however, the Act does provide for the protection of "objects of antiquity" (understood to include paleontological resources) by various federal agencies not covered by the PRPA.

The Federal Land Policy and Management Act of 1976. The Federal Land Policy and Management Act (FLPMA) (43 USC 1701 1782) authorizes inventories and monitoring surveys of paleontological resources on federal land managed by the BLM, which issues a permit for collecting paleontological resources. It also directs the BLM to develop management plans that include public education about paleontological resources and procedures for collection and minimization of impacts to resources.

The BLM defines a significant paleontological resource as any paleontological resource considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has identified educational or recreational value (BLM, 2008).

National Environmental Policy Act of 1969. The National Environmental Policy Act (NEPA) (USC § 4321 et seq.; 40 Code of Federal Regulations, § 1502.25), as amended, directs federal agencies to "Preserve important historic, cultural, and natural aspects of our national heritage (Section 101(b)(4))." The current interpretation of this language has included scientifically important paleontological resources among those resources that may require preservation.

3.14.1.6. State Laws, Regulations, and Policies

California Environmental Quality Act (CEQA) (Public Resources Code Division 13 – Environmental Quality) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3). CEQA declares that it is state policy to: "take all action necessary to provide the people of this state

with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, CEQA requires that alternative plans and mitigation measures be considered. The State CEQA Guidelines reflect the requirements set forth in the Public Resources Code, as well as court decisions interpreting the statute and practical planning considerations and define procedures, types of activities, persons, and public agencies that are required to comply with CEQA.

If paleontological resources are identified as being within a project study area, the sponsoring agency must take those resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

California Public Resources Code - PRC § 5097.5 and § 30244. A person shall not 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, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. The code includes rules for legal punishment and restitution. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

3.14.1.7. Local Laws, Regulations, and Policies

Riverside County General Plan. The Multipurpose Open Space Element of the Riverside County General Plan identifies a number of policies intended to minimize impacts to paleontological resources. It also includes a Paleontological Sensitivity Resources map indicating lands with low, undetermined, or high potential for finding paleontological resources. The following policies apply to the portions of the Project area within County- and privately owned lands (Riverside County, 2015):

- **Policy OS 19.6.** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, 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.
- **Policy OS 19.7.** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, 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.
- **Policy OS 19.8**. Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, 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.
- **Policy 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.

The proposed Project would comply with all federal, State, and County requirements regarding the development of applicable plans and reports and the recovery and curation of any paleontological resources found.

3.14.2. Methodology for Analysis

Due to the nature of the fossil record, paleontologists cannot know either the quality or the quantity of fossils present in a geologic unit prior to natural erosion or human-caused exposure. Therefore, in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce scientifically significant fossils elsewhere within the same geologic unit (both within and outside of the study area) or a unit representative of the same depositional environment. The paleontological resources assessment is based on the paleontological sensitivity of the underlying geologic units as determined by: (1) records searches at the Natural History Museum of Los Angeles County (NHMLAC), San Bernardino County Museum (SBCM), San Diego Natural History Museum (SDNHM), and Western Science Center (WSC); (2) a review of the relevant geologic and paleontologic literature for the project area; and (3) a field survey of the Project site, as detailed in the Paleontological Resource Survey Report (PaleoWest, 2023). The Project site was identified with areas of high and moderate potential for paleontological resources and are evaluated for the amount and type of construction ground disturbance and construction and operational activities that would result in impacts to paleontological resources. No areas of very high potential for paleontological resources were identified within the Project site.

3.14.3. CEQA Significance Criteria

The criteria used to determine the significance of potential Paleontological Resources impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to Paleontological Resources if the Project would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Impact PR 1).

The County of Riverside's Environmental Assessment Form includes Paleontological Resources significance criteria that are identical to the above-listed CEQA criteria and are thus not analyzed separately.

3.14.4. Proposed Project Impact Analysis

During the scoping effort conducted by the County of Riverside no concerns related to Paleontological Resources were raised.

Impact PR-1. The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

LESS THAN SIGNIFICANT WITH MITIGATION. As defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Most impacts on paleontological resources are direct impacts, resulting from ground-disturbing activities that would damage or destroy resources. The result of resource recovery is scientific net gains in the discovery of previously unrecorded paleontological resources. Indirect impacts include the potential for increased unauthorized collection of fossils and other paleontological resources resulting from larger numbers of people in the vicinity (i.e., personnel involved in construction and operation of the facilities).

Since most of the Project site has nearly level to gently sloping topography, no mass grading would be required; however, some areas of the solar site would be affected by some form of ground disturbance, including mowing, grubbing, minor grading, compaction, and excavation. Some of the areas where

facilities and arrays would be located would require light grubbing for leveling and trenching. Construction would require ground disturbance for construction of the solar arrays, substation, O&M building, septic system, BESS foundations, access roads, gen-tie line towers, and other features. This ground disturbance could result in direct impacts to the paleontologically sensitive geologic rock units that could adversely affect (damage or destroy) significant paleontological resources. The desktop paleontological assessment conducted for the Project by PaleoWest identified paleontological resources in the Project vicinity and the paleontological field survey identified paleontological resources on the Project site, including four significant vertebrate fossils from rabbits/hares (Lepus, Leporidae) and tortoises (Testudinidae) (PaleoWest, 2023). PaleoWest assigned PFYC classifications of High (PFYC 4) to the Quaternary alluvium (Qal) and Moderate (PFYC 3a) to the mapped Quaternary nonmarine conglomerates (Qc, Qco). Therefore, significant paleontological resources could be encountered and adversely impacted (damaged or destroyed) during ground disturbance associated with the Easley Project construction.

The moderate to high sensitivity of the formations and known and potential paleontological resources underlying the Project site necessitates the implementation of a Paleontological Resources Monitoring and Mitigation Plan (PRMP) and worker awareness training to minimize the impact of construction-related activities. Mitigation Measures PR-1 through PR-4 would require a PRMP, paleontological awareness training, paleontological monitoring where appropriate, and mitigation and monitoring reporting. With implementation of Mitigation Measures PR-1 through PR-4, potential adverse impacts on paleontological resources within the Project area during construction and operation of the solar facilities would be reduced to a less-than-significant level.

Indirect effects include the potential for increased unauthorized collection of fossils and other paleontological resources resulting from increased number of people in the vicinity during construction. Implementation of Mitigation Measures PR-1 through PR-4, and the installation of fencing around the perimeter of the Project facility, would minimize the potential for indirect impacts to paleontological resources by limiting unauthorized access to the site, putting in place a monitoring program to ensure fossil identification and recording during construction, and providing an educational program to workers so that paleontological resources are avoided or reported to qualified professionals.

Mitigation Measures for Impact PR-1

MM PR-1 **Paleontological Resource Monitoring and Mitigation Plan (PRMP).** See Section 3.14.8 (Mitigation Measures) for full text.

MM PR-2 **Worker Environmental Awareness Program (WEAP).** See Section 3.14.8 (Mitigation Measures) for full text.

MM PR-3 **Paleontological Monitoring and Fossil Recovery**. See Section 3.14.8 (Mitigation Measures) for full text.

MM PR-4 **Paleontological Resources Monitoring Report.** See Section 3.14.8 (Mitigation Measures) for full text.

Significance After Mitigation

The impact would be less than significant.

3.14.5. Alternative 1: No Project Alternative

The No Project Alternative would not result in the development of the solar facility and gen-tie line nor require new construction and/or operational activities, as described in Section 2.11.1. As such, the environmental impacts associated with the proposed Project, as described in Section 3.14.4, would not occur. The No Project Alternative would not result in any direct or indirect impacts to paleontological

resources. Therefore, the No Project Alternative would not have impacts related to paleontological resources.

However, in the absence of the proposed Project or an alternative to the Project, the purposes and goals for renewable energy generation that would be met by the proposed Project (or an alternative) would not be achieved. As a result, it is possible that another, similar energy generation project would be constructed in the future to meet the renewable energy generation goals in the Desert Center area. Such a project would likely introduce similar impacts related to paleontological resources that would be introduced through the proposed Project or an alternative.

3.14.6. Alternative 2: Lake Tamarisk Alternative

Alternative 2 would remove approximately 30 acres of solar panels closest to the Lake Tamarisk Desert Resort (LTDR) and relocate the onsite substation and BESS to a location 0.7 miles further north of the LTDR. This relocation of the onsite substation would result in the 500 kV gen-tie line for this alternative being approximately 0.8 miles longer than the proposed 500 kV gen-tie line. Despite the increased length of the gen-tie line, this alternative would lead to an overall decrease in ground disturbance due to the removal of solar panels. Operation of the project under Alternative 2 would be the same as for the proposed Project. Due to the decrease in ground disturbance, impacts related to damage or destruction of paleontological resources would be minimally less than for the proposed Project. implementation of Mitigation Measures PR-1 through PR-4 would reduce potential adverse impacts on paleontological resources to a less-than-significant level.

3.14.7. Cumulative Impacts

Geographic Scope

The geographic scope of cumulative impacts to paleontological resources is eastern Riverside County. Cumulative development in eastern Riverside County in the Desert Center region of Southern California has the potential to directly or indirectly destroy paleontological resources, particularly during earth moving activities such as grading and excavation in all areas of the Chuckwalla Valley underlain by the same geologic units as the proposed Project; in particular, areas of Quaternary alluvial sediments (Qal) that have a BLM PFYC of Class 4 (High) paleontological sensitivity, or underlain by other geologic units with high to very high paleontological sensitivity. In addition, collection of fossil materials, dislodging of fossils from their preserved environment, and/or physical damage of fossil specimens could also adversely affect paleontological resources. Together these potential direct and indirect impacts associated with development in the cumulative scenario could result in a cumulatively significant impact to paleontological resources.

Cumulative Impact Analysis

As discussed above, there is a potential for paleontological resources on the Project site to be affected during ground-disturbing activities associated with the Project construction (Impact PR-1). 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. The Easley Project, as well as the other solar development projects in eastern Riverside County, would be required to provide mitigation for any impacts to paleontological resources in accordance with provisions of CEQA, as well as with regulations currently implemented by the County and BLM, the PRP Act, and the proposed guidelines of the SVP. Implementation of Mitigation Measures PR-1 through PR-4 would ensure that the proposed

Project would avoid and minimize impacts on paleontological resources to the maximum extent feasible. Therefore, the Easley Project's incremental contribution to cumulative impacts for paleontological resources would not be cumulatively considerable.

Mitigation Measures for Cumulative Impacts

MM PR-1 Paleontological Resource Monitoring and Mitigation Plan (PRMP)

MM PR-2 Worker Environmental Awareness Program (WEAP)

MM PR-3 Paleontological Monitoring and Fossil Recovery

MM PR-4 Paleontological Resources Monitoring Report

Significance After Mitigation

The impact would be less than significant.

3.14.8. Mitigation Measures

MM PR-1 Paleontological Resource Monitoring and Mitigation Plan (PRMP). Prior to the start of any Project-related construction activities, the Applicant shall retain a County- and BLM-approved paleontologist (Project Paleontologist) to prepare and implement a project-specific PRMP to be approved by the County and BLM. The Project Paleontologist shall hold a BLM-issued Paleontological Resource Use Permit and be responsible for implementing all the paleontological conditions of approval and for using qualified paleontologists to assist in work and field monitoring.

At a minimum, information to be contained in the PRMP, in addition to other information required under industry standard, Society of Vertebrate Paleontology standards, and BLM paleontology program policy and 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.
- The PRMP 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.
- The PRMP 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 PRMP shall detail methods of recovery, preparation, and analysis of specimens, the final curation location of specimens at the repository identified in the BLM-issued

Paleontological Resource Use Permit, data analysis, and reporting. Where possible, recovery is preferred over avoidance in order to mitigate the potential for looting of paleontological resources.

- The PRMP shall specify that all paleontological work undertaken by the Applicant on public lands administered by BLM shall be carried out by qualified, permitted paleontologists with the appropriate current BLM Paleontological Resources Use Permit.
- Identification of personnel with authority and responsibility to temporarily halt or divert ground-disturbance activities to allow for recovery of large specimens.

The PRMP shall be submitted to the County and BLM for review and approval 60 days prior to start of Project construction. The PRMP must be approved by the County and BLM prior to the Notice To Proceed.

MM PR-2 **Worker Environmental Awareness Program (WEAP).** Prior to the start of Project-related construction activities, a paleontological component to the WEAP shall be developed by the Project Paleontologist. The WEAP shall address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. The training program shall also include the set of reporting procedures that workers are to follow if paleontological resources are encountered during Project activities. The WEAP may be combined with other environmental training programs for the Project. All field personnel will receive WEAP training on paleontological resources prior to Project-related construction activities.

MM PR-3 **Paleontological Monitoring and Fossil Recovery**. The PRMP shall identify monitoring frequency and intensity of all areas of the Project site, particularly in areas underlain by geologic units assigned paleontological sensitivity of High (PFYC 4) or Moderate (PFYC 3a). Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, he or she may recommend to the BLM Authorized Officer that monitoring be reduced or cease entirely.

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 PRMP 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 on the Paleontological Resources Use Permit held by the Project Paleontologist and in the PRMP. 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- and BLM-approved repository (identified on the permit and in the PRMP) and receipt(s) of collections submitted to the County and BLM no later than 60 days after all ground-disturbing activities are completed.

MM PR-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 and BLM. 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.

3.15. Population and Housing

This section evaluates the impacts on population and housing resulting from implementation of the Project. The analysis in this section: presents an overview of existing conditions that influence population and housing, describes the applicable regulations, identifies the criteria used for determining the significance of environmental impacts, and describes the potential impacts to population and housing.

3.15.1. Environmental Setting

3.15.1.1. Population

The proposed Project area is in Riverside County, which is the fourth most populous county in California (CA DOF, 2022). Table 3.15-1 provides a summary of the existing population, housing, and employment conditions for Desert Center, CA (the general location of the proposed Project) and Riverside County and San Bernardino County (counties where the construction workforce would largely be recruited).

Table 3.15-1. Year 2021 Existing Conditions – Population, Housing, and Employment: Desert Center, Riverside County, and San Bernardino County.

		Housing Units		Employment	
Location	Population	Total Units	Vacancy Rate	Total Employed[1]	Unemployment Rate
Desert Center	288	241	35.0%	268	0%
Riverside County	2,435,525	863,784	10.5%	1,130,500	3.7%
San Bernardino County	2,187,665	740,654	8.9%	990,100	3.6%

1: Accounts for population greater than 16 years of age and in Labor Force.
Source: CA DOF, 2022; CA EDD, 2022, US Census Bureau 2021a, 2021b, 2021c.

Population estimates, future projections, and average annual growth rates for Riverside County and San Bernardino County are summarized in Table 3.15-2. There was no data available for Desert Center regarding population projections, so it has not been included in Table 3.15-2. Populations from 2020 through 2050 are listed with an average annual growth number and rate for the communities within the study area. The population growth in both Riverside County and San Bernardino County are expected to increase slowly during the next three decades, with Riverside County projected to have a slightly higher annual growth rate than San Bernardino County.

Table 3.15-2. Population Estimates, Projections, and Average Annual Growth Rates

	Riverside County	San Bernardino County
Population, 2020	2,449,299	2,184,112
Projected Population, 2025	2,593,906	2,273,291
Average Annual Growth Rate, 2020-2025	1.18%	0.82%
Projected Population, 2030	2,728,068	2,368,002
Average Annual Growth Rate, 2025-2030	1.03%	0.83%
Projected Population, 2040	2,933,038	2,536,592
Average Annual Growth Rate, 2030-2040	0.75%	0.71%
Projected Population, 2050	3,059,095	2,681,796
Average Annual Growth Rate, 2040-2050	0.42%	0.57%

Source: CA DOF 2021.

3.15.1.2. Housing

The current occupied and vacant housing estimates are presented in Table 3.15-1 for communities and counties within the study area of Desert Center, Riverside County, can San Bernardino County. The vacancy rate of Desert Center is high with about 35 percent of the total housing units vacant. Riverside County and San Bernardino County have relatively low vacancy rates, with approximately 9 percent and 4 percent of the total housing units vacant, respectively.

3.15.2. Regulatory Framework

There are no federal, state, or local regulations, plans, and standards for population and housing that apply to the proposed Project.

3.15.3. Methodology for Analysis

The regulations implementing CEQA state that economic or social factors of a project may be included in a CEQA document but shall not be treated as significant effects on the environment. However, economic or social effects of a project may be used to determine the significance of physical changes caused by the Project. Additionally, economic, social, and housing factors should be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment.

To determine whether the proposed Project would induce population growth, the availability of the local workforce and population in the region was analyzed. It was assumed that most construction workers would be drawn from communities located within Riverside County and San Bernardino County, which have the largest concentration of construction workers in proximity to the proposed Project area. It is anticipated that most projected construction workforce would likely seek housing closer to the proposed Project area (within an hour driving distance) or seek temporary housing (such as seasonal, recreational, or occasional use housing; long-term visitor areas; and hotel and motels) during the week and commute an average 150 miles round trip per day and commute home over the weekend.

3.15.4. CEQA Significance Criteria

The significance criteria listed below are from the Environmental Checklist Form in Appendix G of the State CEQA Guidelines. Under CEQA, the proposed Project and alternatives would have significant impacts on population and housing if they would result in:

- *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) (see Impact PH-1).*

The following additional significance criteria from the County of Riverside Environmental Assessment form are used in this analysis. A project could have potentially significant impacts if it would:

- *Cumulatively exceed official regional or local population projections (see Section 3.14.9, Cumulative Impacts)*

The following CEQA significance criteria from Appendix G were not included in the analysis:

- *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.*

The proposed Project would be constructed on vacant desert land and would not remove any existing structures. The Project would not cause displacement of existing housing or people, and would not necessitate construction of replacement housing elsewhere.

The following CEQA significance criteria from the County's Environmental Assessment Form were not included in the analysis for the following reasons:

- *Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income.*

  The proposed Project would not create a demand for additional housing due to the temporary nature of Project construction activities and the nominal workforce required during Project operation. During construction, workers would commute to the Project site from nearby communities in Riverside County and San Bernardino County.

- *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

  Similar to the above, the proposed Project would not displace substantial existing housing or people due to the fact that there are no existing residential buildings on site, and no housing structures would be removed as part of the Project. As a result, the construction of replacement housing is not necessary. In addition, the Project workforce would be sourced locally, and the proposed Project does not contain a residential component.

- *Affect a County Redevelopment Project Area.*

  The proposed Project area and its immediate vicinity would not be within a County Redevelopment Project Area.

3.15.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to population and housing. Public concerns included a potential for decreased property values due to the proximity of the Project, which is an economic effect and, therefore, not a significant impact under CEQA (see Section 3.15.3). For informational purposes, concerns related to property values are addressed in Section 3.12, Land Use and Planning, and Section 4.7 (Other Public Concerns).

Impact PH-1. The Project could induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

LESS THAN SIGNIFICANT. During the 20-month construction period of the proposed Project, the on-site workforce is expected to reach peak of approximately 530 individuals with an average construction-related on-site workforce of 320 individuals. The construction workforce would largely be recruited from within Riverside and San Bernardino Counties. Riverside County has the largest concentration of construction workers close to the Project area. It is anticipated that many workers are likely to engage in weekly commuting or otherwise temporarily relocate to the Desert Center region while working at the Project area.

In 2021, Desert Center's unemployment rate averaged 0 percent, Riverside County's unemployment rate averaged 3.7 percent, and San Bernardino County's unemployment rate averaged 3.6 percent. Based on the most recent unemployment rates, it is anticipated that most construction, operation, and maintenance workforce would come from the existing labor pool in nearby communities in Riverside or San Bernardino Counties.

As illustrated in Table 3.15-1, Year 2021 Existing Conditions – Population, Housing, and Employment: Desert Center, Riverside County, and San Bernardino County, vacancy rates in the study areas are high, ranging from about 9 to 35 percent. Within the Desert Center area, there are approximately 115 vacant units. Riverside County as a whole has approximately 103,919 vacant units. There are sufficient vacant housing units within the local communities to support the number of construction workers to the extent that they are not only drawn from local communities. The proposed Project would not trigger the need for construction of new housing and would not induce substantial permanent growth to the regional population levels.

During operation of the proposed Project, up to 10 permanent staff members could be on the site at any one time for ongoing facility maintenance and repairs. Alternatively, approximately 2 permanent staff and 8 Project operators would be located off site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. Security personnel would be on-call. These staff would also be sourced from nearby communities in Riverside County and San Bernardino County. The permanent staff are not anticipated to increase the local population and vacancy rates within the study area offer ample available housing to operational employees wishing to relocate within the local study area.

Decommissioning of the proposed Project would require removal of the solar equipment and facilities and transportation of all components off site. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense.

Overall, the proposed Project's impact on population growth in the Project area and demand for additional housing from construction, operation, and decommissioning would be less than significant.

Similar to the solar and energy storage facility, workers for the gen-tie line (a peak of up to 530 workers for a 20-month period) would be sourced from nearby communities in Riverside County and San Bernardino County. Given the unemployment and vacancy rates in the Desert Center area and Riverside County and San Bernardino County as a whole, any potential population growth in the Project area would either be temporary or insubstantial during construction and operation of the proposed Project and the existing vacant housing units would be sufficient to support the Project. Impacts would be less than significant.

Mitigation Measures for Impact PH-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.15.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities (solar panel installation, substation and O&M building, and construction of access roads and gen-tie line). The No Project Alternative would not affect population growth or demand for additional housing in the Project area. Therefore, the No Project Alternative would not have impacts to population and housing, while the proposed Project would have impacts that are less than significant to these resources. Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project. A different solar energy project would potentially result in similar impacts to population and housing as those identified for the proposed Project.

3.15.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would be similar to the proposed Project, but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk, such that the Project solar panels would be approximately 0.45 miles (2,350 feet) from the closest residence compared to 750 feet under the proposed Project. The electrical output of the Alternative 2 would not be appreciably reduced compared to the proposed Project. Alternative 2 would have similar construction and operational activities as the proposed Project, and therefore, Alternative 2 would have similar impacts to population and housing and impacts would be less than significant.

3.15.8. Cumulative Impacts

Geographic Scope

The geographic scope of the cumulative impacts analysis includes populated areas within a two-hour worker commute distance of the proposed Project site near Desert Center, which would extend out into the rest of Riverside County and into San Bernardino County. This geographic scope would include all projects listed in Tables 3.1-1 and 3.1-2.

Solar and Energy Storage Facility

Short-term cumulative impacts to population and housing would occur during the construction and decommissioning periods when overlapping construction schedules of multiple projects 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. Operational cumulative population and housing impacts could occur when multiple projects cause a substantial increase in population in an area that leads to demand for housing that exceeds available capacity.

Construction of the present and reasonably foreseeable future development projects shown in Tables 3.1-1 and 3.1-2 may overlap with construction of the proposed 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 (35 percent in Desert Center) 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. The proposed Project would contribute an additional peak labor need of approximately 530 individuals. 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.

500 kV Gen-tie Line

Cumulative impacts of the gen-tie line would be the same as for the solar and energy storage facility with regards to impacts to population and housing in the study area. The gen-tie line would not make a considerable contribution to cumulative impacts because any potential population growth in the Project area due to the construction and operation of the Project gen-tie line would either be temporary or insubstantial during construction and operation of the proposed gen-tie line.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

The Project's incremental contribution to impacts to population and housing would not be cumulatively considerable.

3.15.9. Mitigation Measures

No mitigation would be required.

3.16. Public Services and Utilities

This section evaluates the impacts on public services and utilities resulting from implementation of the proposed Project. The analysis in this section: presents an overview of existing conditions that influence public services and utilities, describes the applicable regulations, identifies the criteria used for determining the significance of environmental impacts, and describes the potential impacts on public services and utilities of the proposed Project.

3.16.1. Environmental Setting

3.16.1.1. Fire Protection

Riverside County Fire Department, in cooperation with California Department of Forestry and Fire Protection (CAL FIRE), provides fire and emergency services to residents of unincorporated areas of Riverside County (Riverside County Fire Department, 2023a). The closest Riverside County Fire Department/CAL FIRE station to the proposed Project location in the Desert Center area is Station 49 – Lake Tamarisk Station, located at 43880 Lake Tamarisk, Desert Center, about 0.3 miles southwest of the Project (Riverside County Fire Department, 2023b).

The BLM Fire and Aviation Program is responsible for fire and fuels management and protection of federal lands, identified as Federal Responsibility Areas, within the United States. The Fire and Aviation program includes fire suppression, preparedness, predictive services, fuels management, fire planning, community assistance and protection, prevention and education, and public safety. BLM establishes fire prevention orders and restrictions to assist with wildland fire prevention efforts throughout the public lands within the California Desert District, which portions of Inyo, Imperial, Kern, Mono, Los Angeles, San Bernardino, San Diego, and Riverside Counties.

3.16.1.2. Police Protection

The Riverside County Sheriff's Department's Colorado River Station provides service to the unincorporated area from Red Cloud Road on the west, to the Arizona state line on the east, and county line to county line on the north and south, which includes the Desert Center area. The Colorado River Station is located at 260 North Spring Street, Blythe, CA (Riverside County Sheriff, 2023), approximately 45 miles east of the proposed Project area.

The California Highway Patrol (CHP) is the primary law enforcement agency for State highways and roads. The CHP division covering highways within the Desert Center area is the Border Division. The California Highway Patrol Blythe Area serves the East Riverside County Region and is located at 430 South Broadway, Blythe, CA. This office patrols Interstate 10, State Route 78, and U.S. Route 95, as well as 500 miles of unincorporated Riverside County roadways (CHP, 2023).

The BLM has approximately 200 law enforcement rangers on staff who promote safety, security, and environmental protection of public lands, public land users, and employees. The BLMs law enforcement program draws its authority from federal law under federal jurisdiction. BLM law enforcement officers enforce federal laws and do not have authority to enforce state laws without written authorization from a sheriff, other authorized state official, or state law (BLM, 2023).

3.16.1.3. Emergency Medical Services

The Palo Verde Hospital, located at 250 North 1st Street, Blythe, CA, is the closest hospital to the proposed Project area. It provides intensive care and radiology services as well as surgery. The hospital has 51 patient

beds, consisting of 4 intensive care beds, and 2 surgical suites (Palo Verde Hospital, 2023). It is located approximately 45 miles east of the proposed Project area.

Desert Regional Medical Center, located about 65 miles to the west of Desert Center at 1150 North Indian Canyon Drive in Palm Springs, CA, is the second closest hospital to the proposed Project area. The medical center is the only designated Level II trauma center in the Coachella Valley and is equipped with 385 beds. The facility includes tertiary acute care services, critical care services, and a skilled nursing unit (Desert Care Network, 2023).

3.16.1.4. Parks

There are no recreation facilities, developments, or specific recreational attractions on the Project site. However, the surrounding area offers multiple outdoor recreational opportunities, including off-highway vehicle use, camping, rock hounding, and hiking. The Project is east of the Joshua Tree National Park and is near other recreational areas, such as the Palen-McCoy Wilderness Area and the Chuckwalla Mountains Wilderness Area. No local parks or Riverside County regional parks are located in the vicinity of the Project area near Desert Center (Riverside County RPOSD, 2023).

See Section 3.17, Recreation, for more information about recreation resources near the Project area.

3.16.1.5. Schools

The Desert Center Unified School District serves the Desert Center area where the proposed Project is located. The closest school to the Project area is Eagle Mountain School, which serves kindergarten through eighth grade students (CDE, 2023) and is located approximately 6 miles northwest of the Project area.

3.16.1.6. Libraries

The Riverside County Library System serves all Riverside County. The closest library branch to the proposed Project area is the Lake Tamarisk Branch located at 43880 Tamarisk Drive, Desert Center, CA (Riverside County Library System, 2023), about 0.5 miles south of the Project area.

3.16.1.7. Solid Waste Services

The following Table 3.16-1 lists the capacities of the active landfills near the Desert Center area. The closest landfill to the Project area is the Desert Center Landfill, located at 17991 Kaiser Road, Desert Center, CA, approximately 0.2 miles west of the northwest corner of the Project area.

Table 3.16-1. Landfill Capacities

Landfill Name	Total Capacity (cu.yd.)	Remaining Capacity (cu.yd.)	Remaining Capacity (percent)	Maximum Throughput (tons/day)
Blythe Sanitary Landfill (Cease operation estimated 2047)	6,229,670	3,834,470	61.55	400
Desert Center Landfill (Cease operation estimated 2041)	409,112	127,414	31.14	60

Sources: CalRecycle, 2023a and 2023b.

3.16.1.8. Utilities

Water in the Desert Center area is primarily provided from well water or Riverside County Service Area 51 (CSA 51). Wastewater is generally collected in septic tanks and are not conveyed through a sewer system

and treated at a centralized treatment plant. Southern California Edison provides electricity to the Desert Center and surrounding areas (CEC, 2020a). Southern California Gas provides natural gas to the area (CEC, 2020b). Telecommunications are provided by AT&T, T-Mobile, Verizon, and Sprint (CPUC, 2023).

3.16.2. Regulatory Framework

There are no federal or local regulations, plans, and standards for public services and utilities that apply to the proposed Project.

3.16.2.1. State Laws, Regulations, and Policies

2010 Strategic Fire Plan for California. The 2010 Strategic Fire Plan for California was developed in coordination with the State Board of Forestry and Fire Protection and CAL FIRE to reduce and prevent the impacts of fire in California. Goal 6 of the Plan sets objectives to determine the level of suppression resources (staffing and equipment) needed to protect private and public state resources. Specific objectives include, but are not limited to, maintaining an initial attack policy which prioritizes life, property, and natural resources; determining suppression resources allocation criteria; analyzing appropriate staffing levels and equipment needs in relation to the current and future conditions; increasing the number of CAL FIRE crews for fighting wildfires and other emergency response activities; maintaining cooperative agreements with local, state, and federal partners; and implementing new technologies to improve firefighter safety, where available (State Board of Forestry and Fire Protection). The standards outlined are applicable to the fire protection agency serving unincorporated Riverside County.

California Integrated Waste Management Act of 1989. Assembly Bill 939 codified the California Integrated Waste Management Act of 1989 in the Public Resources Code and established a hierarchy to help the California Integrated Waste Management Board (CIWMB) and local agencies implement three major priorities under the Integrated Waste Management Act: source reductions; recycling and composting; and environmentally safe transformation and land disposal. Waste diversion mandates are included under these priorities. The duties and responsibilities of the CIWMB have since been transferred to the California Department of Resources Recycling and Recovery (CalRecycle) after the abolishment of the CIWMB in 2010, but all other aspects of the Act remain unchanged.

The Act requires all local and county governments to adopt a waste reduction measure designed to manage and reduce the amount of solid waste sent to landfills. This Act established reduction goals of 25 percent by the year 1995 and 50 percent by the year 2000. Senate Bill 1016 (2007) streamlines the process of goal measurement related to Assembly Bill 939 by using a disposal-based indicator: the per capita disposal rate. The per capita disposal rate uses only two factors: the jurisdiction's population (employment can be considered in place of population in certain circumstances) and the jurisdiction's disposal as reported by disposal facilities. CalRecycle encourages reduction measures through the continued implementation of reduction measures, legislation, infrastructure, and support of local requirements for new developments to include areas for waste disposal and recycling on site.

California Code of Regulations (Title 27). Title 27 (Environmental Protection) of the California Code of Regulations defines regulations and minimum standards for the treatment, storage, processing, and disposal of solid waste at disposal sites. The State Water Resources Control Board maintains and regulates compliance with Title 27 (Environmental Protection) of the California Code of Regulations by establishing waste and site classifications and waste management requirements for solid waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment units. The compliance of the proposed Project would be enforced by the Colorado River RWQCB Region 7 and the California Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board). Compost facilities are regulated under CCR Title 14, Division 7, Chapter 3.1 Section 17850 through 17895, by CalRecycle. Permit requests, Reports of Waste Discharge, and Reports and

Disposal Site Information are submitted to the RWQCB and CalRecycle, and are used by the two agencies to review, permit, and monitor these facilities.

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 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.

3.16.3. Methodology for Analysis

This section considers the potential impact to and disruption of public services and utilities in the Desert Center area during Project construction and operation. Many public services and utilities would experience minor impacts. However, because of the potential need to disrupt services for extended periods of time during construction, some of the impacts may be moderate. The metrics used to compare alternatives would be the length of time required for construction of the different alternatives and whether that would result in a longer disruption time. If an alternative required a substantially longer construction timeframe than others or required substantially more services than others, this would also be used to compare impacts to public services.

3.16.4. CEQA Significance Criteria

The criteria used to determine the significance of potential public services and utilities impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to public services and utilities if the Project would:

- *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; and/or result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, which include (see Impact PSU-1):*
  - *Fire Protection;*
  - *Police Protection;*
  - *Schools;*
  - *Parks; and*
  - *Other Public Facilities.*
- *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 (see Impact PSU-2).*
- *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years (see Impact PSU-3).*
- *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 (see Impact PSU-4).*

- *Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste (see Impact PSU-4).*

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:

- *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; and/or result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, which include (See Impact PSU-1):*
  - *Sheriff Services;*
  - *Libraries; or*
  - *Health Services.*
- *Not comply with federal, state and local statues and regulations related to solid wastes including the County Integrated Waste Management Plan (CIWMP) (see Impact PSU-4).*

The following CEQA significance criteria from Appendix G were not included in the analysis and are not discussed further beyond this summary:

- *Result in construction of new facilities or the expansion of the existing following facilities:*
  - *Electricity;*
  - *Natural gas;*
  - *Communications systems;*
  - *Storm water drainage;*
  - *Street lighting;*
  - *Maintenance of public facilities, including roads; or*
  - *Other governmental services.*

  The proposed Project would generate renewable energy that would have an overall beneficial effect on the electricity supply. The Project would not use any sources of natural gas. The Project would not require expansion of existing or new street lighting, storm water drainage, or other public facilities, including roads.
- *Conflict with any adopted energy conservation plans.*

  The proposed Project would further the goals of the California Renewable Portfolio Standard (RPS) and other similar renewable programs in the state. The Project operation would have an overall beneficial effect on the electricity supply to the grid and would help decrease reliance on coal power. No conflicts with adopted energy conservation plans would occur.

3.16.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to public services and utilities. Public concerns related to public services and utilities that were identified in the scoping process involved the waste that batteries cause when they are no longer useful, and the potential for an increased need for law enforcement.

A commenter noted that the Lake Tamarisk sewage settlement ponds are on BLM-administered land within the perimeter of the proposed Project and suggested the sewage pond land needs to be assigned to Riverside County in care of County Service Area (CSA) 51. The sewage ponds referenced in this comment

are located on BLM-administered land within the Easley Project boundaries (APN 808-230-005). Water and sewer services are provided to Lake Tamarisk by the County. The sewage ponds are part of a County facility that contains wastewater evaporation ponds with underground pipes to service Lake Tamarisk. Currently, the ponds and the facility are not fully used, and the County has no plans to expand the ponds/facility. The Easley Project would not impact the sewage settlement pond facility. Ingress/egress to the facility and access to the underground sewer lines would be maintained. Assignment of the ponds to CSA 51 would be a matter between BLM and Riverside County that is outside of the scope of the Easley Project.

Impact PSU-1. The Project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; and/or result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for public services.

LESS THAN SIGNIFICANT. Construction is anticipated to occur over a 20-month period and require an average construction-related on-site workforce of 320 individuals, with the peak workforce reaching approximately 530 individuals. As discussed in Section 3.15, Population and Housing, it is anticipated that the construction workforce would be drawn from communities within Riverside County and San Bernardino County and would not induce substantial permanent growth to the regional population levels.

After the construction phase, up to 10 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. These 10 operation personnel would also come from local communities and would not contribute to a significant population increase.

Decommissioning is anticipated to require a workforce similar to or slightly less than that required for construction. The workforce would be drawn from communities within Riverside County and San Bernardino County and would not induce substantial permanent population growth at the regional or local level.

Fire Protection

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 proposed Project.

During construction, there is the potential for both small fires and major structural fires. Electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, or insulating fluid at substations, or flammable liquids, explosions, and over-heated equipment may cause small fires. The proposed Project could result in an increase in demand for fire protection services over existing levels during construction. However, local fire protection services, along with the provisions in the Fire Protection Plan, are anticipated to be adequate enough to handle this potential increase in demand for fire services, and no construction of new fire protection facilities is proposed.

Construction of the proposed Project would not cause population growth sufficient to generate a need for new or expanded fire protection facilities. Impacts would be less than significant, and no mitigation would be required.

The Fire Prevention Plan for the Project, developed as part of the BLM Plan of Development (POD) and reviewed by Riverside County Fire Department (RCFD), will identify potential hazards and accident scenarios that would exist at the facility during construction. The Fire Prevention Plan would decrease the risk of fires and include fire response measures that employees would implement before emergency responders arrive on site.

Increases in long-term demand for fire protection services typically are associated with substantial permanent increases in population. Approximately 320 to 530 daily workers would be present on site during the 20-month construction period. As discussed in Section 3.15, Population and Housing, it is anticipated that the construction workforce will be drawn from communities within Riverside County and San Bernardino County, and therefore would not induce substantial growth even during the construction period such that the demand for fire protection services, aside from that mentioned for activities taking place at the construction project itself, would increase. After the construction phase, up to 10 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. These 10 operation personnel would not contribute to a significant population increase, resulting in an increase to the demand for fire protection services, or require new or altered facilities. Additionally, the proposed Project would include emergency access and other safety features and plans for fire protection, and impacts would be less than significant. 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 Protection and Sheriff Services

The temporary increase of construction workers could increase demands on police services. Although an addition of up to 530 construction personnel would alter the current protection service ratio, because Project construction is not anticipated to permanently increase the local population, no new or expanded law enforcement facilities or increased staff levels within the Project regional or local study area would be required. In addition, during construction, on-site security would include trained, uniformed, and unarmed personnel whose primary responsibility would be to control ingress and egress of personnel and vehicles, perform fire and security watch during off hours, and perform security badge administration, all of which would minimize the potential need for assistance from the Riverside County Sheriff's Department or the CHP.

Construction of the proposed Project would generate truck and employee traffic along haul routes and at the Project area, which could temporarily increase the accident potential in these areas or affect response times or other service performance over the approximate 20-month construction period. The additional volume of traffic associated with workers commuting to the sites during construction would be temporary and it is anticipated that personnel and equipment from the Riverside County Sheriff's Department or the CHP would suffice to respond to incidents in the Project area. In addition, Project construction is not expected to adversely affect the CHP's ability to patrol the highways. Once operational, the Project area would include perimeter fencing, controlled access gates, and security cameras and lighting, which would minimize the potential need for the police assistance. Project decommissioning impacts would be the same as those described for Project construction.

Overall, Project construction, operations, and decommissioning would not result in the need for new or physically altered police or sheriff protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Impacts would be less than significant.

Schools

As described above and in Section 3.15, Population and Housing, there are sufficient vacant housing units within the nearby communities to support the number of construction workers and the proposed Project would not trigger the need for new housing. Up to 10 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. These 10 operation personnel would come from the local labor force and would not contribute to a significant population increase. The Project would not displace populations or existing housing, and it would not necessitate construction of replacement

housing elsewhere. Therefore, the temporary addition of construction and decommissioning workers and the long-term addition of operational personnel to the Project area's population is not anticipated to increase school enrollment sufficiently to require new schools to be constructed or existing schools to be physically altered to allow for a Project-related increase in enrollment, where the physical alteration of the school could result in adverse environmental impacts. Impacts would be less than significant.

Parks

As discussed above, no local parks or Riverside County regional parks are in or near the vicinity of the Project area near Desert Center. The required construction and decommissioning workforce of the Project would be hired from the available regional workforce. There would be temporary in-migration that would increase the local population during construction; however, it would not warrant the need for new or expanded parks and recreational facilities within the Project regional or local study area. It is anticipated that some or most of the workforce would temporarily relocate to near the Project site and would commute home on the weekends so are unlikely to use the recreation facilities. Although some workers may use recreational areas during Project construction and operation, increased use would be minimal and/or temporary and would not contribute substantially to the physical deterioration of existing facilities. Less than significant impacts would occur. Park and other recreational facilities are discussed in detail in Section 3.17, Recreation.

Other Public Facilities

Health Services

The RCFD would provide first responder emergency medical care. The nearest RCFD fire stations are staffed full-time, 24 hours, 7 days a week, with a minimum three-person crew, including paramedics. Once a patient is transported, local area hospitals are available to provide emergency medical care.

While a high number of construction and decommissioning employees would be located on site, local area emergency medical facilities are expected to adequately handle any worksite accidents requiring their attention. Minor injuries could be treated at Palo Verde Hospital in Blythe. Injuries resulting in significant trauma would be treated at the Desert Regional Medical Center in Palm Springs. Project construction and operation would therefore not require new or physically altered hospital facilities or personnel or result in the increase in emergency responder staff levels within the Project regional or local study area; impacts would be less than significant.

Libraries

Consistent with the impacts previously discussed for other public facilities, although Project construction and decommissioning would temporarily increase the number of people within the Palo Verde Valley, it would not substantially increase the population. The permanent addition of 10 full-time staff and the operation- and maintenance-related demands of the Project would also not substantially increase the population. New or expanded library facilities within the area are not required and impacts would be less than significant.

Mitigation Measures for Impact PSU-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact PSU-2. The Project would require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, which could cause significant environmental effects.

LESS THAN SIGNIFICANT. The Project would not require or result in the relocation or construction of new water, wastewater treatment, or natural gas facilities during construction, operation, maintenance, or decommissioning because the Project would not be connected to a public water or sewer system and would not use natural gas.

The Project would construct a new electric solar power facility that includes a BESS, SCADA, and telecommunications system. The construction of the Project would cause potentially significant environmental effects as described in detail in Sections 3.2 through 3.19 of this Environmental Impact Report. The EIR includes mitigation measures to reduce the effects to the extent feasible and complies with CEQA.

Construction of the proposed Project would require ground-disturbing activities, including solar array installation, substation yards and O&M building construction, construction of access roads, and construction of the gen-tie line. Since most of the site has nearly level to gently sloping topography, no mass grading would be required; however, much of the solar and energy storage facility would be impacted by some form of ground disturbance, either from compaction, micro-grading, or disc-and-roll grading. Grading could alter naturally occurring drainage patterns and result in soil erosion, sedimentation, long-term siltation, and increased storm water runoff. Vegetation removal for road clearance and construction areas decreases the ability of the soil to absorb water, which also increases storm water runoff from such disturbed areas. Vegetation would be cleared for construction of the drainage controls, including berms if needed. Site preparation also would include construction of drainage components to capture and direct stormwater flow around the BESS facility.

As part of the Project, a Storm water Pollution Prevention Plan (SWPPP) or SWPPP-equivalent document would be prepared by a qualified engineer or erosion control specialist and would be implemented before and during construction. The SWPPP would be designed to reduce potential impacts from storm water runoff and existing drainage patterns. In addition, the SWPPP would include best management practices (BMPs) for controlling runoff and reducing erosion. The BMPs would include storm water runoff quality control measures, concrete waste management, storm water detention, watering for dust control, and construction of perimeter silt fences, as needed. The SWPPP and associated BMPs are a regulatory requirement, thus, not considered to be a mitigation measure necessary to reduce the impact significance for Impact PSU-2. However, the implementation of the BMPs included in the SWPPP or a SWPPP-equivalent document would ensure that the proposed Project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause potentially significant environmental effects, and impacts would be less than significant.

Mitigation Measures for Impact PSU-2

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact PSU-3. The Project would have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years.

LESS THAN SIGNIFICANT. During the construction phase of both the solar facility and generation-tie line, it is anticipated that a total of up to 1,000 acre-feet would be used over the 20-month construction timeframe for dust suppression, truck wheel washing, and other purposes. Restroom facilities for the construction workforce would be provided by portable units to be serviced by licensed providers.

During operation, water would be required for panel washing, maintenance, the BESS facility, and for sub-station restroom facilities. The proposed Project would require water for panel washing up to four times per year and other uses resulting in the use of approximately 50 acre-feet annually. Water used during panel washing would be absorbed into the surrounding soil or would evaporate. Water would also be used for fire safety and the implementation of BMPs and mitigation measures.

Water for operations, construction needs, and related dust control would be obtained from either an on-site groundwater well or purchased off site. Water tanks would likely be set up by any groundwater wells and near the O&M building. These water sources would tap into the Chuckwalla Valley Groundwater Basin (CVGB).

A Water Supply Assessment (EIR Appendix G, Water Supply Assessment) was conducted for the Project and concluded that the CVGB's current annual groundwater recharge and outflows are almost balanced, and all estimated groundwater demand for the Project may be sourced from the CVGB without resulting in a cumulative groundwater deficit under average climatic conditions using conservative groundwater recharge estimates.

During a normal year, the baseline groundwater budget for the CVGB indicates an annual groundwater surplus of 100 AF. There would be an initial groundwater deficit during the construction phase of the project, because the estimated water use for construction is greater than 100 AF, however, there would be a recovery of groundwater levels during the operational phase, because this phase uses less water.

For dry and multiple dry years, the Water Supply Assessment concluded that, including all cumulative projects, there would be a total groundwater deficit of approximately 102,900 AF. The Project would contribute 1,500 AF, approximately 1 percent to this deficit. At the end of the projected 37-year period analyzed in the water supply assessment, there would be some recovery of groundwater levels, but overall, there would be a deficit of approximately 126,500 AF.

Although there would be a groundwater deficit, sufficient water supplies are available to serve the Project's needs. The CVGB would have sufficient water supplies for construction, operation, and decommissioning of the Project, along with future foreseeable development. Impacts would be less than significant.

Mitigation Measures for Impact PSU-3

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

Impact PSU-4. The Project would generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

LESS THAN SIGNIFICANT. The Project would generate solid waste during construction, operation, maintenance, and decommissioning. Riverside County must comply with the California Green Building Standards Code which includes mandatory recycling. Section 5.408 of the Code requires that 65 percent of the nonhazardous waste be recycled or salvaged for reuse. Section 5.408.3 (Excavated soil and land clearing debris) requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing shall be reused or recycled.

The Project site consists of relatively flat topography. All required cut and fill soils associated with construction-related grading activities is anticipated to be approximately balanced; minimal import and export (to a landfill) would be necessary. Construction materials would be sorted on site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. It is anticipated that at least 20 percent of construction waste would be recyclable, and 50 percent of those materials would be recycled. Additionally, wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted.

Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at the county landfills. Hazardous waste and electronic waste would not be placed in a landfill, but rather would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling). All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

Non-hazardous waste generated during Project operations would be limited to office uses associated with the proposed O&M building and include paper, aluminum, food, and plastic and would be managed similarly to during construction with non-hazardous items being recycled where possible or otherwise disposed of at the municipal county landfills.

The closest landfill to the Project area is the Desert Center Sanitary Landfill, with a remaining capacity of 127,414 cubic yards. It is estimated to operate until year 2041 (CalRecycle, 2023b). The other nearest landfill: Blythe Sanitary Landfill has over 3.8 million cubic yards of capacity remaining. The Project would comply with applicable federal, State, and local regulations related to solid waste and sufficient capacity is anticipated at the three nearest waste disposal sites. The Project would not 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. Overall, impacts related to solid waste would be less than significant and no mitigation would be required.

Mitigation Measures for Impact PSU-4

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.16.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities (solar panel installation, BESS, and O&M building, and con-

struction of access roads and gen-tie line). The No Project Alternative would not impact population growth or demand for additional housing in the Project area and therefore would not put any strain on the availability and performance of government facilities, including fire protection, police protection, schools, parks, medical facilities, and libraries. In addition, the No Project Alternative would not require new storm water drainage facilities or expansion of existing facilities. The No Project Alternative would not result in impacts to public services and utilities, while the proposed Project would have impacts to these resources that are less than significant. Under the No Project Alternative, it is probable that another solar energy-related project would be implemented within the site in lieu of the proposed Project. A different solar energy project would potentially result in similar impacts to public services and utilities as those identified for the proposed Project.

3.16.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would be similar to the proposed Project but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk, such that the Project solar panels would be approximately 0.45 miles (2,350 feet) from the closest residence compared to 750 feet under the proposed Project. The electrical output of the Alternative 2 would not be appreciably reduced compared to the proposed Project. Alternative 2 would have similar construction and operational activities as the proposed Project, and therefore, Alternative 2 would have similar impacts to public services and utilities and impacts would be less than significant.

3.16.8. Cumulative Impacts

Geographic Scope

The geographic scope of the cumulative impacts analysis includes the service areas of each of the providers serving the proposed Project. This geographic scope would include all projects listed in Tables 3.1-1 and 3.1-2. The proposed 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. If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but would not create physical changes in the environment that would affect public services and utilities or contribute to cumulative impacts.

Fire Protection, Law Enforcement, 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. The implementation of Project-specific Fire Prevention Plan 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. The incremental effects of the Project would therefore be reduced to a less-than-significant level. The incremental effects of the proposed 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 would not make a considerable contribution to cumulative impacts on fire, law enforcement, and emergency medical services.

Cumulative operational and maintenance-related impacts to public services including fire, hazardous materials handling, and medical resources and facilities related to the Project would be less than related demands during construction and would not result in a considerable contribution to cumulative impacts due to the low number of employees required to support projects in the cumulative scenario.

At the end of the 30-50-year operational period of the proposed Project, the components would be decommissioned and deconstructed; the site would be restored to its pre-solar facility conditions and made available for agricultural use. Similar to construction (but to a lesser degree), the greatest potential need for public services would be associated with fire hazards. Fire hazards would be greatest during this time because the on-site workforce would be at its peak which could create a potential demand for fire and police services. Under cumulative conditions, implementation of the Project in the context of past projects and in conjunction with development of projects listed in Tables 3.1-1 and 3.1-2 are not anticipated to cause a demand on public services or utilities such that the construction of new or physical alteration of existing facilities would be required because the payment of development fees now and into the future is expected to substantially offset the public service-related demands of currently proposed and reasonably foreseeable future projects. Therefore, no significant adverse cumulative impact would result.

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 operational impacts to utilities would not be cumulatively considerable. The proposed Project would utilize an on-site or off-site groundwater well or water trucked from an offsite water purveyor and would not generate wastewater. There is no potential for the Project to 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.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

The Project's incremental contribution to impacts to public services and utilities would not be cumulatively considerable.

3.16.9. Mitigation Measures

No mitigation measures are required.

3.17. Recreation

This section describes the environmental setting and regulatory framework for recreational resources near the proposed Project. The study area for the recreation includes recreational areas and opportunities within 20 miles of the Project site. This is an appropriate study area for recreation because it captures all major recreation resources that contribute to baseline conditions and could be affected by activities related to the Project.

3.17.1. Environmental Setting

The Project site consists of both private and BLM land. The site is in eastern Riverside County surrounded primarily by BLM land with some scattered rural residences and farms. In the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment, the BLM-administered portions of the site are designated as a Development Focus Area (DFA), which is an area suitable for renewable energy project development. BLM land has traditionally been used for a range of recreation activities such as hiking, horseback riding, rockhounding, noncompetitive vehicle touring, and other events on "designated open" routes of travel. Additionally, the Project is near the Joshua Tree National Park.

3.17.1.1. Regional Recreation Areas and Opportunities

The Project is in the Desert Center area in the Chuckwalla Valley. Desert Center has no community parks and there are no regional or State parks in the Chuckwalla Valley. Lake Tamarisk Desert Resort (LTDR), located 2 miles north of Desert Center and immediately south and west of the Project, is a 55 member-owned community for active seniors with 150 mobile homes spaces, mobile home rentals, heated pool, and club house. LTDR has a 9-hole county golf course as well. The Chuckwalla Valley Raceway is located approximately 1 mile east of the Project and State Route 177 (SR-177) on private land. It was built in 2010 on over 1,100 acres, and has a 17-turn, 2.68-mile track for beginner to experienced racers. It also includes an area for camping and has 40 cabins and a private airport.

Locally, residents and visitors use the public and private lands around the LTDR community for informal recreation, including wildlife viewing, hiking, and all-terrain vehicle (ATV) use. The land around and near LTDR is mostly under BLM administration. Much of the BLM-administered land west of Kaiser Road and LTDR is protected desert tortoise habitat and is open land. East of Kaiser Road, extensive tracts of BLM lands have been designated as Development Focus Areas (DFAs) and are suitable for development of renewable energy projects. Certain conservation and management actions (CMAs) apply to projects in DFAs in order to protect valued resources. Implementation of CMAs results in portions of a Project site remaining open and accessible; areas with solar arrays and other Project facilities are fenced.

Within a 20-mile radius around the Project, the BLM administers wilderness areas; campgrounds, including long-term visitor areas; trails; interpretive sites; and an extensive network of backcountry-approved travel and off-highway vehicle (OHV) routes near the Project.

A coalition of environmental and community groups known as the Protect California Deserts campaign is proposing a new national monument south of Joshua Tree National Park, and south and west of the Project area outside of the DRECP DFA lands. While early in the process, if approved, the proposed "Chuckwalla National Monument" would recognize the area's recreational and cultural significance and would encompass nearly 700,000 acres in both Riverside and Imperial counties. National monument status would require either a vote by Congress or a presidential designation under the Antiquities Act (Rode, 2023).

Much of the recreation activity occurs in the Chuckwalla Special Recreation Management Area (SMRA) located immediately south of Interstate 10 (I-10), which is its northern boundary. The SMRA extends

approximately 15 miles south from I-10 and approximately 10 miles west and 22 miles east of Desert Center. The SMRA includes large sections of the Chuckwalla Mountains and Chuckwalla Valley. BLM-administered Areas of Critical Environmental Concern (ACECs) and BLM and NPS wilderness areas provide dispersed recreation opportunities in the region. In general, recreation use on BLM lands in the California desert is limited to the cooler months of September through May, with little use in the summer.

According to the BLM Recreation Management Information System (RMiS) Report 23(c) for the Palm Springs-South Coast Field Office, for the year October 1, 2019, through September 30, 2020, the Eastern Riverside County Recreation Management Area had 402,313 visitor days,[20] with most occurring as dispersed use. The Corn Springs campground (approximately 8 miles south of the Project) saw 6,946 visitor days, while the Desert Lily Preserve (approximately 3.3 miles east of the nearest Project elements) had 1,917 visitor days (BLM 2020). The most attractive recreational area in the region is Joshua Tree National Park, with the closest boundary approximately 4 miles from the Project site. The main recreational users of the Project Area and vicinity are local residents from Desert Center and Blythe, or visitors stopping for short periods while traveling on I-10 (BLM, 2018).

Recreation areas within 20 miles of the Project site are identified in Table 3.17-1 and discussed below. This information was adapted from the Palen Solar Project environmental review (BLM, 2018, updated with information on the BLM home website, visit menu (BLM 2023).

Table 3.17-1. Recreation Areas and Special Designations with Recreational Opportunities

Recreation Area	Direction from Project Site	Approx. Distance from Project Site (miles)	Approximate Size (acres)	Status
Chuckwalla Special Recreation Management Area	south	2	228,480	Designated in the DRECP
Palen-Ford Playa Dunes ACEC	east	3	41,370	Designated in the DRECP
Chuckwalla Desert Wildlife Management Area ACEC	south	2	514,400	Expanded under the DRECP
Palen Dry Lake ACEC	southeast	11	3,630	Designated
Chuckwalla Mountains Wilderness	south	3	112,326	Designated
Palen-McCoy Wilderness	east	12	259,009	Designated
Corn Springs ACEC	south	7	2,470	Designated
Alligator Rock ACEC	south	1.5	7,750	Designated
Desert Lily Preserve ACEC	east	2	2,060	Designated
Joshua Tree National Park	northeast	3	1,017,750	Designated
Joshua Tree Wilderness	northeast	3	549,500	Designated
Corn Springs Campground	southeast	7.6	9 camping units	Designated
Bradshaw Trail Back Country Byway	south	17	65 miles	Designated

Source: BLM, 2018, BLM 2023.

Joshua Tree National Park

The National Park Service administers the Joshua Tree National Park (Park). The southeast end of the Park is located about 3 miles northeast of the Project. The Park comprises nearly 800,00 acres, mostly federally administered, and is used for hiking, mountain biking, and rock climbing, and includes nine campgrounds.

[20] A visitor day is defined as 12 visitor hours. A visitor hour is a unit of measure of the presence of one or more persons in an area for continuous, intermittent, or simultaneous periods totaling one hour (i.e., one person for one hour, two people for 30 minutes each; or 10 people for 6 minutes each).

Other recreational activities include wildflower viewing and birdwatching. The eastern part of the park, closest to the Project, is noted for its dark skies that draw stargazers and amateur astronomers, and the Park has been designated as an International Dark Sky Park by the International Dark Sky Association. The Park is open year-round, with peak visitation occurring from October through May. Over 3 million people visited the Park in 2021 (NPS, 2023).

Wilderness Areas

The Wilderness Act limits recreation on wilderness lands to those that are primitive and unconfined, depend on a wilderness setting, and do not degrade the wilderness character of the area. Motorized or mechanized vehicles or equipment for recreational purposes are not permitted in wilderness (916 USC 1133(c)). The BLM regulates such recreation on lands within its jurisdiction in accordance with the policies, procedures and technologies set forth in the Code of Federal Regulations (43 CFR 6300), BLM Manual 6340 (*Management of Designated Wilderness Areas*), and BLM's Principles for Wilderness Management in the California Desert.

Four wilderness areas are located within 20 miles of the Project site: the Chuckwalla Mountains Wilderness, Palen-McCoy Wilderness, Joshua Tree Wilderness, and Little Chuckwalla Mountains Wilderness. They have no developed trails, parking/trailheads, or other visitor use facilities. These areas are generally steep, rugged mountains, with no permanent natural water sources, thus limiting extensive hiking or backpacking opportunities. Visitor use within the wilderness areas is very light although the BLM has no visitor use counts. Five nearby mountain peaks are occasionally used by the Desert Peaks Section of the Sierra Club's Angeles Chapter (BLM, 2018). None of the peaks directly overlook the Project site, although the site may be visible from certain peaks, depending on elevation and topography.

Observations by staff and Law Enforcement Rangers indicate only 100 to 200 hikers per year within all the wilderness areas near the Project site. More popular is vehicle camping along roads that are adjacent to the wilderness areas. RV camping near wilderness areas, with associated hiking, OHV use, photography, sightseeing, etc., accounts for up to 2,000 visitors per year (BLM, 2018).

Areas of Critical Environmental Concern

Seven ACECs are located near the Project site: Chuckwalla Desert Wildlife Management Area ACEC, Palen Dry Lake ACEC, Corn Springs ACEC, Alligator Rock ACEC, Desert Lily Preserve ACEC, and Chuckwalla Valley Dune Thicket ACEC. The Palen-Ford Playa Dunes ACEC was most recently designated in the DRECP. Recreation activities allowed in ACECs are determined by the resources and values for which the ACECs were established, and by the associated ACEC Management Plan. Most ACECs allow low-intensity recreation that is compatible with protection of the relevant values (BLM, 2015).

The Alligator Rock ACEC and the Corn Springs ACEC primarily protect cultural resources. The Chuckwalla Desert Wildlife Management Area (DWMA) and Desert Lily ACEC protect sensitive wildlife and plant species, while Chuckwalla Valley Dune Thicket and Palen Dry Lake ACECs protect both natural and cultural resources. The Palen-Ford Playa Dunes ACEC maintains the integrity of essential fringe-toed lizard habitat and essential ecological processes. Only the Corn Springs and the Palen-Ford Playa Dunes ACECs have recreation use facilities; however, they are signed to inform visitors of the special values of the areas and associated protection measures.

Long Term Visitor Areas

The BLM manages seven Long Term Visitor Areas (LTVAs), where camping is available from September 15 to April 15. A seasonal individual special recreation permit is required allowing visitors to stay in any of the six LTVAs in California or two LTVAs in Arizona: Imperial Dam LTVA near Yuma and La Posa LTVA near

Quartzsite. In California, camping is allowed in the LTVA between April 16 and September 14 at no cost with the standard 14-day camping limit. Mule Mountains LTVA is 2,805 acres, an estimated 35 miles east of the Project, and includes the Wiley's Well and Coon Hollow campgrounds. Mule Mountains LTVA received 20,537 visits in 2015-2016 (BLM, 2018). Midland LTVA is 135 acres, an estimated 47 miles east of the Project site, and received 17,964 visits in 2015-2016 (BLM, 2018).

Special Recreation Management Areas

A SRMA is an administrative unit where the 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.

The DRECP LUPA has designated one SRMA south of the Project site on the south side of the I-10, the Chuckwalla SRMA. This area is 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.

The Bradshaw Trail

The Bradshaw Trail is a 70-mile Back Country Byway in southeastern Riverside County, with a small segment in Imperial County. This east-west trail is located about 18 miles south of the Project site and extends from about 12 miles east of the community of North Shore near the Salton Sea State Recreation Area to about 14 miles southwest of Blythe near the Colorado River.

The Bradshaw Trail was the first road through Riverside County, blazed by William Bradshaw in 1862 as an overland stage route beginning in San Bernardino, California, and ending at Ehrenberg, Arizona. The trail was used extensively between 1862 and 1877 to transport miners and passengers. The trail is a dirt road that traverses mostly public land between the Chuckwalla Mountains and the Chocolate Mountain Aerial Gunnery Range. Four-wheel-drive vehicles are recommended due to stretches of soft sand. Recreational opportunities along the Bradshaw Trail include four-wheel driving, wildlife viewing, plant viewing, birdwatching, and scenic drives. All commercial activities require a land use or special recreation permit from the BLM. Fourteen-day camping limits apply on public lands.

Off-Highway Vehicle Routes

The California Desert Conservation Area (CDCA) Plan and Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan Amendment state that vehicle access is among the most important recreation issues in the desert. A primary consideration of the recreation program is to ensure that access routes necessary for recreation enjoyment are provided. Under the CDCA Plan, as amended, BLM-administered public lands within the CDCA are designated as Open, Limited, or Closed. Within Open areas, motorized vehicles may travel anywhere; in Closed areas, such travel is prohibited. While there are no BLM-designated Open OHV areas in Riverside County, there are Open Routes suitable for OHV travel. In Limited areas, motorized-vehicle access is allowed only on certain routes of travel, defined to include roads, ways, trails, and washes. The DRECP LUPA does not change the status of the routes within the Project area (BLM, 2015).

The 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 vehicles 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.

A route has high significance if it provides access to other routes, historical sites, or recreational areas such as the 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 accurate usership numbers of routes in the vicinity of the Project. Observations by BLM staff and Law Enforcement Rangers report that use is relatively low on routes within the vicinity of the Project site, not exceeding 300 visits per year (BLM, 2018). Recreation and vehicle use generally is limited to the cooler months of September through May. Use is nearly non-existent during the summer.

Washes Open Zones

Under the NECO Plan, all Multiple-use Class – Moderate Use (MUC-M) areas are considered "washes open zones" unless specifically designated Limited or Closed. The use of washes within "washes open zones" is restricted to those considered "navigable," unless it is determined that vehicle use must be further limited. Navigable washes in "washes open zones" are designated "Open" as a class, that is, washes are not individually designated unless they are identified as specific routes in the NECO route inventory. In this context, the term "wash" is defined as a watercourse, either dry or with running or standing water, which by its physical nature, width, soil, slope, topography, vegetative cover, etc., permits the passage of motorized vehicles, thereby establishing its navigability (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.

3.17.1.2. Solar Facility

None of the existing solar facility sites are used for recreation as they are all previously farmed parcels or undeveloped desert. However, much of the surrounding region is used for recreation as described above.

OHV routes cannot be officially designated on private land, but some routes cross private land and may be used by recreationists. Four designated BLM Open Routes are on or near the Project site: DC322; DC533; DC536-1; and DC540.

3.17.1.3. 500 kV Generation-Tie Line

The gen-tie line would be located on almost entirely BLM-administered land through the Oberon Renewable Energy Project site, which began commercial operation in fall 2023. The land is designated as a DFA (meaning not designated for recreation). The gen-tie line would connect to the Oberon substation within the Oberon Renewable Energy Project site.

3.17.2. Regulatory Framework

3.17.2.1. Federal Laws, Regulations, and Policies

Wilderness Act of 1964. The Wilderness Act, signed into law in 1964, created the National Wilderness Preservation System and 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…."

Designated wilderness is the highest level of conservation protection for federal lands. Only Congress may designate wilderness or change the status of wilderness areas. Wilderness areas are designated within existing federal public land. Congress has directed four federal land management agencies — U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service — to manage wilderness areas to preserve and, where possible, to restore their wilderness character.

The Wilderness Act prohibits permanent roads and commercial enterprises, 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, permanent structures or installations (with exceptions in Alaska). Wilderness areas are to be primarily affected by the forces of nature, though the Wilderness Act does acknowledge the need to provide for human health and safety, protect private property, control insect infestations, and fight fires within the area. 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.

Federal Land Policy and Management Act (FLPMA). FLPMA recognizes the value of public lands and includes the multiple use/sustained yield framework for management to provide for outdoor recreation for future generations. Title VI of 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. The solar facility site is governed by these pieces of legislation, and its various alternatives would impact the recreational opportunities available in the vicinity.

California Desert Conservation Area (CDCA) Plan. The CDCA Plan establishes goals for management of recreation in the California Desert (BLM, 1999). As with the FLPMA, recreational opportunities in the study area are framed by the CDCA Plan. The goals are to provide for the use of the public lands and resources of the CDCA, including recreational uses, in a manner that enhances wherever possible — and that does not diminish — the environmental, cultural, and aesthetic values of the desert (BLM, 1999). The goals of the Recreation Element of the plan are to:

- *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; and*

- *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 (BLM, 1999). 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.

Northern and Eastern Colorado Desert Coordinated Management Plan. The NECO Plan, an amendment to the CDCA Plan, provides for management of recreation within the California Desert area of El Centro, Blythe, Needles, and cities in the Coachella Valley (BLM, 2002). 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 off-highway vehicles (OHV) route inventory and designated routes of travel (approximately 95 percent of existing routes remained available for vehicle access under the plan). Open Routes through the solar facility area include DC 322, 533, 536-1, and 540. 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.

Desert Renewable Energy Conservation Plan. The BLM published the Land Use Plan Amendment (LUPA) and Final EIS for the DRECP in November 2015. The DRECP amended the CDCA Plan with the signing of the Record of Decision in September of 2016. It designates SRMAs and Extensive Recreation Management Areas within the California Desert, including the study area (BLM, 2015). The DRECP includes additional conservation management actions for recreation that dictate the types of activities allowed near certain recreational features.

Off-Road Vehicles (43 CFR § 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. Recreational use under Title VI "includes the use, where appropriate, of off-road recreational vehicles."

3.17.2.2. State Laws, Regulations, and Policies

No State law, regulations, or policies were identified pertaining to recreation at or near the Project site.

3.17.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan, and Desert Center Area Plan (DCAP). The Riverside County General Plan includes policy area locations, such as for Desert Center, that have a separate Area Plan for future development and growth. The Project falls within the DCAP, which is part of the General Plan. Under the DCAP, the Open Space Recreation designation is applied to the golf course at Lake Tamarisk. No other land under County jurisdiction in the Project area is designated for recreation. Local land use designations do not apply to the BLM land, but FLPMA requires the BLM to coordinate with local governments in land use planning in Title II, Section 202, (b)(9).

3.17.3. Methodology for Analysis

This section analyzes potential effects of the proposed 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 includes a detailed inventory and designation of Open Routes for motorized-vehicle use, were reviewed to determine impacts to Open Routes.

3.17.4. CEQA Significance Criteria

The criteria used to determine the significance of potential recreation impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to recreation if the 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 (see Impact REC-1).*

The following CEQA significance criterion from Appendix G was not included in the analysis:

- *Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.*

  The proposed Project does not include recreational facilities nor require the construction or expansion of recreational facilities.

The County of Riverside's Environmental Assessment Form includes two additional significance criteria not in the CEQA Guidelines. They are:

- *Located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees).*
- *Include the construction or expansion of a trail system.*

The proposed Project site is located in unincorporated Riverside County and is adjacent to but not within Community Service Area No. 51. County CSAs collect special taxes and assessments to provide services to specific areas of the County. CSA 51 maintains the Lake Tamarisk Golf Course as well as a tot lot. The Project would not be located in a recreation and park district with a Community Parks and Recreation Plan. The Project would not include construction or expansion of a trail system. Therefore, the two above criteria related to recreation in the County's Environmental Assessment Form were not included in the analysis.

3.17.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to recreation. Public concerns regarding recreation identified during the scoping process included concerns about the lower quality and decrease in availability of recreation due to: heat and wind and the presence of solar developments; preventing access for OHVs, hiking, or other recreational activities; and a decrease in the scenic value of the region.

Several commentors have stated that the Lake Tamarisk community has invested in equipment for recreational use in the desert, such as OHVs. Some commentors suggested allowing passages through Project to allow for easier access to recreational areas for OHV use and hiking.

These comments are addressed within the impact analysis provided below.

Impact REC-1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Solar and BESS Facility

LESS THAN SIGNIFICANT. The solar and energy storage facility is on BLM-administered land and on private land that was previously used for agriculture or undeveloped desert. Except for BLM Open Routes, there are no designated recreational uses of the land. However, the land is largely open and unoccupied and may be visited by hikers, birdwatchers, and others. Except as explained below for BLM Open Routes, the Project would have no direct impact that would result in the loss of designated recreational space or increase in the use of other recreational facilities.

BLM Open Route DC322 extends northwest through the Project site beginning at the west side of SR-177. It crosses both BLM and private land and continues northwest of the Project. Fenced solar panel arrays would be installed north and south of this route as it traverses the Project site, but it would remain open. It continues north and west from the Project site.

BLM Open Route DC533 is just north of the Project that extends east from BLM Open Route DC322 and would not be affected by the Project.

BLM Open Route DC540 extends from SR-177 east to the Chuckwalla Valley Raceway and airport and is adjacent to the easternmost array of solar panels near SR-177 but would be outside the fence line and remain open.

BLM Open Route DC536-1 extends northwest from SR-177 to BLM Open Route DC322, where it terminates. It traverses the Project site and is parallel to and approximately 0.8 miles north of BLM Open Route DC322. BLM Open Route DC536-1 is only partially on BLM-administered land. It would be blocked by fenced solar arrays in two locations. However, existing undesignated routes outside of the Project fence connect to BLM Open Route DC 536-1 to DC322.

BLM Open Route DC536-1 is the only Open Route that would be blocked by the Project, which would install solar arrays within a fenced area across the route. However, BLM Open Route DC322, which parallels BLM Open Route DC536-1 would remain open, providing OHV access from SR-177 to BLM-administered lands west and north of the Project.

BLM Open Route DC536-1 is a short route (approximately 2.5 miles) that connects SR-177 and BLM Open Route DC533, as does the unaffected parallel route BLM Open Route DC322 to the south. Based on aerial imagery, BLM Open Route DC536-1 does not appear to be frequently used as it is difficult to find on the images. The route does not lead to a specific recreation destination, is not heavily used, is in an area with an alternative route (BLM Open Route DC322) nearby. BLM Open Route DC536-1 could remain accessible via an undesignated route visible on aerial imagery extending north from BLM Open Route DC322 outside the Project fence. The loss of approximately 1.2 miles of BLM Open Route DC536-1 would not be expected to result in a substantial use of other routes compared with current practice. The impact would be less than significant.

Indirect effects to recreational users of specially designated lands (including the Special Recreation Management Area, wilderness areas and ACECs, the 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. While the Joshua Tree National Park receives hundreds of thousands of visitors annually, the location closest to the Project is less heavily visited because of the difficulties in reaching that area.

Recreational users could be affected by construction, operation and decommissioning activities of the Project such as construction noise, fugitive dust, vehicle movement, and other "non-natural" construction activities. 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 as agreed to by the landowner, and BLM may choose to reopen the affected BLM Open Routes across public lands.

Overall, these impacts could affect users' perception of solitude, naturalness, and unconfined recreation. While the Project would result in indirect impacts to recreation, it is not anticipated that the Project would result in a significant change in use of the nearby recreation facilities that would increase the use of other regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the impact would be less than significant. The associated indirect impacts are addressed in Sections 3.13 (Noise and Vibration), 3.4 (Air Quality), 3.18 (Traffic), and 3.2 (Aesthetics).

500 kV Generation-Tie Line

LESS THAN SIGNIFICANT. The gen-tie line would be on BLM-administered land designated as a Development Focus Area and would traverse the adjacent Oberon Renewable Energy Project in an existing transmission corridor not designated for recreation. The gen-tie line would not result in direct loss of recreation, nor would it result in permanent impacts to designated OHV routes. While it would introduce a new 500 kV transmission line and may temporarily close BLM Open Route DC379 in the corridor, the associated construction would be of short duration. Impacts to recreation due to the gen-tie line would be less than significant.

Mitigation Measures for Impact REC-1

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.17.6. Alternative 1: No Project Alternative

The No Project Alternative would not result in the development of the solar facility and gen-tie line nor require new construction and/or operational activities. It would not result in any direct or indirect impacts to recreation and would not result in the closure or isolation of designated Open Routes on BLM-administered land. Therefore, the No Project Alternative would not have impacts to recreation.

3.17.7. Alternative 2: Lake Tamarisk Alternative

The Lake Tamarisk Alternative would be similar to the proposed Project but would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk and move the substation and BESS to the northeast, on either BLM-administered land (Substation Alternative A) or private land (Substation Alternative B) closer to SR-177. The impact on BLM Open Routes would be the same as under the proposed Project and Alternative 2 (Lake Tamarisk Alternative). Approximately 30 acres of solar panels closest to the community of Lake Tamarisk would be fenced under the proposed Project, but would be removed from development under Alternative 2, and thus, would remain open and available for informal recreational use. As with the proposed Project, the Lake Tamarisk Alterative would cause a less than significant impact to designated recreation areas or recreation facilities.

3.17.8. Cumulative Impacts

Geographic Scope

The cumulative geographic scope for recreation is the Desert Center region because the direct and indirect impacts to recreation would be additive within this area in that they could result in direct loss of recreation and indirect impacts to the same resources. Within this area there are existing utility solar facilities (Desert Sunlight, Desert Harvest, Athos, Palen, and Oberon) as well as projects under construction (Victory Pass and Arica). Additional projects are under review (Sapphire, Eagle Mountain Pumped Storage, Redonda Solar, and Skybridge). See Tables 3.1-1 and 3.1-2. While other existing or proposed projects would add to the cumulative recreation impacts, the solar facilities would be the largest contributors.

Cumulative Impact Analysis

The cumulative solar projects would result in similar impacts to recreation as those described for the proposed Project in that they would affect Open Routes available to OHV users. However, each project is located either on private land or on BLM-administered land designated as development focus area under the DRECP LUPA. While some of the BLM-administered land may be used for recreation, the direct loss of recreational lands would be minimal compared with the land available for recreation in the region, most notably south of I-10.

If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity but could increase recreational visitation in these areas. Such visitation could create physical changes in the environment that would contribute to potential cumulative impacts; however, such impacts would be less than those that would be associated with potential development that is avoided.

If all the solar projects were developed, loss of the local Desert Center OHV routes would be significant because many routes would be closed. However, the Easley Project's contribution to the cumulative loss of OHV routes would not be cumulatively considerable because only one route would be partially closed and would have alternative access to a nearby Open Route. None of the routes in the Project site connect to specific recreation areas.

If all the solar projects were developed in the Chuckwalla Valley area, they would substantially change the region and the vistas from nearby recreational facilities that are prized for their isolation, especially wilderness areas. Recreationists looking for solitary experiences would potentially look for other areas to recreate which would increase the use of these parks or wilderness areas. However, because of the large amount of wilderness and solitary recreational areas in Eastern Riverside County and in the California desert and the limited use of the recreational areas near the Project, it is unlikely that recreationists who leave the Desert Center area for elsewhere in California would increase the use of such areas such that substantial physical deterioration of the region would occur or be accelerated. Therefore, there would not be a significant cumulative impact and the proposed Project would not make a considerable contribution to cumulative impacts.

Mitigation Measures for Cumulative Impacts

No mitigation would be required.

Significance After Mitigation

This impact would be less than significant.

3.17.9. Mitigation Measures

Impacts would be less than significant, and no mitigation would be required.

3.18. Traffic and Transportation

This section describes the environmental setting and regulatory framework with respect to traffic and transportation for the proposed Project, including applicable plans, policies, and regulations. Because the Project site is in a remote area, materials would have to be brought to the site from long distances and many workers would have to commute from communities elsewhere in Riverside County and nearby counties. All Project-related traffic would use Interstate 10 (I-10) and State Route 177 (SR-177) for regional travel. The "Project area" or "study area" for the traffic and transportation analysis would be the existing roadways and intersections with the potential to experience a discernable increase in traffic volume during Project construction. Therefore, the study area for this analysis of traffic and transportation includes I-10, SR-177, and local roadways in the vicinity of the Project site.

A Transportation Impact Analysis for the Easley Project (David Evans and Associates, 2023) was prepared by David Evans and Associates to evaluate the potential transportation and traffic impacts of the Project with regard to congestion and is provided as Appendix H of this EIR.

3.18.1. Environmental Setting

The Project site is approximately 2 miles north of Desert Center in eastern Riverside County (refer to Figure 2-2). This site is north of I-10 and is situated primarily between SR-177 (Rice Road) on the east and County Route R2 (Kaiser Road) on the west. A small portion of the Project is east of SR-177, as is the Project's gen-tie line. It is anticipated that most construction workers would be drawn from the Blythe/Palo Verde Valley region, with additional workers coming from the Imperial Valley and the greater Riverside County region. Workers and delivery trucks would access the Project site using entrances from SR-177 (Rice Road) approved by the California Department of Transportation (Caltrans) from Kaiser Road (County Road R2) approved by and Riverside County. It is anticipated that the I-10 interchange with SR-177 at Desert Center (Exit 192) would experience a substantial increase in traffic volume during AM and PM peak hours, when vehicles would be using SR-177 and Kaiser Road to reach Project access points.

3.18.1.1. Regional and Local Roadway Facilities

Roads in the vicinity of the Project site are shown in Figure 3.18-1. Easley Project Roads and Access. In addition to the principal through roads (I-10, SR-177/Rice Road, and Kaiser Road) local roads potentially affected by traffic include Ragsdale Road, Oasis Road, and Orion Road. Site access would be from both Rice Road and Kaiser Road, as indicated in Figure 3.18-1 (located at the end of the Traffic and Transportation section). The final location and design of Project access driveways would be determined in consultation with Caltrans and Riverside County, respectively, which have jurisdiction over these roads.

Regional roadway facilities in the Project area include:

- **Interstate 10:** I-10 is a major east/west interstate freeway connecting Southern California to Phoenix, Arizona and destinations further east. I-10 is a four-lane freeway with a Desert Center interchange near the Project site at SR-177 (Rice Road). The posted speed limit on I-10 is 70 mph. In 2020 I-10 carried roughly 28,000 average daily trips (ADT) with a peak hour ADT of approximately 3,400 at the I-10/SR-177 interchange.
- **State Route 177:** SR-177 (Rice Road) is a north/south highway between Desert Center/I-10 and SR-62, approximately 25 miles northeast of Desert Center. SR-177 is a two-lane road, and the posted speed limit is 65 mph. In 2020, at its junction with I-10, Rice Road carried had approximately 2,900 ADT with a peak hour ADT of 470.

Local roadways in the Project area include:

- **Ragsdale Road:** Ragsdale Road parallels the north side of I-10 in Desert Center and intersects with SR-177 (Rice Road) approximately 1,000 feet north of the freeway.
- **Kaiser Road (County R2):** Kaiser Road is a local county road that extends north for its intersection with SR-177 (Rice Road) approximately 400 feet north of Ragsdale Road. Kaiser Road provides access the Lake Tamarisk community and continues north along the western boundary of the Project site. The road continues northwest to the community of Eagle Mountain, where it terminates.
- **Oasis Road:** Oasis Road is a short local road connecting Kaiser Road and Rice Road along the south side of the community of Lake Tamarisk.
- **Orion Road:** Orion Road is a local road extending west from Rice Road and provides access to properties east of Rice Road.

There are no signalized intersections in the Project vicinity. Except for a stop sign on Kaiser Road southbound at SR-177, neither Kaiser Road nor SR-177 (Rice Road) have stop signs in the Project vicinity. The other local roads have stop signs where they intersect with Rice Road and Kaiser Road. Some movements on local intersecting roads, including crossing the major roadway or turns onto the major road, can be subject to delays, depend on the amount of through traffic on the main roadway; however, on the major roads through traffic and right turns would not experience any delays at these intersections.

As noted, SR-177 and Kaiser Road each provide access to the Project site.

SR-177 (Rice Road). In the Project vicinity, northbound and southbound traffic on SR-177 is free flowing with no stop signs between the I-10 freeway and the Project site. Traffic exiting the I-10 freeway at the I-10/SR-177 interchange has stop signs at the top of the eastbound and westbound I-10 offramps; eastbound and westbound traffic from SR-177 onto the freeway has no stops. North of the freeway, SR-177 intersects Ragsdale Road, which has stop signs controlling traffic entering or crossing SR-177. This is also the case at the T-intersections of Kaiser Road and Oasis Road, respectively, with SR-177. Traffic on the all of the intersecting roads has stop signs while SR-177 is through traffic.

Kaiser Road (County R2). Traveling north from the I-10 interchange, Kaiser Road is reached by a left turn from northbound SR-177. There are no stop signs for northbound traffic on Kaiser Road. Near Lake Tamarisk, Oasis Road has a stop sign at its T-intersection with Kaiser Road. Southbound on Kaiser Road from the Project site toward the freeway there is one stop sign where Kaiser Road ends in a T-intersection with SR-177. Here traffic going toward the freeway would make a right turn onto southbound SR-177.

3.18.1.2. Project Site Access

Access to the Project vicinity from both the east and west is primarily via I-10. Secondary regional access from the northeast is via SR-177 (Rice Road). Most of the Project is situated between a State Highway (SR-177) and a County Road (Kaiser Road) and therefore subject to Caltrans and County requirements respectively for encroachment on these roadway rights-of-ways (ROWs). Encroachment permits would be needed for ingress/egress driveways or installation of any overhead/underground lines in or across the ROWs. Among the factors considered when permitting access points are the geometry and spacing of proposed ingress/egress points relative to each other and other existing road features and characteristics, the volume and speed of traffic on the affected road, and the ability to make safe turning movements in and out of the adjacent property.

Figure 3.18-1 shows approximate access locations. However, the final location and design features of temporary and permanent driveways between the roads and the site would be determined in consultation with the responsible agency and in compliance with their requirements. The volume of traffic to and from

a particular access point would vary during the course of construction, depending on where within the site construction activities occur and the number of workers required by those activities.

3.18.1.3. Public Transportation within the Project Vicinity

Pedestrian and Bicycle

Pedestrian facilities include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape amenities. Pedestrian facilities currently do not exist in the Project study area. The existing pedestrian network does not currently provide sidewalks connecting adjoining land uses along SR-177 (Rice Road). No bicycle facilities (e.g., bicycle paths, lanes, or routes) currently exist in the area.

Public Transportation Service

The nearest public bus service is offered by the Palo Verde Valley Transit Agency, which serves the Blythe Area. Bus Route 6 travels along I-10 and serves the Desert Center Post Office once daily westbound and eastbound on Monday, Wednesday, and Friday (Palo Verde Valley Transit Agency, 2023).

Rail Service

There is no rail service in the vicinity of the Project. The Arizona and California Railroad runs from Cadiz, CA to Parker, AZ. A branch line that once served Blythe, California, has been abandoned.

Airports

Blythe Airport is the nearest public airport located approximately 40 miles east of the Project, serving Riverside County. The airport has two runways and is mostly used for general aviation, with an average 37 flights a day (AirNav, 2023a). Desert Center Airport is a private use airport owned by Chuckwalla Valley Associates. It is located approximately 1 mile east of SR-177 and the Project. Desert Center Airport has one runway and averaged less than 150 general aviation operations per year in 2006. Permission is required to land at this private use facility (AirNav, 2023b).

The Project site was compared to the military flight paths and airspace designations of the California Military Land Use Compatibility Analysis (CMLUCA) database. The site location is not within 4,000 feet of a military installation, within military special-use airspace, or beneath a military designated low-level flight path. Based on the CMLUCA, the Project site is located within military Visual Route (VR) flight paths (CMLUCA, 2023).

Impacts related to airports and aviation are addressed in Section 3.10, Hazards and Hazardous Materials.

3.18.2. Regulatory Framework

3.18.2.1. Federal Laws, Regulations, and Policies

CFR, Title 49, Subtitle B

This regulation includes procedures and regulations pertaining to interstate and intrastate transport (including hazardous materials program procedures) and provides safety measures for motor carriers and motor vehicles that operate on public highways.

3.18.2.2. State Laws, Regulations, and Policies

California Vehicle Code (CVC)

The CVC includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.

California Government Code

Sections 65352, 65404, 65940, and 65944, amended by Senate Bill 1462, requires local planning agencies to notify the military whenever a proposed development project or general plan amendment is located within 1,000 feet of a military installation, located within special use airspace, or is located beneath a low-level flight path.

California Department of Transportation

Local Development – Intergovernmental Review (LD-IGR). The Caltrans LD-IGR program uses the Transportation Impact Study Guide (TISG) during environmental review of land use projects and plans (Caltrans, 2020). The Caltrans LD-IGR program works with local jurisdictions early and throughout their land use planning and decision-making processes, consistent with the requirements of CEQA and state planning law. Caltrans seeks to reduce single occupancy vehicle trips, provide a safe transportation system, reduce per capita VMT (vehicle miles travelled), increase accessibility to destinations via cycling, walking, carpooling, and transit, and reduce GHG emissions. Those goals along with standard CEQA practice create the foundation of Caltrans review of proposed new land use projects.

The TISG replaces Caltrans' previous Traffic Impact Study Guidelines from 2002, which were based on vehicle delay and congestion. Based on the May 2020 TISG, for land use projects and plans, automobile delay is no longer considered a significant impact on the environment under CEQA per Senate Bill 743. Caltrans review of land use projects and plans is now based on a VMT metric, consistent with changes to the CEQA Guidelines (Cal. Code Regs. § 15064.3(b)(1)). This 2020 VMT-focused TISG provides a foundation for review of how lead agencies apply the VMT metric to CEQA project analysis.

As discussed later in Sections 3.18.5 through 3.18.8, the proposed Project would generate a large number of peak hour trips during construction. Most of these are worker vehicle trips. EIR Appendix H provides a transportation impact analysis prepared for the proposed Project. The analysis provided in Sections 3.18.5 through 3.18.8 compares the worst-case daily construction and operational trips against the existing volumes and capacities of study area roadways, including traffic volumes from other projects with construction and operation timelines overlapping that of the proposed Project.

3.18.2.3. Local Laws, Regulations, and Policies

Southern California Association of Governments

Connect SoCal – Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). The 2020-2045 RTP/SCS Plan charts a path toward a more mobile, sustainable and prosperous region by making key connections: between transportation networks, between planning strategies and between the people. As part of the development of Connect SoCal, a set of ten high level goals were adopted. As requested by SCAG, the following presents a consistency analysis of the proposed Project with the ten Connect SoCal goals and demonstrates that the proposed Project would be consistent with the RTP/SCS Plan.[21]

[21] Adopted Final Connect SoCal Plan Performance Measures. https://scag.ca.gov/sites/main/files/file-attachments/fconnectsocal_performance-measures.pdf.

1. Encourage regional economic prosperity and global competitiveness.

   Consistency Analysis: Economic benefits, from the procurement of goods and services and worker wages, would occur both locally and regionally during Project construction and operation.

2. Improve mobility, accessibility, reliability, and travel safety for people and goods.

   Consistency Analysis: The proposed Project would have no effect on the mobility, accessibility, or reliability of the transportation network. With respect to safety, Mitigation Measure TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities) is proposed to ensure any damage and deterioration attributed to the Project would be repaired.

3. Enhance the preservation, security, and resilience of the regional transportation system.

   Consistency Analysis: The proposed Project would have no effect on security of the transportation network. With respect to preservation and resilience, Mitigation Measure TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities) is proposed to ensure any damage and deterioration attributed to the Project would be repaired.

4. Increase person and goods throughput and travel choices within the transportation system.

   Consistency Analysis: While the Project would not be transit-friendly, it would include Mitigation Measure TRA-1 (Construction Traffic Carpool and Trip Reduction Plan), which would encourage carpooling of construction workers. During operation of the proposed Project, up to 10 permanent staff periodically could be on the site for ongoing facility maintenance and repairs, which would not affect the transportation system.

5. Reduce greenhouse gas emissions and improve air quality.

   Consistency Analysis: The proposed Project is a solar generation and energy storage facility, which would reduce greenhouse gas emissions and improve air quality by offsetting the need for conventional power generation.

6. Support healthy and equitable communities.

   Consistency Analysis: The proposed Project is a solar generation and energy storage facility, which would reduce greenhouse gas emissions and improve air quality by offsetting the need for conventional power generation. Economic benefits, from the procurement of goods and services and worker wages, would occur both locally and regionally during Project construction and operation.

7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.

   Consistency Analysis: The proposed Project would have no effect on regional development patterns of the transportation network. The proposed Project is a solar energy facility, which would reduce greenhouse gas emissions and improve air quality by offsetting the need for conventional power generation.

8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.

   Consistency Analysis: While the Project would not be transit-friendly, it would include Mitigation Measure TRA-1 (Construction Traffic Carpool and Trip Reduction Plan), which would encourage carpooling of construction workers.

9. Encourage development of diverse housing types in areas well supported by multiple transportation options.

   Consistency Analysis: The proposed Project would have no effect on housing and transportation networks supporting them (see Section 3.14, Population and Housing).

10. Promote conservation of natural and agricultural lands and restoration of critical habitats.

    Consistency Analysis: The proposed Project would have no effect on designated critical habitat or active/operational agricultural lands. The Project does affect undeveloped private lands that are disturbed from past agricultural operations and impacts to Agricultural Resources are discussed in Section 3.3. Potential impacts to habitat are discussed in Section 3.4 (Biological Resources).

County of Riverside Congestion Management Plan

Riverside County's Congestion Management Plan (CMP) is part of the Riverside County Transportation Commission's Long Range Transportation Plan published in 2019. All state highways and principal arterials are CMP roadways. I-10 and SR-177 are the only CMP roadways in the Project study area. Under the CMP all CMP roadways operate at a Level of Service (LOS) of "E" or better.

The RCTC's adopted minimum LOS threshold is LOS "E." Therefore, when a CMP street or highway segment falls to "F," a deficiency plan must be required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including consideration of Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency.

Riverside County General Plan – Circulation Element & Land Use Element

The Riverside County General Plan is applicable to all unincorporated lands within Riverside County. Countywide policies that address traffic and transportation within the County boundaries are found in the Circulation Element (2020) and Land Use Element (2021) of the County General Plan, and include:

Circulation Element:

- **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 Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans
  >
  > …

  Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental impacts and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate

the impacts of such approval. Any such approval must incorporate all feasible mitigation measures, make specific findings to support the decision, and adopt a statement of overriding considerations.

- **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, plot plans, 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 C2.8:** 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 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 on-site 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 countywide transportation system.
- **Policy C7.9:** Review development applications in cooperation with RCTC and as appropriate, to identify the precise location of CETAP corridors and act to preserve such areas from any permanent encroachments, pending dedication or acquisition. Coordinate with RCTC to evaluate and update the CETAP corridors periodically as conditions warrant.

Land Use Element:

- **Policy LU 29.6:** *Require that commercial projects abutting residential properties protect the residential use from the impacts of noise, light, fumes, odors, vehicular traffic, parking, and operational hazards.*

Riverside County Municipal Code Title 10 Vehicles and Traffic, Chapter 10.08, Sections 10.08.010 – 10.08.180

Chapter 10.08 establishes requirements and permits for oversize and overweight vehicles.

Riverside County Ordinance No. 460

This ordinance specifies that all new access roads shall conform to the requirements of the Riverside County Transportation Department Subdivision Regulations.

Riverside County Ordinance No. 461

This ordinance specifies that all new access roads shall conform to the requirements of the Riverside County Transportation Department Road Improvement Standards and Specifications.

The proposed Project would be consistent with applicable policies and ordinances of the County related to traffic and transportation. This would be assured through Project design, requirements imposed under a CUP/PUP and Development Agreement, and County review of plans.

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 considering vehicle miles traveled, as required under CEQA. In addition, Riverside County has an additional impact criterion to be considered regarding congestion. The *Transportation Impact Analysis* report (David Evans and Associates, 2023) found in EIR Appendix H. is the basis for also evaluating impacts to local transportation systems based on level of service determinations.

This assessment of transportation-related impacts is based on evaluations and technical analyses designed to compare the existing conditions (pre-Project), construction and operation of the Project, and cumulative impacts that consider the additional effects of other projects in the region. After construction, operation of the Project would not generate a substantial or significant number of trips above those already generated by existing land uses in the Project area. However, the construction phase of the Project would include trips generated by construction workers and supplies delivered by trucks to the Project area. Decommissioning activities are anticipated to be similar to construction, but less intense. This analysis considers the effects of transportation and traffic of the Project in the context of CEQA and Riverside County requirements. Caltrans is the agency responsible for permitting and regulation of the use of state-administered roadways within California, including I-10 and SR-177, and the County is the agency responsible for regulation of the use of roadways within its jurisdictional boundaries.

3.18.3.1. Trip Generation

Trip generation for the proposed Easley Project was developed for the construction phase of the Project using information provided by the Applicant. Another project, the Sapphire Solar Project, is proposed adjacent to the Easley Project. If approved, construction of this project could potentially overlap with the Easley Project construction period. Three projects in the vicinity of the Easley site are under construction. They are the Oberon Renewable Energy Project (operational with site restoration underway), the Victory Pass Solar Project, and the Arica Solar Project. These are anticipated to have completed construction and

be in operation prior to the start of Easley Project construction. To be conservative (and thereby identify the "worst case" scenario), traffic on roads in the vicinity during the Easley Renewable Energy Project construction period is assumed to include both Easley Project and Sapphire Solar Project construction traffic, as well as operations-related traffic associated with the Oberon, Victory Pass, and Arica projects.

Average daily trips (ADT) and peak hour trips generated in the Project area during the construction period of the Easley Project are shown in Table 3.18-1. This includes construction trips associated with both the Easley Project and the proposed Sapphire Project, as well and the O&M trips associated with operations of the three nearby solar projects.

Overall, the average number of workers on the Easley site during construction is projected to be 320, with a peak of 530. The higher number represents a "worst case" scenario and assumes 530 single occupant worker vehicles arriving and departing the construction site during the peak hours. Based on the distance between the Project and population centers where most workers live, many workers are expected to carpool from near their homes or from remote parking locations rather than drive alone to the Project site. Remote parking and carpooling would reduce the actual number of vehicles one roads in the Project vicinity during peak hours. As well, not all workers are expected to arrive/depart in a single peak AM or PM hour.

Table 3.18-1. Daily Construction Trip Generation During Construction Period

			AM Peak Hour			PM Peak Hour		
Description	**Quantity**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Easley Project Workers	530	1080	530	10	540	10	530	540
Easley Project Delivery Trucks	80	160	3	3	6	3	3	6
Daily Total Easley Project Trips		*1240*	*533*	*13*	*546*	*13*	*533*	*546*
Sapphire Project Workers	322	650	322	3	355	3	322	325
Sapphire Project Delivery Trucks	9	17	1	1	2	1	1	2
Daily Total Sapphire Project Trips		*667*	*323*	*4*	*327*	*4*	*323*	*327*
Nearby Solar Project O&M Workers*	30	60	30	0	30	0	30	30
Nearby Solar Project O&M Deliveries*	9	18	6	6	12	3	3	6
*Daily Total Nearby O&M Trips**		*78*	*36*	*6*	*42*	*3*	*33*	*36*
Total Construction Period Workers	882	1790	882	13	925	43	852	895
Total Construction Period Trucks	98	195	10	10	20	7	7	14
Daily Total Trips		*1985*	*892*	*23*	*915*	*20*	*889*	*909*

* For Arica Solar, Victory Pass Solar, Oberon Renewable Energy Projects
Source: EIR Appendix H.

3.18.3.2. Vehicle Miles Traveled

Vehicle miles traveled (VMT) is a measure used in transportation planning for a variety of purposes. It measures the amount of travel for all vehicles in a geographic region over a given period. VMT is calculated by adding up all the miles driven by all the cars and trucks on all the roadways in a region. This metric plays an integral role in the transportation planning, policy-making, and revenue estimation processes due to its ability to indicate travel demand and behavior. Per CEQA Guidelines section 15064.3, subdivision (b), a VMT analysis under CEQA may be based on the following:

- *Qualitative Analysis*: If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle

miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

- *Methodology*: A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgement based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

While the proposed Project would generate a substantial number of trips, this would be only during construction, which is anticipated to take approximately 20-months. Therefore, a qualitative analysis for VMT has been conducted.

VMT reduction is needed to achieve State climate goals as travel per capita and passenger vehicle emissions have continued to grow despite improvements in vehicle fuel efficiency and other strategies to reduce emissions The more that travelers are able to make the same trips by walking, bicycling, using transit, or carpooling, the less VMT increases even as new development occurs.

The proposed Project would generate a large amount of traffic during the 20-month construction period but not thereafter. As the site is developed, workers and trucks would travel to and from the site. The remote location of the site limits the opportunity to improve how efficiently workers reach the site. Living locally or carpooling are two ways to reduce VMT in the region. However, there are few housing opportunities nearby. Workers could (and on other projects currently under construction workers do) carpool. Few if any alternative means to reach the Project site are available. The ability to use public transit is limited by from the distance from the nearest transit stop to the site and the very infrequent service; the same is true for walking and bicycling.

The VMT approach is useful when a project results in facilities or locations that generate trips year-in and year-out, such as office buildings and shopping centers. During construction, these and other projects generate temporary vehicle trips from workers and materials deliveries, which end with the end of construction. The principal concern during construction is the effect of worker and truck traffic on congestion in the Project vicinity. This is the case with the Easley Project. After construction, during operation, the Project would generate few trips – not enough to have a significant impact on congestion, air quality, noise, and similar concerns.

3.18.3.3. 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. At unsignalized intersections, LOS A results in 10 seconds or less delay for a motorist; LOS F results in 50 seconds or greater delay. 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. In situations such as those existing at and around the Easley Project site, LOS remains a useful tool for illustrating the construction-period congestion effects of a project on local roads and intersections. LOS is an indicator of operating conditions on a roadway or at an intersection and is defined in categories ranging from A to F. LOS A represents the best traffic flow conditions with very low delay, and LOS F represents poor conditions. LOS A indicates free-flowing traffic, and LOS F indicates substantial congestion with long delays at intersections.

Once the Easley Project is operational, traffic attributable to the Project would be minimal; therefore, the focus of this impact analysis is on the congestion that may occur on roadways during construction, when there would be a high volume of worker vehicles and delivery trucks accessing the Project site. Based on this consideration, the analysis of traffic and transportation impacts related to the Easley Project is focused on the level of service on local roads, where LOS is measured in terms of delay for motorists that results from the number of vehicles on the roadway and at intersections.

For the proposed Project, field observations of existing intersection turning movements (counts) were completed on Wednesday, February 15, 2023. This was a midweek day with clear weather. Table 3.18-2 presents existing LOS at the five studied intersections. As illustrated in Table 3.18-2, all of the intersections within the study area of the proposed Project are operating at an acceptable level of service (LOS A or LOS B) during both the morning and afternoon peak hours when Project-related traffic would be heaviest.

Table 3.18-2. Existing Intersection Levels of Service

Intersection	Peak Period	Existing	
		Delay	LOS
Rice Road (SR-177) / I-10 Eastbound Ramps	AM	9.5	A
	PM	9.4	A
Rice Road (SR-177) / I-10 Westbound Ramps	AM	9.3	A
	PM	9.4	A
Rice Road (SR-177) / Ragsdale Road	AM	9.7	A
	PM	11.5	B
Rice Road (SR-177) / Kaiser Road (County R2)	AM	8.9	A
	PM	9.7	A
Rice Road (SR-177) / Oasis Road	AM	8.8	A
	PM	9.5	A

Source: EIR Appendix H.

The LOS shown in Table 3.18-2 shows current conditions (February 2023), which included traffic associated with projects that under construction in the area on the day traffic counts were taken. If the Easley Renewable Project were not constructed, but the proposed Sapphire Project were built and the three nearby solar projects were in their post-construction O&M stage, the LOS at the intersections would be as shown in Table 3.18-3. All levels would be acceptable.

Table 3.18-3. Intersection Levels of Service with Sapphire Project Construction and O&M Projects

Intersection	Peak Period	Existing	
		Delay	LOS
Rice Road (SR-177) / I-10 Eastbound Ramps	AM	10.4	B
	PM	10.4	B
Rice Road (SR-177) / I-10 Westbound Ramps	AM	12.9	B
	PM	9.7	A
Rice Road (SR-177) / Ragsdale Road	AM	13.8	B
	PM	20.3	C
Rice Road (SR-177) / Kaiser Road (County R2)	AM	9.4	A
	PM	15.5	C
Rice Road (SR-177) / Oasis Road	AM	9.3	A
	PM	10.7	B

Source: EIR Appendix H.

When it is assumed that the Easley Project the proposed Sapphire Project have a simultaneous construction period and the three nearby solar projects are in their post-construction O&M stage, the LOS at intersections would be as shown in Table 3.18-4. This table includes the three driveways that are associated only with the Easley Project. Under this scenario, three intersections in the area were identified has potentially having LOS F, highlighted in bold in the table.

Table 3.18-4. Intersection LOS with Easley and Sapphire Construction and Projects in O&M

Intersection	Peak Period	Existing	
		Delay	LOS
Rice Road (SR-177) / I-10 Eastbound Ramps	AM	18.5	C
	PM	18.3	C
Rice Road (SR-177) / I-10 Westbound Ramps	**AM**	**114.3**	**F**
	PM	12.2	B
Rice Road (SR-177) / Ragsdale Road	AM	29.5	D
	PM	**72.8**	**F**
Rice Road (SR-177) / Kaiser Road (County R2)	AM	14.4	B
	PM	**271.6**	**F**
Rice Road (SR-177) / Oasis Road	AM	10.4	B
	PM	13.2	B
Oasis Road / Kaiser Road (County R2)	AM	13.9	B
	PM	12.8	B
Rice Road (SR-177) / Project Driveway #1	AM	17.3	C
	PM	17.5	C
Rice Road (SR-177) / Project Driveway #2	AM	17.3	C
	PM	17.5	C
Kaiser Road (County R2) / Project Driveway #3	AM	11.2	B
	PM	29.3	D

Source: EIR Appendix H.

These tables show the potential temporary effect of construction traffic on LOS at various local intersections. The analysis supporting Table 3.18-4 assumed that the Easley and Sapphire Projects have simultaneous construction periods, that the traffic on a particular day is the maximum for each of the two projects, and that workers arrive/depart during the peak AM/PM hours in single occupant vehicles.

LOS F would occur for AM Peak Hour traffic on the westbound I-10 ramp to Rice Road and PM Peak Hour traffic on Ragsdale Road at Rice Road and on Kaiser Road at Rice Road. Under this scenario, three intersections would be at LOS F. Under County standards intersections with LOS F would be unacceptable.

With the end of construction, the only traffic associate with solar projects would be that required for O&M operations, estimated to involve no more than 10 workers and 3 trucks arriving and departing each day per solar project site.

3.18.3.4. Ambient Growth and Cumulative Traffic

The ambient growth is a general rate of growth in traffic from overall regional growth (assumed to be 3% annually for the analysis presented in EIR Appendix H). Over 20 projects in Eastern Riverside County were identified that are either operational or are under construction but will be operational prior to construction of the Easley Project. Eight other potential future projects in the vicinity of the Easley are under review but not approved.

The traffic impact analysis presented in EIR Appendix H considered the development of adjacent and nearby large-scale solar energy projects, where the construction of those projects is expected to overlap with construction of the proposed Easley Project. As shown in Table 3-18-4, for the Easley Project this would involve simultaneous development of the proposed adjacent Sapphire Solar Project. Three projects in the vicinity of the Easley Project – Arica Solar, Victory Pass Solar, and Oberon Solar – are expected to be in operation prior to the construction phase of the Easley Project.

During the operations and maintenance of these three projects, each would each contribute daily traffic from an estimated 10 workers and 3 truck deliveries. This would result in and estimated 42 AM peak hour trips and 36 PM peak hour trips. When operational, the Easley Project would have a similar level of traffic (10 workers, 3 truck deliveries) as the other solar projects in the vicinity.

3.18.4. CEQA Significance Criteria

The criteria used to determine the significance of potential traffic and transportation impacts are based on Appendix G of the State CEQA Guidelines. Based on the Guidelines, the proposed Project would result in a significant impact under CEQA related to traffic and transportation if the Project would:

- *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.*
- *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).*
- *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).*
- *Result in inadequate emergency access.*

The County of Riverside's Environmental Assessment Form includes additional significance criteria. The additional criteria indicate that a project could have potentially significant impacts related to traffic and transportation if it would:

- *Cause an effect, or a need for new or altered maintenance of roads (see Impact TRA-2);*
- *Cause an effect upon circulation during the project's construction (see Impact TRA-1);*
- *Result in inadequate emergency access or access to nearby uses (see Impact TRA-1)*.
- *Include the construction of expansion of a bike system or bike lanes (omitted)*.

The County impact criterion regard construction or expansion of bike facilities is omitted; the Project would not construct or expand bike facilities. The other Guidelines and County criteria are addressed in Section 3.18.5.

The County of Riverside's Environmental Assessment Form also includes significance criteria regarding airports. These are addressed in Section 3.10, Hazards and Hazardous Materials.

3.18.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to traffic and transportation, including concerns about increased disturbance, dust, and noise created by construction vehicles and trucks, as well as the speed and presence of these vehicles impacting the safety of residents. Dust, noise, and similar nuisance impacts are discussed in the relevant resource topic areas in this EIR. It is presumed that vehicles would comply with posted speed limits and obey all traffic laws on public roads. Compliance with traffic laws would reduce any potential safety risk to residents.

A commentor also expressed concerns about coordination with the Department of Defense (DoD), as the Project is in a fly zone, which the military uses for training. The Department of Defense will receive notification of the Project and of the availability of the EIR and will be invited to comment. The height of

Project facilities, such as the gen-tie line, would comply with requirements of the FAA to ensure aviation safety and any DoD restrictions that may apply.

Impact TRA-1. The Project would conflict with an applicable plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Solar Facility

Road Network

LESS THAN SIGNIFICANT WITH MITIGATION. Table 3.18-4 presents the potential level of service (LOS) at each study area intersection were the maximum daily construction trips were to occur for the Easley Project, the proposed Sapphire Project, and the three nearby solar projects in the O&M stage of operation. This represents the "worst case" scenario, with the highest number of workers working at each site and arriving/departing during the same peak hours.

As shown in Table 3.18-4. the addition of Easley Project-related construction trips to the ambient conditions (Sapphire Project plus three projects in O&M) could result in three intersections operating at LOS F, an unacceptable level:

- I-10 westbound ramp at SR-177 – LOS F (AM Peak Hour)
- Rice Road (SR-177) at Ragsdale Road – LOS F (PM Peak Hour)
- Rice Road (SR-177) at Kaiser Road (County Route R2) – LOS F (PM Peak Hour)

To ensure that impacts from temporary construction-related trips are reduced to a less than significant level, Mitigation Measure (MM) TRA-1 (Construction Traffic Control Plan) is proposed and would require the Applicant to prepare a Construction Traffic Control Plan for review and approval by Caltrans and Riverside County. This plan requires the Applicant to reduce construction-related trips during morning (7:00 a.m. to 9:00 a.m.) and afternoon (4:00 p.m. to 6:00 p.m.) peak hours on I-10, SR-177, and Kaiser Road. If the traffic conditions at the time of Project construction reflect the ambient conditions due to overlapping construction, the measure requires the Applicant to install a temporary signal or use manual intersection control. The Easley Project in itself is not expected to result in an unacceptable LOS as it would generate fewer vehicle trips than the ambient conditions (which includes simultaneous construction at the Sapphire Project site). Therefore, the measure allows for adaptive management given the uncertain schedule for projects included in the ambient conditions.

Up to 10 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. Alternatively, approximately 2 permanent staff and 8 Project operators would be located off-site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. The Project site maintenance program would be largely conducted on-site during daytime hours. Equipment repairs could take place in the early morning or evening when the plant would be producing the least amount of energy. Based on these expected operational and maintenance requirements, it is estimated average daily traffic volumes associated with Project operation would be approximately 15 daily round trips (30 total trips), with the majority being passenger vehicles. The addition of 30 daily trips would have a negligible effect on performance of the study area transportation system and less than significant impacts would occur.

Transit, Bicycle, and Pedestrian Use

LESS THAN SIGNIFICANT WITH MITIGATION. The only public transit stop in the Project vicinity is at Desert Center Post Office. The service is operated by the Palo Verde Valley Transit Agency, which serves the Blythe Area. Bus Route 6 travels along I-10 and serves the Desert Center Post Office once daily westbound and east-bound on Monday, Wednesday, and Friday. The Post Office stop is west of SR-177, south of the Project

near I-10 and would not be affected by Project construction. There are no designated pedestrian and bicycle paths in the Project vicinity.

Construction of the solar facility is not expected to require any temporary lane closures that could restrict the movements of vehicles or pedestrians. However, construction of the Project would require large vehicles travel on local roadways to access the Project site. MM TRA-1 (Construction Traffic Control Plan) requires the Construction Traffic Control Plan be reviewed and approved by Caltrans and Riverside County and includes provisions for ensuring detours or safe movement of traffic through all affected areas. With the implementation of this measure, impacts during construction would be less than significant.

Once constructed, maintenance activities would occur as needed at the solar facility but are not expected to require any temporary travel lane closures that could restrict the local circulation system. Impacts would be less than significant.

500 kV Generation-Tie Line

LESS THAN SIGNIFICANT WITH MITIGATION. The construction trip generation shown in Table 3-18-4 includes trips associated with both construction of the solar energy facility and the gen-tie line. Therefore, the trip analysis presented above for construction of the solar energy facility also evaluated trips associated with gen-tie construction. As discussed, the implementation of MM TRA-1 (Construction Traffic Control Plan) would eliminate any significant impact at the three affected study area intersections.

As presented in Chapter 2 (Description of the Proposed Project and Alternatives) construction of the gen-tie would require overhead conductors be strung across SR-177. Overhead gen-tie construction could require the short-term temporary closure lanes on SR-177. Also, where new poles would be installed adjacent to roads and where conductor would be strung on poles adjacent to roadways, temporary travel lane disruptions may also occur.

Mitigation Measure TRA-1 (Construction Traffic Control Plan) is proposed to provide specificity regarding the means to reduce potential impacts from any temporary travel lane disruptions and requires the Construction Traffic Control Plan be reviewed and approved by Caltrans and Riverside County. With the incorporation of MM TRA-1 (Construction Traffic Control Plan), impacts to traffic flow resulting from temporary construction-related disruptions to the affected circulation system would be less than significant.

Once constructed, the gen-tie overhead facilities would require routine inspection via ground observation. Maintenance activities would occur as needed. Collector lines would not require routine inspection but may require some periodic maintenance over the life of the Project. Due to the limited duration and extent of these activities, minimal daily trips are necessary and would have a negligible effect on the LOS or other performance standard of the transportation system under existing conditions. Routine inspections and maintenance are not expected to require temporary lane closures. Impacts would be less than significant.

Mitigation Measures for Impact TRA-1

MM TRA-1 Construction Traffic Control Plan. See full text in Section 3.18.9 (Mitigation Measures).

Significance After Mitigation

With the implementation of MM TRA-1, potential impacts to traffic flows on the affected circulation system resulting from Project-related construction traffic trips and potential disruptions to travel lanes would be less than significant and would be consistent with applicable traffic-related plans and policies.

Impact TRA-2. Construction of the Project would conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) regarding transportation impacts.

LESS THAN SIGNIFICANT WITH MITIGATION. The proposed Project would result in traffic trips during construction. During construction, an average of 320 workers per day would commute to the Project site with a maximum of 530 workers during peak construction. In addition, an estimated 80 round trips per day would be required to deliver materials and equipment to the Project site. Truck trips associated with materials and equipment deliveries would likely come from within the Palm Springs, Blythe, and/or Riverside–San Bernardino area, with some materials trips likely originating from the Ports of Long Beach and Los Angeles. Many temporary workers needed for construction of the gen-tie would reside within a 60- to 90-minute drive time of the Project area. This assumption is based on observations regarding worker commute habits during construction monitoring efforts for recent similar renewable energy and transmission projects in the California desert. However, it is likely that some construction workers would come from outside a reasonable commute area and seek temporary housing proximate to the work area.

Per State 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. Due to the remote location of the Project site, many construction truck trips may require high VMT to access the site. However, all construction-related truck trips would be temporary and only in volumes necessary to deliver equipment and materials to the site. Upon completion of construction, all truck trips and construction worker commute trips would cease. At this time, no known applicable VMT thresholds of significance for temporary construction trips that may indicate a significant impact are known. MM TRA-1 (Construction Traffic Control Plan) requires the Applicant to prepare a Construction Traffic Control Plan, with the Plan providing means to encourage or provide ridesharing opportunities for construction workers. Therefore, while the proposed Project would include temporary construction trips that may include high VMT, they would not affect existing transit uses or corridors and are presumed to cause a less than significant transportation impact. Based on construction of other solar projects in the region, workers often carpool because of the distance travelled and the cost savings.

Once constructed, operation and maintenance of the Project would generate very few vehicle trips. It is assumed operational workers would either be located in, or seek permanent residence within, a reasonable commute distance. For example, Blythe is approximately 50 miles east of Desert Center and Indio is a similar distance to the west. This would require a 45-minute commute. The estimated commute time and VMT for operational workers is considered to be within a reasonable range typical of the remote desert communities nearest to the Project. Due to the remote location of the Project site, limited residential and transit opportunities to the site, and low number of daily trips (30 daily trips), Project operation is not considered to result in high VMTs that could adversely affect transit or transportation planning for the area. MM TRA-1 requires the Applicant to prepare a Construction Traffic Control Plan to affected jurisdictions, with the Plan providing means to encourage or provide ridesharing opportunities for operational workers as well. Therefore, operational-related trips would not affect existing transit uses or corridors and are presumed to cause a less-than-significant transportation impact.

Mitigation Measures for Impact TRA-2

MM TRA-1 Construction Traffic Control Plan. See full text in Section 3.18.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of MM TRA-1.

Impact TRA-3. Project activities would increase transportation hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Solar Facility and 500 kV Generation-Tie Line

LESS THAN SIGNIFICANT WITH MITIGATION. Most construction traffic would access the Project area via I-10 and SR-177, accessing private site entrances from SR-177 and Kaiser Road adjacent to the Project site. Due to the flat topography, both the freeway and local roadways accessing the site have a relatively straight horizontal alignment with good visibility in all directions. All access driveways to the site from SR-177 would comply with County and Caltrans requirements to ensure safe site ingress and egress. There would be no sharp curves or dangerous intersections. All new internal roads within the site would be private. During construction, all truck drivers would adhere to California Vehicle Code regulations pertaining to licensing, size, weight, and load of vehicles operated on highways and local roads; safe operation of vehicles; and the transport of any hazardous materials. Traffic on public freeways and roads would be of the same vehicle types (passenger vehicles and heavy trucks) that currently occur and are allowed. Construction-related traffic would be compatible with existing traffic. Therefore, no additional roadway hazards would occur from Project-related vehicle trips on transportation facilities. Additionally, MM TRA-1 (Construction Traffic Control Plan) requires the preparation of a Construction Traffic Control Plan to be reviewed and approved by Caltrans and Riverside County. This Plan includes provisions for ensuring detours or safe movement of local resident vehicles, pedestrians, and bicycles through all affected facilities. With the incorporation of this mitigation, hazard impacts from Project-related vehicle use of public roadways would be less than significant.

The movement of heavy trucks and equipment on public roads to Project work areas could potentially result in damage to road surfaces, shoulders, curbs, sidewalks, signs, and light standards. MM TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities) is proposed to ensure any damage and deterioration attributed to the Project would be repaired. With the incorporation of this mitigation, hazard impacts from transportation facility damage demonstrable to the Project would be less than significant.

The 500 kV gen-tie line would cross SR-177 overhead, requiring temporary lane closures when the conduit is strung between towers east and west of the highway. Collector lines from the solar arrays located east of SR-177 would be installed under SR-177 using directional drilling. Traffic would not be affected.

During operations and maintenance, it is estimated average daily traffic volumes associated with the Project would be approximately 15 round trips (30 total trips), with the majority being passenger vehicles. This amount of operational daily trips would have a negligible effect on public roadway safety. During public scoping, concern was raised about an increase in traffic resulting in safety hazards on local roads. It is assumed that passenger vehicle and trucks associated with development of the Project would obey traffic laws with regard to speed limits and rights of way for vehicles and pedestrians. Mitigation Measure TRA-1 would reduce the number of vehicles on local roads by encouraging carpooling.

Mitigation Measures for Impact TRA-3

MM TRA-1 **Construction Traffic Control Plan**. See full text in Section 3.18.9 (Mitigation Measures).

MM TRA-2 **Repair Roadways and Transportation Facilities Damaged by Construction Activities.** See full text in Section 3.18.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of MMs TRA-1 and TRA-2.

Impact TRA-4. Project activities would result in inadequate emergency response access or access to nearby properties.

Solar Facility

LESS THAN SIGNIFICANT WITH MITIGATION. Construction of the solar facility is not expected to require temporary lane closures that could restrict the movements of emergency vehicles. The Project site would have controlled access points for ingress and egress at the site. These access points would allow for emergency vehicle access into and through the site. The Project would not block access to nearby properties. Therefore, impacts during construction would be less than significant.

Once constructed, maintenance activities would occur as needed at the solar facility but are not expected to require any temporary travel lane closures that could restrict emergency vehicle movements. Emergency responders would have access to any locked gates into the site. Impacts would be less than significant.

500 kV Generation-Tie Line

LESS THAN SIGNIFICANT WITH MITIGATION. As discussed under Impact TRA-1, construction of the gen-tie line may require temporary closure or disruption to travel lanes during conductor stringing. MM TRA-1 (Construction Traffic Control Plan) is proposed to provide specificity regarding the means to reduce potential impacts from any temporary travel lane disruptions during construction of the gen-tie line. Additionally, MM TRA-1 requires the Construction Traffic Control Plan be reviewed and approved by Caltrans and Riverside County and would include plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. With the incorporation of this mitigation, impacts from temporary construction-related disruptions to the affected circulation system would be less than significant.

Typical inspections and maintenance of the gen-tie line would not require temporary road or lane closures. Therefore, normal maintenance activities are not expected to restrict emergency service access or vehicle movements. Less than significant impacts would occur.

Mitigation Measures for Impact TRA-4

MM TRA-1 Construction Traffic Control Plan. See full text in Section 3.18.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant with implementation of MM TRA-1.

3.18.6. Alternative 1: No Project Alternative

The transportation and traffic impacts associated with the proposed Project would not occur under the No Project Alternative. Under this alternative there would be no direct or indirect impacts associated with temporary vehicle trip generation, VMT, or temporary travel lane disruptions. There would be no physical features that could cause impacts to air navigation. Much of the proposed Project site is designated as a DFA and is suitable for solar energy generation. Under the No Project Alternative, it is probable that other solar energy-related projects would be implemented within the site in lieu of the proposed Project because the demand for solar energy continues to increase and the site offers excellent solar potential. A different solar energy project would potentially result in similar impacts to transportation and traffic as those identified for the proposed Project.

3.18.7. Alternative 2: Lake Tamarisk Alternative

Under this alternative, approximately 30 acres of solar panels closest to the community of Lake Tamarisk would be removed from the Project and the location of some facilities moved farther from Lake Tamarisk. However, there would be no substantial change to the size of the solar facility proposed to be constructed and operated. Under the Lake Tamarisk Alternative, construction- and operations-related traffic would be similar to that anticipated for the Project as proposed. Therefore, the traffic and transportation impacts for Alternative 2 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.

3.18.8. Cumulative Impacts

Geographic Scope

The geographic scope of the cumulative analysis for the transportation and traffic vehicle trips analysis are the Project study area intersections identified in Table 3.18-2. This geographic area was selected because cumulative projects would increase impacts only if they used the same intersections and roads at the same time as the proposed Project. Therefore, the cumulative projects considered within the traffic and transportation geographic extent include the ambient projects, i.e., the proposed Sapphire Project and the three nearby solar projects that would be in their O&M phase.

Cumulative Impact Analysis

As discussed in Section 3.18.5, Project operations and maintenance would result in negligible daily trips to study area roadways. Therefore, the cumulative impact analysis focuses on traffic volumes generated during construction of the proposed Project. Impact TRA-1 and Impact TRA-2 consider the cumulative impacts of the Project by analyzing the effects of the Project plus the ambient conditions. Both impacts conclude that the cumulative impacts would be less than significant with implementation of MM TRA-1 (Construction Traffic Control Plan). Furthermore, Project construction and operation would not introduce trip VMT in excess of projects within the rural desert area and with implementation of MM TRA-1 would require the Applicant to ensure plans for carpooling are incorporated.

Several solar projects and associated gen-tie lines and the Eagle Mountain Project gen-tie line are located within 20,000 feet of the Desert Center Airport. As with the proposed Project, each project would check with the airport sponsor and the FAA to ensure there are no potential safety or navigational problems with a proposed solar facility, especially if it is a large facility (FAA, 2010). Each cumulative development project within 20,000 feet of Desert Center Airport would also have to be evaluated against FAA 7460 regulations pertaining to structures that may affect aviation and airspace safety. Because each project would need to comply with FAA determinations, the FAA will be able to ensure that the cumulative impacts to the Desert Center Airport are not significant.

The number of potential solar projects that could be under development at the same time would result in an increase in trips, VMT, and an increased risk of transportation hazards or damage to the roads. Cumulative impacts due to increased transportation hazards or damaged roads 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 contribution to the potentially significant cumulative impact would be reduced to less than cumulatively considerable because MM TRA-1 (Construction Traffic Control Plan) requires the Applicant to define the methods to maintaining close coordination with Caltrans and Riverside County, prior to and during construction, to minimize cumulative impacts of multiple simultaneous construction projects affecting shared portions of the circulation system. MM TRA-1 also requires the Applicant to reduce temporary motorist hazards in a variety of ways, including ensuring the safe movement of pedestrians and bicycles through work areas. MM TRA-2 (Repair

Roadways and Transportation Facilities Damaged by Construction Activities) is proposed to ensure any damage and deterioration attributed to the Project would be repaired. With the incorporation of these measures, the Project would have a less than significant contribution to cumulative hazard impacts on transportation facilities.

Construction of gen-tie lines could result in a cumulative impact to temporary lane closures. This is because construction of the solar facilities is expected to require temporary lane closures for the stringing of gen-tie conductor across roadways. The Easley Project would only require lane closures on SR-177 during conductor installation. This is a short-term effect. Construction of the gen-tie lines for each cumulative project may require stringing the lines over local roads and the I-10, but each developer would be required to coordinate that work with Caltrans and the County to avoid any cumulative impacts.

Construction of the solar facility is not expected to require any temporary lane closures that could restrict the movements of buses. Similarly, the construction of the cumulative projects would also be unlikely to require temporary land closures because they would be built on public or private lands off of public roads. Construction of the proposed Project would require large vehicles travel on local roadways to access the site and includes MM TRA-1 (Construction Traffic Control Plan) that would include provisions for ensuring detours or safe movement of vehicles through all affected areas. The cumulative projects would also be required to abide by regulations regarding lane closures to reduce any potential impacts. Therefore, the Project would not result in a cumulative significant impact to public transportation.

If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity that could increase traffic from recreational uses and visitors. If this occurs, it would be after the proposed Project is constructed and in operation, when project-related traffic would be minimal. The Project's contribution to local traffic at that time would not be cumulatively considerable.

Mitigation Measures for Cumulative Impacts

Implementation of MM TRA-1 and MM TRA-2 would mitigate potential transportation and traffic impacts for the proposed Project. No additional mitigation is required.

Significance After Mitigation

With implementation of mitigation, the Project's incremental contribution to impacts from an increase in daily trips and transportation hazards would not be cumulatively considerable. There would be no cumulative impact to aviation safety, disruption of emergency response access, or public transportation.

3.18.9. Mitigation Measures

MM TRA-1 **Construction Traffic Control Plan.** Prior to the start of construction, the Project owner shall submit a Construction Traffic Control Plan for review and approval by Caltrans and 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:

- 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. Additionally, if conditions warrant, geometry changes shall be considered in coordination with Caltrans and Riverside County, and implemented, if necessary, in addition to signalization at the I-10 westbound ramp and SR-177. These geometry changes could include a turn pocket.

- The locations and use of flaggers, warning signs, barricades, delineators, cones, arrow boards, 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.
- 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 Kaiser 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.
- Define the method to maintaining close coordination, prior to and during construction, with Caltrans and Riverside County to minimize cumulative impacts of multiple simultaneous construction projects affecting shared portions of the circulation system. Coordination with adjacent development projects to spread work shifts into multiple hours (instead of peak hour) or the installation of additional temporary traffic signals or manual traffic control officers during peak hours to mitigate the temporary impacts.

MM TRA-2 **Repair Roadways and Transportation Facilities Damaged by Construction Activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such transportation features are damaged by Project construction activities, as determined by the affected public agency, such damage shall be repaired and restored to their pre-Project condition by the Project owner. Prior to construction, the Project owner shall confer with Caltrans and Riverside County regarding the roads within 500 feet in each direction of Project access points (where heavy vehicles will leave public roads to reach Project sites) and regarding the roads to be crossed by the proposed gen-tie line. At least 30 days prior to construction, or as requested by Riverside County or Caltrans, the Project owner shall photograph or

video record all affected roadway segments and shall provide Riverside County and Caltrans with a copy of these images, if requested.

At the end of major construction, the Project owner shall coordinate with each affected jurisdiction to confirm whether repairs are required. Any damage demonstrable to the Project is to be repaired to the pre-construction condition within 60 days from the end of all construction, or on a schedule mutually agreed to by the Project owner and the affected jurisdiction. If multiple projects are using the transportation features, the Easley Project owner shall pay its fair share of the required repairs. the Project owner shall provide Riverside County and Caltrans (as applicable) proof when any necessary repairs have been completed.

3.19. Wildfire

This section evaluates the impacts relating to wildfire hazards resulting from implementation of the Project. It describes applicable regulations, existing conditions that influence risks associated with wildfire, the criteria used to determine the significance of environmental impacts, and the Project's potential impacts relating to wildfire.

3.19.1. Environmental Setting

The Project site is located in the central portion of Chuckwalla Valley in the Colorado Desert, east of Joshua Tree National Park. No major urbanized areas are located within 40 miles of this area; the Project site is considered a remote location.

The site and surrounding areas consist of land at varying elevation, ranging from less than 400 feet above mean sea level (amsl) at Ford Dry Lake (approximately 20 miles southeast of the Project) to over 3,000 feet amsl in the mountains that enclose the Chuckwalla Valley. The immediate Project site is relatively flat. Vegetation communities at the Project site are generally limited to scattered creosote brush scrub and desert dry wash woodland. Land uses near the Project include agriculture, the small community of Lake Tamarisk, scattered residences, renewable energy, energy transmission, historical military operations, and recreational development and use. Several solar farms exist in the vicinity of the Project. The existing Desert Sunlight and Desert Harvest solar facilities are located north, Athos Renewable Energy Project is located to the east, and Oberon is located to the southeast of the Project. Nearby solar projects that are under construction include the Arica and Victory Pass Solar Projects to the southeast. The Sapphire Solar Project, proposed by EDF Renewables, is adjacent to the northern area of the Easley Project.

The Riverside County General Plan Safety Element identifies areas with rugged topography and flammable vegetation as being susceptible to fire hazards. According to the California Department of Forestry and Fire Protection (CAL FIRE), the Project is located within both Local Responsibility Areas (LRAs) and Federal Responsibility Areas (FRAs) (CAL FIRE, 2023). According to the Wildfire Susceptibility Map in the Riverside County General Plan Safety Element (2019 version), Very High Fire Hazard Severity Zones (FHSZs) in Local, State, and Federal Responsibility Areas are concentrated in the western portions of Riverside County (Riverside County, 2019). The Project would be located in Moderate FHSZ in LRA and FRA. Since the Project is not located in a State Responsibility Area (SRA), CAL FIRE would not be responsible for fire management or suppression activities in this area. This responsibility falls to the U.S. Bureau of Land Management (BLM), although agencies cooperate in fire incident responses. Agencies that are likely to provide wildfire protection to the Project would be the Riverside County Fire Department (RCFD) and BLM Fire Program.

Climate change will result in a small but general increase in temperature, and higher temperatures, and droughts are likely to increase the severity, frequency, and extent of wildfires during operation, maintenance, and decommissioning of the Project (USEPA, 2023).

Riverside County Fire Department. RCFD, in cooperation with CAL FIRE, provides fire and emergency services to residents in Riverside County. There are 101 fire stations located throughout the County that serve unincorporated communities, partner cities, and the State of California under the California Master Mutual Aid Agreement (RCFD, 2023). RCFD Station 49 is the closest fire station to the Project site, located approximately 0.4 mile south at 43880 Tamarisk Drive, Desert Center.

Bureau of Land Management Fire Program. The BLM Fire Program is responsible for fire and fuels management and protection of federal lands, identified as Federal Responsibility Areas, within the United States. The Fire and Aviation program includes fire suppression, preparedness, predictive services, fuels management, fire planning, community assistance and protection, prevention and education, and public

safety (BLM, 2023a). BLM establishes fire prevention orders and restrictions to assist with wildland fire prevention efforts throughout the public lands within the California Desert District, which portions of Inyo, Imperial, Kern, Mono, Los Angeles, San Bernardino, San Diego, and Riverside Counties (BLM, 2023b).

3.19.2. Regulatory Framework

3.19.2.1. Federal Laws, Regulations, and Policies

Federal Wildland Fire Management Policy. On BLM-administered lands in the California Desert, the BLM implements Federal Wildland Fire Management policies and objectives in coordination with state and other federal agencies as part of the California Desert Interagency Fire Management Organization. The Federal Wildland Fire Management Policy was developed by a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. The policy acknowledges the essential role of fire in maintaining natural ecosystems, but also prioritizes firefighter and public safety first in every fire management activity and focuses on risk management as a foundation for all fire management activities. The policy promotes basing responses to wildland fires on approved Fire Management Plans and land management plans, regardless of ignition source or the location of the ignition.

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 deals with electric safety rules, including transmission wire clearance standards, whereas the applicable ANSI code deals with the practice of pruning and removal of vegetation.

3.19.2.2. State Laws, Regulations, and Policies

California Fire Code. The California Fire Code governs code requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for standby or emergency power, uninterruptable power supply, and other grid services.

California Fire Plan. The Strategic California Fire Plan was finalized in June 2010 and directs each CAL FIRE Unit to prepare a specific Fire Management Plan 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 stake-holder 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 problem. The plans are required to be updated annually.

3.19.2.3. Local Laws, Regulations, and Policies

Riverside County General Plan. The intent of the Safety Element of the Riverside County General Plan is to reduce death, injuries, property damage, and economic and social impact from hazards. The following policies included in the Safety Element generally relate to the proposed Project with respect to natural hazards (Riverside County, 2021a).

- **Policy S 5.1.** Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:
    - All proposed development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire and Building and Safety departments.

- All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County 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.
- In addition to the standards and guidelines of the California Building Code and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection 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.
- Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County Ordinances.
- 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.
- Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, and constructed that provide adequate defensibility from wildfires.

- **Policy S 5.4.** Limit or prohibit development or activities in areas lacking water and access roads.
- **Policy S 5.6.** Demonstrate that the proposed development can provide fire services that meet the minimum travel times identified in RCFD Fire Protection and EMS Strategic Master Plan.
- **Policy S 7.14.** Regularly review and clarify emergency evacuation plans for dam failure, inundation, fire and hazardous materials releases.
- **Policy S 7.15.** Develop a blueprint for managing evacuation plans, including allocation of buses, designation and protection of disaster routes, and creation of traffic control contingencies.

Desert Center Area Plan. The intent of the Wildland Fire section of the Hazards section of the Desert Center Area Plan (a part of the General Plan) is to address wildland fire susceptibility for improved public safety in the Desert Center area. The following policy included in the Desert Center Area Plan generally relates to the proposed Project with respect to hazards (Riverside County, 2021b).

- **Policy DCAP 10.1.** All proposed development located within High or Very High Fire Hazard Severity Zones shall protect life and property from wildfire hazards through adherence to policies identified in the Fire Hazards (Building Code and Performance Standards), Wind-Related Hazards and General and Long-Range Fire Safety Planning sections of the General Plan Safety Element.

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 (RCFD, 2020). 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 proposed 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.

3.19.3. 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 location of the Project on CAL FIRE maps to determine its location within FHSZs. Although the Project would not be located in a Very High or High FHSZ, the potential for wildfires is still present due to the electrical components of the Project. This analysis identifies design features and compliance with existing safety procedures, standards, and regulations that would be part of the Project.

3.19.4. CEQA Significance Criteria

The criteria used to determine the significance of potential wildfire impacts are based on Appendix G of the State CEQA Guidelines. The proposed Project would result in a significant impact under CEQA related to Wildfire if the Project is located in or near State Responsibility Areas or lands classified as very high fire hazards severity zones and would:

- *Substantially impair an adopted emergency response plan or emergency evacuation plan.*
- *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.*
- *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.*

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 people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.*

The following CEQA significance criterion from Appendix G was not included in the analysis and is not discussed further beyond this summary:

- *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 located in a Moderate FHSZ in a remote desert area. The solar facility would be constructed and operated on nearly level ground and would require minimal grading, and areas with irregular topography would be avoided and be protected in place to preserve important hydrologic functions. Solar panels would not be installed in existing drainages or washes. Because the ground surface at the Project site is nearly level, and nonflammable solar panels would be installed, the Project would not pose a risk of landslides, post-fire slope instability, or drainage changes. As such, impacts regarding downslope or downstream flooding or landslides as a result of post-fire slope instability would be less than significant.

3.19.5. Proposed Project Impact Analysis

The scoping effort conducted by the Riverside County Planning Department revealed several public concerns related to wildfire. Public concerns brought up in the scoping process involved concerns about the increased risk of wildfires due to the increased presence of power lines. Although the proposed Project is not located in or near SRAs or lands classified as Very High FHSZ, the potential for wildfires is still present due to the electrical components of the Project.

Impact FIRE-1. The Project would substantially impair an adopted emergency response plan or emergency evacuation plan.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION. The Easley Project would be constructed in a remote area with existing, approved, and proposed solar projects nearby. SR-177 would be the primary access road to the solar facility site, and several ingress/egress points would be established for construction access. An internal roadway system would be constructed to provide access within the Project site. Construction of the solar facility, battery energy storage system (BESS), and other components would not require any temporary lane closures on public roads. Although construction vehicles would be present on public roads to access the Project site, construction of the solar facility is not expected to restrict the movements of emergency vehicles. The new ingress and egress points at the Project site would allow for emergency vehicles access into and through the site, as well as provide controlled access for construction vehicles.

Construction of the gen-tie line would primarily occur within the 175-foot BLM right-of-way, but this disturbance would not obstruct any public rights-of-way. A small section of the gen-tie line would be strung across SR-177, potentially requiring temporary lane closures during stringing of the wire between towers east and west of SR-177. As discussed in Section 3.18, (Traffic and Transportation), Mitigation Measure (MM) TRA-1 (Construction Traffic Control Plan) is proposed to provide specificity to reduce potential impacts from any temporary travel lane disruptions during construction of the gen-tie line. MM TRA-1 (Construction Traffic Control Plan) requires the Construction Traffic Control Plan be reviewed and approved by Caltrans and Riverside County and would include plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles (see Impact TRA-4 in Section 3.18, Traffic and Transportation, for full text). With the incorporation of this mitigation measure, impacts from temporary construction-related traffic disruptions would be less than significant.

LESS THAN SIGNIFICANT, OPERATIONS AND MAINTENANCE. During Project operations, up to 10 permanent staff could be on site at the solar facility at any given time for as-needed maintenance and repairs. Maintenance activities for the solar arrays, BESS, gen-tie line, and other components are not expected to require any temporary lane closures that could restrict emergency vehicle movements due to the small number of employees that may travel to the site. Additionally, approximately two permanent staff, eight project operators, and security personnel would be located off site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. Ingress and egress points established during Project construction would be available for operational and emergency access. All internal access roads and gates would comply with RCFD TP 15 002, California Building Code, and County requirements. Access roads would provide a fire buffer as well as facilitate on-site circulation for emergency vehicles. Impacts during Project operations would be less than significant.

LESS THAN SIGNIFICANT, DECOMMISSIONING. Decommissioning the Project would require similar equipment and workforce as Project construction but would be substantially less intense. Workers would travel to the site to dismantle all above-ground equipment (i.e., solar panels, BESS, and associated infrastructure), remove primary roads, break up concrete pads and foundations, remove the septic system and leach field, dismantle the gen-tie line, and scarify compacted areas. Similar to construction, decommissioning would

result in the presence of construction vehicles on public roads to transport workers and equipment and to haul away decommissioned materials. Vehicles used during decommissioning of the solar facility are not expected to restrict the movements of emergency vehicles. The ingress and egress points at the Project site would be maintained during the duration of decommissioning to allow for emergency vehicles access into and through the site, as well as provide controlled access for vehicles. After decommissioning activities are complete, the site would be restored to its pre-solar facility conditions, or such condition as appropriate in accordance with County and BLM policies at the time of decommissioning. Decommissioning activities would result in less-than-significant impacts associated with emergency response plans or evacuation plans.

Mitigation Measures for Impact FIRE-1

MM TRA-1 **Construction Traffic Control Plan).** See Section 3.18.9 (Traffic and Transportation) for full text.

Significance After Mitigation

This impact would be less than significant.

Impact FIRE-2. The Project would expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION. According to the CAL FIRE FHSZ Viewer and the County of Riverside General Plan Safety Element, the Project is not located in a high or very high FHSZ, and thus would not be in an area prone to wildfires. The Project is in a remote, sparsely populated area approximately 40 miles from the nearest major development. The surrounding area includes active and fallow agricultural fields, the community of Lake Tamarisk, electrical transmission lines, and other solar facilities. Wildfires in California typically occur in heavily forested areas and vegetated grassy hillsides, and communities generally at highest risk of wildfire hazards are those located within these areas or in the wildland urban interface. Due to the presence of sparse vegetation, relatively flat topography, the remote location of the Project, and its desert setting, the potential for the Project to exacerbate wildfire risks and expose nearby residences to the hazards of wildfire is low.

The Project design includes fire safety precautions. While vegetation on the Project site is sparse, vegetation management would still be required as needed, particularly for drainage controls, work areas, and solar array areas, and all other areas where permanent structures would be constructed. Prior to construction, vegetation would be mowed, grubbed, rolled, cut, or cleared. The solar array areas would require mowing and rolling of woody vegetation to a height of 12 inches. Woody vegetation adjacent to non-solar array structures would be partially cut. Reduction of vegetation would reduce the availability of flammable fuels around the Project site.

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. Wires would be buried at a minimum of 18 inches below grade, minimizing the potential for faulty wiring to ignite a fire. All electric inverters and the transformer would be constructed on concrete foundation structures or steel skids and tested prior to use to ensure safe operations and to minimize fire risks. Prior to wire setup, work areas would be cleared of vegetation to reduce the risk of ignition from any vehicles or equipment. Small quantities of hazardous chemicals such as fuels and greases would be stored at the site during construction. They would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages and accidental fires.

During construction, a fire suppression system would be placed in service if required by the County or BLM Fire. Fire extinguishers and other portable firefighting equipment would be available on site, as well as additional water for use at the operations and maintenance (O&M) facility. Fire extinguishers would be maintained in accordance with State and federal Occupational Safety and Health Administration (OSHA) requirements.

Furthermore, as described in Section 2.5.13 (Fire Safety During Construction), fire safety measures would be implemented as part of the Project to limit risk of personnel injury, property loss, and potential disruption of electrical generation. A Fire Management and Prevention Plan would be prepared for the Project and would include standards for construction. The plan would address fire-safe construction measures, including welding, reduction of ignition sources, control of fuel sources, availability of water, and property maintenance of firefighting systems. The plan would comply with applicable BLM and Riverside County regulations and would be developed in coordination with the BLM and the RCFD. To further reduce the risk of fire, Mitigation Measure FIRE-1 (Fire Safety) is recommended to specify what elements would need to be included in the Fire Management and Prevention Plan. Implementation of MM FIRE-1 would ensure the impact is less than significant.

The following measures would be taken to identify and control fires and similar emergencies, and are specified in greater detail in MM FIRE-1:

- Electrical equipment that is part of the Project would be energized only after the necessary inspection and approval to minimize risk of any electrical fire during construction.
- Project staff would monitor fire risks during construction and operation to ensure that prompt measures are taken to mitigate identified risks.
- Transformers located on site would be equipped with coolant that is non-biodegradable and contains no polychlorinated biphenyls or other toxic compounds.

The Project's location, components, and safety measures would ensure the safe construction of the solar facility. Any fire hazards during construction of the solar facility would be minimal and further reduced with the Fire Management and Prevention Plan and MM FIRE-1. Security at the Easley solar facility, including solar arrays, substation, and BESS, would be provided by a 6-foot-tall chain-link fence topped with one-foot barbed wire to prevent vandalism, damage, or theft of Project components. As such, the proposed 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 solar facility and BESS would result in less-than-significant impacts with mitigation.

The gen-tie transmission structures would be constructed with either monopoles, lattice steel structures, or wooden H-frame poles and would not exacerbate fire risks, as foundations would be constructed with concrete foundations. Construction of the gen-tie transmission line and structures would use existing access roads where feasible. During construction, vegetation within the gen-tie corridor would be reduced or cleared as part of fire safety measures to reduce the likelihood of ignition from vehicles or equipment. As described previously, fire safety measures would be implemented to ensure that construction of the Project components, including the gen-tie line, are implemented in accordance with applicable fire protection and environmental, health, and safety requirements. As such, construction of the Project's gen-tie line would result in less-than-significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION, OPERATIONS AND MAINTENANCE. Once operational, up to 10 workers are anticipated to perform daily visual inspections and minor repairs to ensure all Project components are in good working condition. No heavy equipment would be used during normal operations. Due to the lower level of activity during operations, fewer vehicles would travel to the solar facility. The reduction in vehicle trips and workers would reduce the risk of on-site accidental fires caused by human activities such as smoking, hot work (i.e., welding), and improper vehicle operation. O&M would be limited to inspections

and repairs and would not involve the handling, usage, or production of flammable materials. The Project facility would be monitored by both on-site and remote O&M personnel. On-site vegetation would be trimmed approximately once every three years, as needed. Vegetation maintenance would ensure that flammable vegetation would not grow within access roads or electrical components. This would prevent ignition of vegetation from hot tailpipes of maintenance vehicles or sparks from faulty electrical components. Fire hazards during operation of the solar facility would be minimal and further reduced with the Fire Management and Prevention Plan and MM FIRE-1 (Fire Safety). MM FIRE-1 would include additional specific elements in the Fire Management and Prevention Plan to address fire safety during Project operations. Implementation of MM FIRE-1 would ensure the impact from operation of the solar facility is less than significant.

Solar arrays and photovoltaic modules are fire-resistant and would not be susceptible to ignition from fires. In a potential wildfire situation, the panels would be rotated and stowed in a panel-up position that could slow the spread of a fire. Security at the Easley solar facility would continue to be provided by a 6-foot-tall chain-link fence and barbed wire to prevent vandalism, damage, or theft of Project components during operations.

The Project includes operation of an up to 650-MW BESS. The BESS would be housed in electrical enclosures that would be installed on concrete foundations designed for secondary containment. Potential electrical fires would be contained within the enclosures and would not spread beyond them. The BESS would be installed following all applicable design, safety, and fires standard for the installation of energy storage systems, including, but not limited to, National Fire Protection Association (NFPA) 855 (Standard for the Installation of Stationary Energy Storage Systems) and the current California Fire Code (CFC). NFPA 855 includes criteria for fire prevention and suppression associated with BESS installations, and Section 1206 of the CFC includes requirements to minimize the risk of fire and life safety hazards specific to BESSs used for load shedding, load sharing, and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosure and the site installation design are all required to be approved by the State Fire Marshal. Furthermore, MM FIRE-1 includes a measure to include 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 these design and safety regulations and implementation of MM FIRE-1 would reduce the likelihood of battery fires starting and spreading. The BESS's impact of exposure of people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire to less than significant with mitigation.

Wildfire risk along the gen-tie corridor would be minimal due to the lack of substantial vegetation, and concrete foundations would further reduce the spread of fire. Portions of the gen-tie line could also be installed underground based on design constraints, existing utilities, and resources. Undergrounding portions of the gen-tie line would reduce the risk of fire. As described previously, fire safety measures would be implemented to ensure that operation of the Project components, including the gen-tie line, are implemented in accordance with applicable fire protection and environmental, health, and safety requirements. As such, operation of the Project's gen-tie line would result in less-than-significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION, DECOMMISSIONING. Decommissioning of the solar facility, BESS, gen-tie line, and other Project components would require a similar workforce and equipment as Project construction, but at a lower intensity. The risk of fire during decommissioning would be lower than that of construction, as the site would have been maintained during its life, and vegetation would be appropriately managed. Decommissioning activities would follow the same fire safety measures as construction, including adherence to the Fire Management and Prevention Plan. Flammable chemicals such as fuels and greases stored on site would be in proper enclosed containers and secured throughout the duration of decommissioning. Fire extinguishers and other portable firefighting equipment would be on site and maintained in accordance with OSHA requirements. Implementation of MM FIRE-1 would include additional measures to the Fire Management and Prevention Plan, such as fire prevention procedures and

emergency response that would minimize the likelihood of a wildfire from starting or spreading. Impacts would be less than significant with mitigation.

Mitigation Measures for Impact FIRE-2

MM FIRE-1 Fire Safety. See Section 3.19.9 (Mitigation Measure) for full text.

Significance After Mitigation

This impact would be less than significant following implementation of mitigation.

Impact FIRE-3. The Project would require the installation and maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate the risk of fire.

LESS THAN SIGNIFICANT, CONSTRUCTION. The Project would construct a utility-scale solar photovoltaic electrical generation and storage facility that would deliver electricity to the statewide transmission grid. Construction of the solar facility would result in the installation of infrastructure to support the generation, delivery, and storage of electricity. Prior to construction, vegetation would be mowed, grubbed, rolled, cut, or cleared. The reduced amount of already-sparse vegetation would minimize the potential ignition of vegetation. Construction of all internal access roads and gates would comply with RCFD TP 15 002, California Building Code, and County requirements.

Construction activities would involve the use of heavy construction equipment and vehicles to install the solar facility's components over the course of approximately 20 months. If on-site fuel tanks are stored at the site for construction vehicles and equipment, they would be no larger than 1,000 gallons each and would comply with all applicable regulations. Flammable substances would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages and accidental fires.

Although the solar facility is in a remote desert setting and is not within a High or Very High FHSZ, the electrical components could pose a small risk of fire if they become damaged or are tampered with. Electrical components that may pose a risk of fire include the electrical distribution line, transformers, batteries, substations, gen-tie line, and the switchyard. Because these components are located in a sparsely vegetated and remote location away from densely populated areas, the potential for faulty electrical equipment to exacerbate fire risks for populated areas is minimal. Additionally, assembly and installation of the electrical equipment would meet existing electrical and safety standards. Certified electricians and utility journeymen would be part of the construction workforce to ensure that all electrical equipment is assembled properly. Up to two substation yards would be secured with a barbed wire chain-link fence to comply with electrical codes and would include communication systems to comply with California Independent System Operator and SCE's monitoring and control requirements to ensure safe operation. Construction of the electrical components, including the BESS, would include preparation, installation, and testing. Wires would be buried at a minimum of 18 inches below grade, minimizing the potential for faulty wiring to ignite a fire. The majority of the solar facility's equipment would consist of solar PV panels and their mounting systems, which would be assembled from noncombustible, nonflammable materials. The solar PV panels would not ignite a potential wildfire or exacerbate the spread of wildfires.

Construction of the gen-tie line and structures would occur within an approximately 175-foot-wide corridor. Wire setup sites within this corridor would be cleared and graded to ensure enough clearance for large equipment used for the wire stringing operation. Removing potentially flammable materials and vegetation within the construction corridor would reduce the risk of wildfire during construction. The gen-

tie transmission structures would be composed of monopoles, lattice steel structures, or wooden H-frame poles and would not exacerbate fire risks due to the nonflammable nature of their concrete foundations. Construction of the gen-tie transmission line and structures would use existing access roads where feasible. The lack of substantial vegetation within the gen-tie corridor would create a minimal wildfire risk during construction of the gen-tie line. As described previously, fire safety measures would be implemented to ensure that construction of the Project components are implemented in accordance with applicable fire protection and environmental, health, and safety requirements. As such, construction of the Project's gen-tie line would result in less-than-significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION, OPERATIONS AND MAINTENANCE. Regular O&M of the solar facility would involve daily visual inspections and maintenance when needed to address damage or deterioration of equipment. O&M activities would ensure that all equipment is in good working order, thereby minimizing accidents and potential fires. Additionally, fire safety measures would be implemented during operations, including having portable firefighting equipment and extinguishers, sprinkler systems, and a fire suppression system on site as well as additional water for use at the O&M facility. These safety measures, along with the Fire Management and Prevention Plan, would provide safe operating conditions and fire response protocols to minimize the risk of wildfire. As such, operation of the solar facility would have a less-than-significant impact regarding the installation of utilities that may exacerbate fire risk and result in temporary impacts.

The BESS would be housed in enclosed storage containers constructed on level concrete foundations. 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 suppression systems. As described in Section 2.7.3 (Fire Safety During Operation), the BESS would be certified to UL 9540 (standard for control, detection, and suppression of fires in BESSs). Each battery would be tested to this standard, and results would support first responders by indicating that internal fires are contained and not spread to other parts of the facility. Additionally, a 10,000-gallon water tank would also be available for each BESS unit as a backup to the suppression systems. The BESS would comply with all requirements of the current CFC and would require approval by the State Fire Marshal. To further improve fire safety, MM FIRE-1 is recommended, which includes specific measures to be added to the Fire Management and Prevention Plan to include 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. It also includes a training component for emergency first responders to prepare for incidents such as fire or explosion at or with the BESS. Therefore, impacts would be less than significant with mitigation.

Operation of the gen-tie transmission line has a low likelihood of causing or exacerbating a wildfire due to the sparsely vegetated areas immediately surrounding the gen-tie structures. However, sparks and resulting fires have historically occurred along transmission lines due to foreign objects (e.g., falling trees, birds, mylar balloons, flammable debris carried by wind, etc.) contacting conductors or insulators. This risk would be reduced by regular inspections and maintenance of electrical components as well as trimming vegetation as needed to reduce fuel load. No trees are located in the vicinity of the gen-tie lines that could ignite from contact with the gen-tie line structures. Due to the gen-tie line's remote location away from densely populated areas, foreign objects such as balloons or bullets are unlikely to come into contact with conductors or insulators. Drones would be used to perform annual thermal and visual inspections of the gen-tie line in compliance with North American Electric Reliability Corporation (NERC) FAC-003-4 Transmission Vegetation Management to reduce risk of equipment malfunction or failure. The use of drones would minimize the need for larger vehicles such that ground disturbance and potential tailpipe-

ignited fires would be avoided. Therefore, gen-tie line inspections would ensure that gen-tie lines and structures are not damaged and would minimize the risk of electrical fires. Implementation of MM FIRE-1 would ensure activities such as vegetation clearing, idling restrictions, and worker training would further reduce the risk of fire associated with operation of the gen-tie line to a level of less than significant.

LESS THAN SIGNIFICANT, DECOMMISSIONING. The solar facility, BESS, gen-tie line, and other electrical infrastructure would be dismantled and removed from the Project site. As described previously, fire safety measures would be implemented to ensure that decommissioning of the Project components is implemented in accordance with applicable fire protection and environmental, health, and safety requirements. As such, decommissioning of the Project would result in less-than-significant impacts.

Once the Project is decommissioned, the solar facility would no longer generate electricity, and the BESS, gen-tie line, distribution lines, and other electrical components would not store or conduct electricity. The removal of solar panels, BESS, gen-tie line, power lines, and other electrical components during decommissioning would essentially eliminate fire risk associated with the electrical infrastructure. After the Project is decommissioned, no power lines, BESS, or other components with a fire risk would exist at the site and no impact would occur once the Project is decommissioned.

Mitigation Measures for Impact FIRE-3

MM FIRE-1 **Fire Safety.** See full text in Section 3.19.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant.

Impact FIRE-4. The Project would expose people and structures to risks of loss, injury, or death involving wildfires.

LESS THAN SIGNIFICANT WITH MITIGATION, CONSTRUCTION. As discussed under Impact FIRE-2, the proposed Project is not located in a high or very high FHSZ, and thus would not be in an area prone to wildfires. The Project site is surrounded by remote desert lands, active and fallow agricultural fields, and other solar facilities. Lake Tamarisk is the closest community to the Project, located adjacent to the southwest corner of the Project site. Due to the presence of sparse vegetation, relatively flat topography, the remote location of the Project, and its desert setting, the potential for the Project to expose people and structures to wildfire risks is low.

During construction of the solar facility, BESS, and gen-tie line, vegetation would be managed on site to reduce the risk of fire. Work areas would be cleared of vegetation so that construction activities such as welding would not ignite nearby vegetation. Woody vegetation would be trimmed to reduce the availability of dry fuels and slow down potential fires. All electrical components such as the gen-tie line, power lines, inverters, transformers, and BESS would be constructed on nonflammable concrete foundation structures or steel skids and tested prior to use for safe operations.

During construction, a fire suppression system would be placed in service if required by the County or BLM Fire. Fire extinguishers and other portable firefighting equipment would be available on site, as well as water for use at the O&M facility. Fire extinguishers would be maintained in accordance with State and federal OSHA requirements. Well-maintained firefighting equipment would increase the likelihood that any accidental fires that occur during construction would be effectively extinguished. MM FIRE-1 would include measures requiring fire prevention, emergency response, and evacuation to ensure the safety of construction workers. All construction workers would receive training on fire prevention procedures, proper use of firefighting equipment, and procedures following the event of a fire. Fire prevention procedures would be included in the Project's Worker Environmental Awareness Program.

The Project is located in both LRAs and FRAs, and as such, RCFD and BLM Fire would be responsible for fighting fires at the Project site. RCFD Station 49 is located approximately 0.4 mile south of the Project site and would be the first responder for the Project in the event of a fire. As required in MM FIRE-1, the Project owner would coordinate with both BLM and RCFD to train emergency first responders to prepare for specialized emergency incidents at the site, including fire or explosion at or within the BESS area. Additionally, worker training records on fire prevention and firefighting procedures would be made available for BLM and RCFD to review. Coordination with the local fire department would ensure timely emergency response that would minimize the risk of loss, injury, or death during construction. Due to the Project's desert setting, scarce vegetation, fire safety measures, and coordination with CRFD and BLM FIRE, impacts would be less than significant with mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION, OPERATIONS AND MAINTENANCE. Project operations would consist of a minimal number of on-site workers for daily inspections and as-needed repairs. No hazardous activities would be performed during operations that could spark a fire, as no heavy equipment would be used, and fewer vehicles would travel to the solar facility. O&M would be limited to inspections and repairs and would not involve the handling, usage, or production of flammable materials. The Project facility would be monitored by both on-site and remote O&M personnel. Inspections, repairs, and remote monitoring of the Project components would reduce the likelihood of electrical failures or faulty equipment that could spark a fire. Fire hazards during operation of the solar facility would be minimal and further reduced with the Fire Management and Prevention Plan and MM FIRE-1. MM FIRE-1 would include additional specific elements in the Fire Management and Prevention Plan to address fire safety during Project operations. Implementation of MM FIRE-1 would ensure the impact from operation of the solar facility is less than significant.

Solar arrays and photovoltaic modules are fire-resistant and would not be susceptible to ignition from fires. In a potential wildfire situation, the panels would be rotated and stowed in a panel-up position that could slow the spread of a fire. Therefore, during a potential wildfire event, operation of the solar facility would not exacerbate a fire or expose workers or nearby residents to fire hazards.

The BESS would be housed in electrical enclosures on concrete foundations designed for secondary containment. Potential electrical fires would be contained within the enclosures and would not spread beyond them. The BESS would be installed following all applicable design, safety, and fire standards for BESSs, including NFPA and CFC requirements. Furthermore, MM FIRE-1 includes a measure to include 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. The enclosures would have air conditioners or heat exchangers and inverters. A 10,000-gallon water tank may also be required for each BESS area. Compliance with these design and safety regulations and implementation of MM FIRE-1 would reduce the danger of fires spreading uncontrollably and causing loss, injury, or death. Furthermore, MM FIRE-1 also includes training and coordination requirements so that emergency first responders are prepared to address battery fires or explosions at the BESS area and are knowledgeable of appropriate firefighting methods for BESS fires. The impact would be less than significant with mitigation.

The gen-tie line, like the solar facility and BESS, would be located in a desert setting with scattered low-growing vegetation. The gen-tie structures would be constructed on concrete foundations such that the areas immediately surrounding the poles would not be flammable. Portions of the gen-tie line may also be placed underground, which would further reduce the risk of fire. As discussed in Impact FIRE-3, regular inspections and maintenance of electrical components and trimming of vegetation would ensure all components are in good working order and that vegetation fuel load is minimal. Drone inspections in compliance with NERC Transmission Vegetation Management requirements would ensure that gen-tie lines and structures are not damaged and would minimize the risk of electrical fires. Implementation of MM FIRE-1 would ensure that workers and emergency first responders are trained to properly handle accidental fires, and would further reduce the risks associated with fires to a level of less than significant.

LESS THAN SIGNIFICANT, DECOMMISSIONING. As discussed in Impact FIRE-3, the solar facility, BESS, gen-tie line, and other electrical infrastructure would be dismantled and removed from the Project site. Once the Project is decommissioned, the solar facility would no longer generate electricity, and the BESS, gen-tie line, distribution lines, and other electrical components would not store or conduct electricity. The removal of solar panels, BESS, gen-tie line, power lines, and other electrical components during decommissioning would essentially eliminate fire risk associated with the electrical infrastructure. After the Project is decommissioned, no power lines, BESS, or other components with a fire risk would exist at the site. The site would not pose a risk of loss, injury, or death involving wildfires. Therefore, no impact would occur once the Project is decommissioned.

Mitigation Measures for Impact FIRE-4

MM FIRE-1 Fire Safety. See full text in Section 3.19.9 (Mitigation Measures).

Significance After Mitigation

This impact would be less than significant.

3.19.6. Alternative 1: No Project Alternative

Under the No Project Alternative, construction, operation, maintenance, and decommissioning would not occur. Because construction would not occur, activities that could cause a fire such as vehicles driving near vegetation, hot work, and storage and use of flammable materials would not occur at the Project site. The BESS, gen-tie line, power lines, and other electrical components would not be installed or operated, and thus, no potential electrical fires associated with such components could occur. The site would remain undeveloped, and public land within the site would remain an allocated DFA. As such, if the No Project Alternative were selected, another solar project could be proposed in the same location and result in similar impacts.

3.19.7. Alternative 2: Lake Tamarisk Alternative

Under the Lake Tamarisk Alternative, approximately 30 acres of solar panels closest to the community of Lake Tamarisk would not be installed, and the onsite substation and proposed BESS would be moved at least 0.7 mile to the northeast farther away from the community of Lake Tamarisk. The slight reduction in solar panel area would result in a nominal decrease in construction activity, as construction would not occur in the approximately 30-acre area near the community of Lake Tamarisk. Thus, there would be a small decrease in fire hazards associated with installation of fewer solar panels, as construction duration and number of workers may be slightly reduced. Although the solar panels would continue to be made of fire-resistant materials, the risk of fire spreading to the community of Lake Tamarisk would further decrease due to the increased distance from the community.

Likewise, the alternative substation and BESS options would be farther from the community of Lake Tamarisk but would result in similar construction impacts as the proposed Project, as the same construction activities and associated fire risks would still occur. During operations, the risk of a fire igniting at the substation or BESS and spreading to the community of Lake Tamarisk would decrease due to the increased distance from the community. Although a portion of the 500 kV gen-tie line would be slightly farther away from the community of Lake Tamarisk, the overall length would be approximately 0.8 mile longer than the gen-tie line under the proposed Project and would result in similar impacts as the proposed Project.

3.19.8. Cumulative Impacts

Geographic Scope

The area of Desert Center is the geographic scope for the cumulative impact analysis of wildfire impacts. This area has a sparsely vegetated landscape and a low potential to ignite and facilitate wildfires, therefore, the greatest potential for cumulative impacts relating to wildfire impacts would primarily be during the construction phase of projects in close vicinity to the proposed Project. Tables 3.1-1 and 3.1-2 list existing and reasonably foreseeable projects in the region. These projects include the Desert Sunlight Solar Project, SCE Red Bluff Substation, Devers-Palo Verde No. 1 Transmission Line, Blythe Energy Project Transmission line, Desert Harvest Solar Project, Athos Renewable Energy Project, Oberon Renewable Energy Project, Arica and Victory Pass Solar Projects, Eagle Mountain Pumped Storage Project, Sapphire Solar Project, and Skybridge Eagle Mountain Hydrogen Project in Riverside County. Recent CAL FIRE Incident Data from 2015 through 2022 was reviewed for the Desert Center region, and no incidents occurred in the span of five years (CAL FIRE, 2022). As such, this area does not have a high risk of wildfires.

Cumulative Impact Analysis

Cumulative impacts regarding wildfire hazards generally occur if multiple projects were to be constructed and operated in overlapping schedules in a High or Very High FHSZ. Additionally, cumulative wildfire impacts are more likely to occur if the projects involve construction of flammable structures, such as houses or other buildings. Combined with a geographic area prone to wildfires, such as a densely forested area or chapparal-dominated landscape, the wildfire effects of multiple developments could combine to be cumulatively considerable.

If adopted, the proposed expansion of Joshua Tree National Park and creation of Chuckwalla National Monument would re-designate existing federal lands in the Project vicinity, which would reduce the opportunity for new development in the region that could contribute to cumulative impacts related to wildfire.

Short-term cumulative impacts would occur during construction and decommissioning if the Project schedule overlaps with multiple other nearby projects. However, projects in the cumulative scenario would be required to comply with local, State, and federal fire hazard policies, the CFC, and include their own fire management plans and best management practices. Furthermore, the proposed Project, as well as the surrounding projects, would all occur in a Moderate FHSZ with no dense vegetation to spread a potential fire. Therefore, the Project, in combination with the nearby projects, would not make a cumulatively considerable contribution to impacts related to fire hazards.

Mitigation Measures for Cumulative Impacts

Mitigation Measures MM TRA-1 and MM FIRE-1 would be implemented to address potential wildfire impacts for the proposed Project. No additional mitigation would be required.

Significance After Mitigation

The Project's incremental contribution to wildfire impacts would not be cumulatively considerable.

3.19.9. Mitigation Measures

MM TRA-1 **Construction Traffic Control Plan.** See full text in Section 3.18.9 (Traffic and Transportation).

MM FIRE-1 **Fire Safety.** The Fire Management and Prevention Plan prepared by the Project owner 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 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 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 BLM and RCFD to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site, including incidents such as fire or explosion at or with the BESS.
- 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 BLM and 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 and spraying of weeds, in accordance with the Weed Management Plan.
- BLM and 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 BLM and 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 BLM and 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) will 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 BLM and 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 BLM for review and approval and to RCFD for review and comment before construction.

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, Section 4.3, growth-inducing effects, Section 4.4, energy consumption, Section 4.5, Caltrans CEQA Summary, and Section 4.6, other concerns.

4.1. Significant and Unavoidable Environmental Impacts

4.1.1. Significant Direct Effects of the Solar Facility

As required by the CEQA Guidelines Section 15126.2(b), an 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 of this EIR describes the proposed Project's potential environmental impacts and recommends mitigation measures to reduce impacts, where feasible. Impacts to the following resources would be significant and unavoidable with construction and operation of the proposed Project, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible. Note that these conclusions apply to the Project as proposed and the Lake Tamarisk Alternative (Alternative 2) described in Chapter 2, but not to the No Project Alternative.

Aesthetics:

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

  The Project could substantially degrade the existing visual character or quality of the site and its surroundings. The resulting visual change would be adverse and unavoidable even with implementation of mitigation, when viewed from all Key Observation Points (KOPs).

Agriculture and Forestry

- ***Impact AG-1. The Project would conflict with existing zoning for agricultural use, a Williamson Act contract, or land within an agricultural preserve.***

  There are seven parcels within the Project site that are subject to a Williamson Act contract and related agricultural preserve program. The proposed solar Project is not an allowable use under the Williamson Act program and, therefore, its construction and operation on lands would be a significant and unavoidable impact with lands in an agricultural preserve and related Williamson Act contract. Cancellation of the Williamson Act contract must occur prior to approval of the conditional use permit for the Project. If the Williamson Act contracts are cancelled at the time of the EIR certification, this impact would be avoided.

- ***Impact AG-3. The Project would conflict with land within a Riverside County Agricultural Preserve.***

  There are seven parcels within the Project site that are subject to a Williamson Act contract and related agricultural preserve program, which is incompatible with the Project; therefore, this conflict with an agricultural preserve would be significant and unavoidable. However, if the Williamson Act contracts are canceled prior to EIR certification, this impact would be avoided.

4.1.2. Significant Cumulative Effects

According to section 15355 of the State 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 in Section 3.1 of this EIR. This EIR has considered the potential cumulative effects of the Project for each issue area in Chapter 3. Impacts of these projects are cumulatively considered 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 many large-scale solar plants and transmission lines whose scale and pervasiveness would have adverse cumulative effects to aesthetics. If all the projects were implemented, they would introduce substantial visual contrast associated with discordant geometric patterns in the landscape and large-scale, built facilities with prominent industrial character; create unnatural lines of demarcation in the valley floor landscape and inconsistent color contrasts; and add visible night lighting within the broader Chuckwalla Valley. As a result, the proposed Project, in combination with the 13 local energy projects, would contribute to significant cumulative visual impacts when viewed by sensitive viewing populations along Interstate 10 and SR-177/Rice Road, from nearby residences, from portions of JTNP, and in the surrounding mountains and wilderness. Effective implementation of Mitigation Measures AES-1 (Surface Treatment of Project Structures and Buildings), MM AES-2 (Project Design), MM AES-3 (Night Lighting Management), and MM BIO-5 (Vegetation Resources Management Plan) would reduce the severity of the Project's contribution to the cumulative visual effects, though the Project's contribution would still be 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 proposed project or alternative would cause. CEQA Guidelines Section 15126.2(c) states "[u]ses 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 project 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 proposed Project or alternative would commit nonrenewable resources during construction and ongoing utility services during operations. Recycling would be in accordance with

application California state requirements.[22] The proposed Project would install solar PV panels manufactured from metals, such as thin-film panels (including cadmium telluride [CdTe or "cad tel"] and copper indium gallium diselenide [CIGS] technologies), crystalline silicon panels, bifacial panels, or any other commercially available PV technology. Some of these materials would consist of earthen minerals. 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.

At the end of its useful life, the Project would be decommissioned, and the land would be available for restoration to open space or other compatible uses. The Applicant would restore the site to the pre-solar facility conditions, or such condition as appropriate in accordance with project approvals and decommissioning plan.

Upon ultimate decommissioning, most components would be suitable for recycling or reuse, and decommissioning would be designed to optimize such salvage as circumstances allow and in compliance with all local, state, and federal laws and regulations as they exist at the time of decommissioning (see Section 2.6, Decommissioning and Repowering). If the Project is decommissioned and dismantled, some of the natural resources on site could be retrieved.

The Project is a renewable energy project intended to generate solar energy to reduce reliance on fossil fuels. Over the life of the Project, the 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. A full discussion on the Project's impacts related to energy consumption is provided in Section 3.6 (Energy).

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.

[22] As of January 1, 2020, CALGreen requires covered projects to recycle and/or salvage for reuse a minimum 65% of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance, whichever is more stringent.

Removal of an obstacle to growth. The proposed Project would result in the conversion of substantial 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 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. Short-term economic growth could occur during the construction and decommissioning periods because the proposed Project could 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. Given the number of solar projects proposed in the Desert Center area, workers may temporarily stay in the area. However, construction of the proposed 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. Alternatively, approximately 2 permanent staff and 8 Project operators would be located off site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. 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 proposed 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 identify 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 (EIR Section 3.1.2, Cumulative Impact Scenario). 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 proposed Project would result in a change to undeveloped land in an area surrounded by proposed, existing or under-construction solar projects. The proposed 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 750 feet from a residential development. Although the Project is within close proximity to a community, 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 proposed Project would not result in growth inducement through development or encroachment into an isolated area or open space.

4.4. Energy Consumption

In order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing the "wasteful, inefficient, and unnecessary consumption of energy" (see Public

Resources Code section 21100(b)(3)). According to Appendix F: Energy Conservation, within the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including:

- 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. For this analysis, an impact related to energy conservation would be considered potentially significant if the Project would cause inefficient, wasteful, and unnecessary consumption of energy.

Energy Implications of the Proposed Project. The proposed Easley Renewable Energy Project itself would develop a renewable source of power, which would help to offset the use of nonrenewable resources and contribute to an overall reduction of nonrenewable resources currently used to generate electricity.

The Project would produce up to nearly 860,000 megawatt-hours (MWh) of electricity annually, based on the generating capacity of 400 MW at a capacity factor of 26 percent, which would be achievable by a typical solar PV system in eastern Riverside County, minus transmission line losses.

Solar-powered production of electricity would further the energy goal of the State CEQA Guidelines by decreasing reliance on fossil fuel-fired electric generating facilities, primarily by decreasing use of natural gas in California, and by increasing reliance on renewable energy sources.

This EIR in Section 3.9 (Greenhouse Gas Emissions) describes additional effects on climate change/greenhouse gas (GHG) emissions that would be caused by implementation of the Easley Renewable Energy Project, such as the GHG emissions avoided by producing electricity from solar power.

Discussion of Potential Energy Impacts. This analysis addresses the following types of potential energy-related impacts, which are outlined in Appendix F of the State CEQA Guidelines:

- ***Would the Project result in substantial new energy requirements or significant energy use inefficiencies for any stage of Project construction, operation, maintenance, and/or removal?*** The proposed Project would produce electricity adding to California's supply of renewable energy resources. Each stage of proposed Project construction, operation, maintenance, and removal, including decommissioning, would require direct energy use through the consumption of fossil fuels in the form of petroleum products that fuel equipment and vehicles, and the use of electricity for powering onsite equipment and facilities. Indirect energy use would include the energy required to refine raw materials and manufacture the components used in construction of the Project. This would include energy used for extraction of raw materials, manufacturing, and transportation associated with manufacturing. Energy used during construction, operation, maintenance, and removal, including decommissioning would be necessary in the implementation of the proposed Project, which would become an electricity producer upon its operation. Accordingly, the proposed Project would not result in an inefficient, wasteful, or unnecessary consumption of energy, and the proposed Project energy requirements would not be substantial or result in significant energy use inefficiencies during any stage.
- ***Would the Project cause a significant adverse effect on local and regional energy supplies and on requirements for additional capacity?*** The development activities and O&M of the proposed Project would consume fossil fuels and some electricity for powering onsite equipment and facilities. Providing diesel and gasoline for Project-related consumption of transportation fuels would not require any additional capacity in the eastern Riverside County regional supply or distribution network. Upon entering commercial service, the proposed Project would become an electricity producer adding to California's supply of renewable energy resources. Because the proposed gen-tie line would provide the capacity to interconnect and ultimately deliver the electrical output of the solar facility, the proposed Project would not exceed local capacity to meet the demand for electricity.

- ***Would the Project cause a significant adverse effect on peak and base period demands for electricity and other forms of energy?*** Overall per capita energy consumption would not be expected to change as a result of the proposed Project. The proposed Project would involve no change in how retail electric service is provided and no change in energy efficiency or energy conservation programs implemented by the utilities serving the peak and base period demands for electricity. The proposed Project would result in no notable change in demand for peak-period or base period electricity from the grid.
- ***Would the Project disrupt compliance with existing energy standards?*** Development activities and O&M of the proposed Project would consume fossil fuels and some electricity for powering onsite equipment and facilities. Vehicles and equipment, and onsite buildings, would need to conform with fuel efficiency standards and building energy efficiency standards established by California's existing programs promoting energy conservation. Similarly, the end-users of electricity that is produced by the proposed Project would be subject to California's existing energy conservation programs. The proposed Project would not disrupt compliance with existing energy standards or have any adverse effect on potential compliance with energy conservation standards.
- ***Would the Project cause a significant adverse effect on energy resources?*** The proposed Project would add to California's supply of renewable energy resources by increasing the production of renewable energy for end-users of electricity in California. The proposed Project would not cause an adverse effect due to inefficient, wasteful, or unnecessary energy use.
- ***Would the Project result in significant adverse effects related to transportation energy use?*** Development activities and O&M of the proposed Project would use transportation fuels and providing diesel and gasoline for Project-related consumption of transportation fuels would not require any additional capacity in the eastern Riverside County regional supply or distribution network. Due to the small permanent workforce and the limited need for deliveries or waste hauling during O&M of the solar facility, the transportation energy use would be minimal in comparison with the electricity produced. The proposed Project would not cause an adverse effect due to inefficient, wasteful, or unnecessary transportation fuel use.

4.5. Other Public Concerns

This section discusses issues raised in the scoping effort conducted by the Riverside County Planning Department, that are not discussed in Section 3 because the issues raised are outside of the scope of CEQA.

4.5.1. Property Values

A frequent scoping comment related to land use was concern over the potential loss of property value as a result of solar projects being developed nearby.

The Lake Tamarisk Desert Resort (LTDR) is a 55-plus, member-owned community 2 miles north of I-10 in Desert Center. In 1984, the property was acquired and an abandoned 1960s era manmade lake, golf course, and swimming pool on the property were restored. In addition to its community facilities and amenities, the Lake Tamarisk community includes individual homes and RV lots. The vicinity around LTDR has been identified as highly suitable for development of renewable energy projects, particularly solar projects. Several large-scale solar projects are now in operation in eastern Riverside County where LTDR is situated, and additional solar projects are under construction or planned.

LTDR and Desert Center residents have expressed their concerns about the potential effect of large solar projects on property values. A large study from Lawrence Berkeley National Laboratory (LBNL) found that houses within 0.5 mile of a utility-scale solar farm have resale prices that are, on average, less than houses that are a little farther away (Elmallah, 2023). In particular, homes within 0.5 mile of large-scale

photovoltaic projects experienced an average home price reduction of 1.5 percent compared to homes 2 to 4 miles away; statistically significant effects were not measurable over 1 mile from a large-scale solar project.

The study's authors analyzed 1.8 million home sales between 2003 and 2020 near solar farms in six states. The study found diminished property values in three states: Minnesota (4 percent), North Carolina (5.8 percent) and New Jersey (5.6 percent). However, the three other states—California, Connecticut, and Massachusetts—had price changes that were within the margins of error for the study,[23] which means the price effects were too close to zero to be meaningful. The study reports that while large-scale photovoltaic projects have an average adverse effect on home prices, impacts are not uniform across geographies, land uses, or solar project size. The study concludes that the effect of renewable energy projects on property values is small on average, but it is not zero. The authors' research focused on property values and did not consider positive or off-setting impacts of solar development, such as local tax revenue and employment.

Overall, the LBNL study results suggest that for homes very close to a project and those predominantly in rural agricultural settings around larger projects, there are adverse property value impacts of large-scale photovoltaic solar project construction. However, most impacts fade at distances greater than 1 mile from a project. The study notes that although the authors found adverse impacts from large-scale solar projects on property values overall, they notably found no statistically significant evidence of impacts in three states in their study area – including in California, which alone accounts for over half of the transactions in their dataset.

A smaller 2020 study by researchers at the University of Rhode Island looked at about 400,000 real-estate transaction in Rhode Island and Massachusetts within 3 miles of solar sites and found that the value of houses within 1 mile of a solar project decreased by an average of 1.7 percent following construction of the solar project (Gaur and Lang, 2020). The study sample consisted of 208 solar installations, 71,337 housing transactions within 1 mile, and 347,921 transactions between 1 and 3 miles distant.

Based on limited studies, it appears that there could be a small adverse effect on property values at Lake Tamarisk attributable to a solar project being located within 0.5 mile. The LBNL study found that for California property transactions any effect was within the margin of error of the study.

Economic effects, including effects on property value, are not a topic included in CEQA assessments of proposed projects. However, State CEQA Guidelines §15131 notes that "[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires." The Guidelines also note that "[e]conomic or social effects of a project are not to be treated as significant effects on the environment" (§15131(a)), although "[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project" (§15131(b)). The Guidelines also note that "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project." (§15093(a))

Although it is conceivable that there could be some reduction in property value owing to the proximity of a large-scale solar project, based on the LBNL study the effect on properties in California appears to be small, if any. Given the CEQA guidance, this would not be considered a significant effect on the environment.

[23] The LBNL study reports that the states where the authors observed no statistically significant difference in sales price (in CA, CT, and MA) are also the states with lower proportions of large-scale photovoltaic project development on agricultural land. In addition, California has very few transactions in rural areas.

4.5.2. Solar Moratorium

Commenters expressed a desire for a moratorium on permitting of solar projects with 5 miles of Lake Tamarisk Desert Resort until the 2012 BLM Western Solar Plan is revised and defines setbacks and exclusion zones around communities and that these are agreed upon by the Lake Tamarisk Community.

Establishing a moratorium or buffer is beyond the scope of the CEQA review for the proposed Project. That would require specific actions by the County for lands under its jurisdiction, and by BLM for lands under its jurisdiction. Since the 2012 Western Solar Plan was issued, the BLM has recognized that updating and expanding the Solar Energy Program would be appropriate to advance current and future renewable energy goals and to support conservation and climate priorities. On December 8, 2022, BLM issued a Notice of Intent (NOI) to prepare a Programmatic EIS to evaluate utility-scale solar energy planning and amend Resource Management Plans for renewable energy development. The comment period on the NOI closed on March 1, 2023.

After consideration, the BLM has chosen not to include the area under the DRECP (which includes BLM lands in eastern Riverside County) in the current effort as the BLM believes the DRECP supports an acceptable balance between conservation and renewable energy opportunities within its planning area boundary. The BLM has noted that the Solar Programmatic EIS will not interrupt the processing of existing or new solar energy development applications. BLM decisions to authorize solar energy development projects will continue to conform to the BLM's approved resource management plans, including as those plans might be amended following the completion of the Solar Programmatic EIS.

4.5.3. Nuisance Animal Encounters

The scoping effort revealed that several commentors were concerned about an increase in occurrence of termites and rattlesnakes. The commentors stated that residents of the nearby Lake Tamarisk Desert Resort have reported an increase in the amount of termite swarms and rattlesnake encounters and have attributed this to the increase in disturbance due to solar development in Desert Center.

4.5.3.1. Termites

Subterranean termites, the type of termite found in Desert Center, lives underground in family groups called colonies. During daylight hours of the spring months, large numbers of winged termites will emerge from soils to leave their parent colonies in order to mate and establish new colonies of their own. These are king and queen termites called swarmers, who will pair up and fly together to search for a place to begin a new nest. Once they land, their wings break off and they start their colony by excavating a small chamber where they mate, reproduce, and grow the colony. Mating continues by the king and queen termite, and the offspring begin creating exploratory tunnels to find wood, which they eat for food. These tubes used to travel underground can range from a few yards to the size of a football field (120 yards). Termites can travel above ground in tubes they build with mud and fecal material to protect themselves from predators and to retain their moisture (Miller, 2010).

Climate change increases the opportunities for the introduction, spread, and persistence of invasive species, such as termites. Termite ranges are expected to significantly increase globally in the following years, partly attributed to climate change and warming temperatures. Economic and ecological damage caused by termites will also increase as a result of this (Buczkowski and Bertelsmeier, 2017). The EPA determines that increasing temperatures and wetter or drier climates will favor increased populations in species such as termites, as they can flourish or expand in the changing climate (EPA, 2010).

The potential increase in termites at the Lake Tamarisk Desert Resort could be driven by climate change and warming temperatures, as described above. As stated above, a termite can travel up to 120 yards, or 360 feet underground. The Easley Project would be at least 750 feet from the Lake Tamarisk Desert Resort.

Methods for controlling subterranean termites include insecticides applied to the soil adjacent to the structure, directly to nests, or through bait stations. Termites can infest wood that is in contact with soil, so maintaining a barrier of inorganic material between the soil surface and structural wood is one recommendation. Other management strategies include using termite resistant wood or other materials, keeping wood away from structures, providing ventilation to substructures to keep them dry, and repairing foundation cracks and exterior defects. To facilitate control of subterranean termites, destroy their shelter tubes whenever possible to interrupt access to wooden substructures (Lewis, 2014).

4.5.3.2. Rattlesnakes

Scoping comments revealed that, along with termites, residents of Desert Center are experiencing an increase in rattlesnake sightings compared to the past. Some explanations include disturbance due to solar developments, or temperature changes due to climate change.

According to one study (Lomas et al. 2019), rattlesnakes in undisturbed areas had larger home ranges and longer home range lengths compared to individuals in disturbed areas. The study also found that rattlesnakes in highly disturbed areas did not move greater total distances or have higher movement rates.

Rattlesnakes are highly sensitive to temperature changes, due to their ectothermy which requires that they rely on ambient environmental temperatures to maintain critical physiological processes. Due to this sensitivity, rattlesnakes may have smaller ranges due to climate change (Olson and Saenz, 2013). One study by Putman and Clark (2017) showed that as climate change continues and mean daily air temperature rises, rattlesnakes decreased hunting activity at night, and increased movement and distance moved during the day.

Rattlesnake translocation is a method used to remove rattlesnakes from populated areas where they are a “nuisance” which is typically public and residential areas. This is an increasingly common management practice in the southwestern United States (Nowak, 2018). The Nowak study concluded that the survival rate of translocated rattlesnakes is low, however, the Brown study on short distance translocation found no evidence that translocation affected the mortality of rattlesnakes. Translocating rattlesnakes is not a successful long-term strategy, as the rattlesnakes have been shown to return to the location they were removed from (Brown et al. 2010). Both studies showed that rattlesnakes translocated at any distance increased their movement distances and the frequency at which they move. This phenomenon could potentially increase the activity range for snakes in the Desert Center area.

The increase in development in Desert Center contributes to a greater amount of ground disturbance. However, the Lomas study found that rattlesnakes in highly disturbed areas did not move greater total distances or have higher movement rates. Climate change may contribute to this issue by causing the rattlesnakes to be more active during the daytime, although climate change may contribute to smaller ranges. Translocation is a management strategy used during construction (and operation?) of solar projects in the Desert Center area, which could contribute to an increase in distance the snakes travel in this area, however, studies show that rattlesnakes generally return to where they were translocated from. Therefore, the increase in disturbance in Desert Center is likely not the cause of an increase in rattlesnake sightings in residential areas, but this cannot be confirmed. The increase in sightings of rattlesnakes could be a result of the snakes being more active during the daytime hours.

4.6. California Department of Transportation CEQA Summary

4.6.1. Introduction

The purpose of this section is to address Caltrans permit requirements and to aid in their environmental review with regards to biological resources, cultural and paleontological resources, and soil contamination. Proposed Project access points and crossings of State Route (SR)-177/Rice Road are subject to

Caltrans requirements including ingress/egress driveways or installation of any overhead/underground lines in or across the Caltrans right-of-way (ROW). Caltrans will require permitting for four features of the Easley Renewable Energy Project that would be located within the Caltrans' ROW for SR-177/Rice Road. These include:

- Temporary Construction Access;
- Overhead or Underground Medium Voltage Line Crossing;
- 500 kV Overhead Crossing; and
- Permanent Operations Access.

SR-177/Rice Road is a two-lane north/south highway between Desert Center/I-10 and SR-62, approximately 25 miles northeast of Desert Center (Figure 3.18-1 in Appendix A). The posted speed limit is 65 mph. In 2020, at its junction with I-10, SR-177/Rice Road carried had approximately 2,900 Average Daily Travel (ADT) with a peak hour ADT of 470.

At this stage, the Project does not have final engineering completed, and therefore, the locations where encroachment permits from Caltrans are not finalized. Additionally, the locations may be different based on which alternative is approved by Riverside County and BLM. Therefore, this analysis considers all potential locations where improvements are proposed for the proposed Project and alternatives. This area covers approximately 5 miles of Rice Road, with a 500 feet buffer on either side of the ROW, as shown on Figure 3.18-1 and Figures 4-1A/B through 4-4A/B in EIR Appendix A.

4.6.2. Description of Project Features within Caltrans ROW

4.6.2.1. Temporary Construction Access

Access off of SR-177/Rice Road to the Project site would include two new construction access roads from SR-177/Rice Road. At each location, access roads would enter the project site from both sides of SR-177/Rice Road. Driveway approaches would conform to current and applicable Caltrans' specifications. Figure 4-1A in Appendix A provides the conceptual location of a Project construction access temporary roads. Construction of the access road segments would include compacting subsurface soils and placing a four-inch-thick layer of asphalt concrete over a 6-inch-thick layer of compacted aggregate base to prevent track-out onto public roads.

Flagging operations at site access points may be implemented during construction if/when traffic control needs are indicated through either monitoring traffic operations during construction or determined to be required during construction stage planning.

For Alternative 2, the onsite substation and BESS locations would be moved at least 0.7 miles to the northeast (farther from the community of Lake Tamarisk), on either BLM-administered land (Substation Alternative A) or private land adjacent to SR-177/Rice Road (Substation Alternative B) (see EIR Section 2.8.3 and Figure 4-1B in Appendix A).

4.6.2.2. Overhead or Underground Medium Voltage Line Crossing

As described in Section 2.3.2, panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground cables would be installed to convey the direct current (DC) electricity from the panels via combiner boxes located throughout the PV arrays, to inverters located at the Power Conversion Station that would convert the DC to alternating current (AC) electricity. The output voltage of the inverters would be stepped up to the required collection system voltage at pad mount transformers located near the inverters within the Power Conversion Station and combined into 34.5 kV collection cables.

The 34.5 kV collection cables would be buried underground and/or installed overhead on wood poles to connect all of the solar facility development areas to the onsite substation, which would involve an overhead or underground crossing of SR-177/Rice Road to connect the solar panels located to the east of SR-177/Rice Road to the onsite substation. Underground collector lines from the solar arrays would be installed under SR-177 using directional drilling which would not affect traffic on the highway. If the collection system is installed overhead, wood poles would be located on either side of SR-177/Rice Road. The typical height of the poles would be approximately 30 to 60 feet, with diameters varying from 12 to 20 inches (see Figure 2-9, Typical 34.5 kV Medium Voltage Line Structures, in Appendix A). For overhead crossings, temporary guard structures would be installed during conductor wire stringing to prevent the conductor from falling on the roadway. These guard structures would be located outside of the Caltrans ROW. Figures 4-2A and Figure 4-2B in Appendix A provide conceptual underground and overhead crossings of SR-177/Rice Road for the proposed Project and Alternative 2, respectively.

4.6.2.3. Gen-tie Overhead Crossing

The Project 500 kV gen-tie line would be located within a 175-foot ROW and start at the onsite substation on the west side of SR-177/Rice Road. The gen-tie line would exit the substation and travel approximately 0.2-mile to cross SR-177/Rice Road, where it would turn southwest to parallel the eastern side of SR-177/Rice Road for 1.1 miles before turning east (see EIR Section 2.3.4 and Figure 3.18-1 in Appendix A).

The Project gen-tie line would be constructed with either monopoles, lattice steel structures, or wooden H-frame poles. At the crossing of SR-177/Rice Road, one gen-tie support structure would be located on either side of SR-177/Rice Road outside of the Caltrans ROW. Conductor, pull and tensioning and temporary work areas required for stringing would also be located outside of the Caltrans ROW on either side of SR-177/Rice Road. For the gen-tie overhead crossing, temporary guard structures would be installed during conductor wire stringing to prevent the conductor from falling on the roadway. These guard structures would be located outside of the Caltrans ROW. Figure 4-3A in Appendix A provides the conceptual design of the gen-tie overhead crossing of SR-177/Rice Road.

Overhead gen-tie construction, including stringing conductor across Highway-177/Rice Road, could require the short-term temporary closure lanes on SR-177/Rice Road (see EIR Section 3.18). Helicopters would likely be used for wire stringing activities including hanging travelers, pulling conductor and optical ground wire (OPGW), dead-end activities, and the installation of bird diverters for the gen-tie line (see EIR Section 2.4.6.1). All helicopter operations would be in accordance with Riverside County and BLM approved Helicopter Use Plan, and all aircraft, pilots, linemen, and mechanics would be in full compliance with applicable FAA requirements and standards.

For Alternative 2, the 500 kV gen-tie line from the Alternative substation location would exit the substation to the south and would cross SR-177/Rice Road before turning to the southwest to parallel the roadway on BLM land within the Easley site to rejoin the proposed route where it would cross SR-177/Rice Road onto the Oberon Project (see EIR Section 2.7.3 and Figure 4-3B in Appendix A).

4.6.2.4. Permanent Operations Access

Upon commissioning, the Project would enter the operations phase. The solar modules at the site would operate during daylight 7 days a week, 365 days a year. Permanent operations access would be via locked gates located at two primary access points (see Figures 4-4A and Figure 4-4B in Appendix A for the proposed Project and Alternative 2, respectively). The Project access points off of SR-177/Rice Road would be turning lanes (or as dictated by Caltrans) to ensure safety. Turning lanes and driveways would be paved to prevent trackout.

4.6.3. Environmental Review

4.6.3.1. Biological Resources

The Biological Resources Technical Report (BRTR) discusses biological information that was used as the baseline for impact assessments for the Project, including those in the vicinity of SR-177/Rice Road (see Appendix C). The descriptions of the biological resources in the BRTR were the basis of the environmental analysis in the EIR (see EIR Section 3.5).

Vegetation. Vegetation communities in the Project site were mapped and classified by botanists, using Holland 1986 and cross-referencing with A Manual of California Vegetation, 2nd edition (Sawyer et al. 2009) and the National Vegetation Classification System (NVCS) referenced in the DRECP (CDFW and AIS 2022). Vegetation was mapped by drawing vegetation polygons on aerial images in the field. These field maps were then digitized into GIS shapefiles using ArcGIS Pro and one-foot pixel aerial imagery on a diagonal flat screen monitor at the office. Most mapped vegetation boundaries are accurate to within approximately 10 feet (3 meters). Vegetation communities in the vicinity of the SR-177/Rice Road improvements include creosote bush scrub and man-made features that include deciduous orchard/ fallow agriculture and urban/developed land (see Figures 4-5A and 4-5B in Appendix A). Vegetation types tend to be patchy. Small patches of one named type are often included within mapped polygons of another type. The size of these patches varies, depending on the minimum mapping units and scale of available aerial imagery.

Focused plant surveys were performed in spring 2020 and 2022 and included visual coverage across the entire Project site. Surveyors employed belt transects spaced at approximately 20 meters apart. Transects were spaced at 10-meters apart in areas not previously surveyed in the preceding fall season. Surveys along the gen-tie line within the Oberon Project site were conducted between fall 2019 and Spring 2020. Special-status plants observed in the vicinity of SR-177/Rice Road include *Proboscidea althaeifolia* (desert unicorn plant) and *Funastrum utahense* (Utah vine milkweed) (see Figures 4-5A and 4-5Bb). Desert unicorn plant was found throughout the Project area primarily in desert dry wash woodland in the southern half of the site and directly along SR-177/Rice Road along the western boundary of the road. One individual Utah vine milkweed was observed on the east side of the Project along the SR-177/Rice Road.

Wildlife. Ironwood Consulting conducted full-coverage wildlife surveys in the Project area between fall 2019 and summer 2022. Surveys of the Oberon Project site, where the gen-tie line is located, were performed between fall 2019 and summer 2020. Surveys were performed focusing on protocols for desert tortoise and burrowing owl. Wildlife surveys conducted in 2019-2022 conformed to full coverage desert tortoise protocol surveys with 10-meter transects on the Project site (Ironwood, 2023a; Ironwood, 2021a). Wildlife surveys were repeated for each site at 20-meter belt transects, consistent with 2012 CDFW burrowing owl protocol surveys. The surveys identified all burrows and all evidence of wildlife use, including use by desert tortoise, burrowing owl, and desert kit fox. During all wildlife surveys, biologists recorded all wildlife species observed, regardless of status. The BRTR provides a compilation of special-status wildlife with potential to occur in the Project vicinity and evaluates probability of occurrence for each species based on habitat, elevational and geographic ranges, and field survey results. The complete methods and results of the surveys are provided in the BRTR (see EIR Appendix C). Special-status wildlife observed in the vicinity of the SR-177/Rice Road include black-tailed gnatcatcher, burrowing owl, and desert kit fox (see Figures 4-6A and 4-6B, and BRTR, Figures 10 through 12 in Appendix C). There was one observation of an individual black-tailed gnatcatcher on the eastern side of the Project although suitable foraging and potential nesting habitat for this species is provided throughout the Project site. One burrowing owl burrow was observed south of the Project site approximately 500 feet west of SR-177/Rice Road. One burrowing owl burrow with whitewash was observed along the northern portion of the gen-tie line on the Oberon Project site. Many desert kit fox burrows observed within the Project site are part

of a complex with multiple entrances. During surveys, twenty-one active desert kit fox burrows or complexes with dig marks, tracks, and/or scat were observed within the Easley Project site (Figure 3.5-8 in Appendix A). The closest burrows, whether inactive or active, are approximately 500 feet either east or west of SR-177/Rice Road (see Figures 4-6A and 4-6B).

Construction and O&M activities may result in direct and indirect impacts to special-status plants and wildlife, including loss of individuals and their habitat, along SR-177/Rice Road. No listed threatened or endangered plant species were observed or have the potential to occur on the Project site or in the vicinity. The gen-tie line overlaps with critical habitat for desert tortoise, located in the southern portion of the Oberon Project site, although no live tortoises were observed. Impacts would be avoided, minimized, and mitigated with implementation of mitigation measures specified in EIR Section 3.5.9 for biological resources. Compliance with applicable CMAs on BLM lands would further minimize impacts of the proposed Project and alternatives.

4.6.3.2. Cultural and Paleontological Resources

The cultural resources impact analysis in this EIR was based on records of previously recorded cultural resources in the area (Dyste et al., 2023) and the Riverside County Phase I and BLM Class III survey reports completed by Chronicle Heritage (formerly PaleoWest) (Clark et al., 2023; Hinojosa et al., 2023). Three historic-era cultural resources were identified within the vicinity of the proposed permanent improvements to State Route 177 (SR-177)/Rice Road as part of the current Project. These include the road itself, SR-177/Rice Road (P-33-025150), a series of linear earthen berms (P-33-022247) and a mobile home park (HL-BE-004H). SR-177/Rice Road was previously determined eligible for the CRHR in 2019 for the Athos Renewable Energy Project (Riverside County, 2019). Portions of the resource were analyzed by Caltrans for the Athos and the Oberon renewable energy projects for a similar need, and it was determined the turnouts would not diminish the integrity of the resource (Tennyson, 2023). Additionally, any possible impacts to the resource would be avoided, minimized, and mitigated with implementation of mitigation measures specified in EIR Section 3.6.9 for cultural and tribal cultural resources. Compliance with applicable CMAs on BLM lands would further minimize impacts of the proposed Project and alternatives.

P-33-022247 and HL-BE-004H both abut the SR-177/Rice Road permanent improvements work areas. Resource P-33-022247, consisting of a series of linear earthen berms, was previously determined not eligible for the NRHP by the BLM in 2021 with SHPO concurrence (SHPO, 2021). The Phase I study completed for the current Project recommended the resource not eligible for listing on the CRHR. Resource HL-BE-004H, a mobile home park, was recommended not eligible for either the CRHR or NRHP during Phase I and Class III surveys for the current Project.

No paleontological resources were found on the surface during surveys on the Easley site. Paleontological monitoring will occur during construction and no resources have been identified in the vicinity of SR-177/Rice Road. Impacts would be avoided, minimized, and mitigated with implementation of mitigation measures specified in EIR Section 3.14.9 for paleontological resources.

4.6.3.3. Soil Contamination

The soil contamination impact analysis in this EIR was based on a desktop study of the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substance Control (DTSC) EnviroStor websites. No known listed hazardous material or contaminated sites were found at the Project site or immediately adjacent to the site. Impacts would be avoided, minimized, and mitigated with implementation of mitigation measures specified in EIR Section 3.10.9 for hazards and hazardous materials.

4.6.3.4. Transportation and Traffic

EIR Section 3.18 (Transportation and Traffic) discusses potential impacts from construction with respect to traffic and transportation for the proposed Project. The analysis concludes that while SR-177/Rice Road would not be affected by underground directional drilling for the collection lines, overhead gen-tie construction would require the temporary installation of guard structures during conductor wire stringing to prevent the conductor from falling on the roadway. To reduce or avoid potential impacts from Project vehicle trips and gen-tie construction, Mitigation Measures MM TRA-1 (Construction Traffic Carpool and Trip Reduction Plan) and TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities) are included as part of the Project. These measures include:

MM TRA-1 **Construction Traffic Control Plan.** Prior to the start of construction, the Project owner shall submit a Construction Traffic Control Plan for review and approval by Caltrans and 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:

- 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. Additionally, if conditions warrant, geometry changes shall be considered in coordination with Caltrans and Riverside County, and implemented, if necessary, in addition to signalization at the I-10 westbound ramp and SR-177. These geometry changes could include a turn pocket.
- The locations and use of flaggers, warning signs, barricades, delineators, cones, arrow boards, 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.
- 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 Kaiser 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.
- Define the method to maintaining close coordination, prior to and during construction, with Caltrans and Riverside County to minimize cumulative impacts of multiple simultaneous construction projects affecting shared portions of the circulation system. Coordination with adjacent development projects to spread work shifts into multiple hours (instead of peak hour) or the installation of additional temporary traffic signals or manual traffic control officers during peak hours to mitigate the temporary impacts.

MM TRA-2 **Repair Roadways and Transportation Facilities Damaged by Construction Activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such transportation features are damaged by Project construction activities, as determined by the affected public agency, such damage shall be repaired and restored to their pre-Project condition by the Project owner. Prior to construction, the Project owner shall confer with Caltrans and Riverside County regarding the roads within 500 feet in each direction of Project access points (where heavy vehicles will leave public roads to reach Project sites) and regarding the roads to be crossed by the proposed gen-tie line. At least 30 days prior to construction, or as requested by Riverside County or Caltrans, the Project owner shall photograph or video record all affected roadway segments and shall provide Riverside County and Caltrans with a copy of these images, if requested.

At the end of major construction, the Project owner shall coordinate with each affected jurisdiction to confirm whether repairs are required. Any damage demonstrable to the Project is to be repaired to the pre-construction condition within 60 days from the end of all construction, or on a schedule mutually agreed to by the Project owner and the affected jurisdiction. If multiple projects are using the transportation features, the Easley Project owner shall pay its fair share of the required repairs. the Project owner shall provide Riverside County and Caltrans (as applicable) proof when any necessary repairs have been completed.

With the incorporation of Mitigation Measures TRA-1 (Construction Traffic Control Plan) and MM TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities), impacts resulting from temporary construction-related disruptions to the affected circulation system were determined to be less than significant.

While the addition of temporary construction worker commute trips on SR-177/Rice Road would significantly increase the amount of average daily trips compared to existing conditions (without the Project), they would not affect existing transit uses or corridors and are presumed to cause a less than significant transportation impact.

5. COMPARISON OF ALTERNATIVES

This section summarizes and compares the environmental advantages and disadvantages of the proposed Project and the alternatives evaluated in this EIR. This comparison is based on the assessment of environmental impacts of the proposed Project and each alternative, as identified in Section 3 (Environmental Impacts of Proposed Project and Alternatives).

5.1. CEQA Requirements for Alternatives Comparison

CEQA requires the following for alternatives analysis and comparison:

> 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. *State Guidelines Section 15126.6(d)*

If the environmentally superior alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative among the other alternatives [State CEQA Guidelines Section 15126.6(e)(2)].

5.2. Comparison Methodology

The following methodology was used to compare alternatives in this EIR:

- **Step 1: Identification of Alternatives.** A screening process (described in Section 2.11, *Alternatives Analyzed in Detail*) was used to identify alternatives to the proposed Project. A No Project Alternative was also identified. This range of alternatives is sufficient to foster informed decision-making and public participation. No other feasible alternatives meeting most of the Project objectives were identified that would lessen or alleviate significant impacts.
- **Step 2: Determination of Environmental Impacts.** The environmental impacts of the proposed Project and alternatives were identified in Section 3, including the potential impacts of solar facility and gen-tie transmission line construction and operation. A summary of the significant impacts that cannot be mitigated (Class I impacts) are described in Section 5.3. Highlighting these areas of significant impacts that the proposed Project cannot avoid identifies the impact of concern when considering whether there is an alternative that would be capable of reducing these effects to a less than significant level compared to the proposed Project, and whether an alternative would create new significant impacts. This simplifies identification of the environmentally superior alternatives while considering all issue areas equally.
- **Step 3: Comparison of Proposed Project and Alternatives.** The environmental impacts of the proposed 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.

Determining an environmentally superior alternative requires balancing many environmental factors. In order to identify the environmentally superior alternative, the most important impacts in each issue area were identified and compared in Table 5-1. Although this EIR identifies an environmentally superior alternative, it is possible that the decision-makers could balance the importance of each impact area differently and reach different conclusions. In other words, the lead agency is not required to select the environmentally superior alternative. CEQA's "substantive mandate" only requires the selection of one alternative

over others if that alternative is feasible, based on a list of statutory factors, and if it will avoid one or more significant effects on the environment compared to other alternatives.

5.3. Comparison of the Proposed Project and Alternatives

5.3.1. Ability to Meet Project Objectives

The Applicant's purpose for the Project is to generate, store, and transmit renewable energy to the state-wide wholesale electricity grid. The Applicant's identified Project objectives are:

- Support achievement of President Biden's goal of a zero-carbon power sector by 2035 and zero-carbon economy by 2050 through development of clean electricity (power sector);
- Assist the nation to meet its Nationally Determined Contribution commitments under Article 4 of the Paris Climate Agreement to achieve a 50 to 52 percent reduction in U.S. greenhouse gas pollution from 2005 levels by 2030, and to achieve 100 percent carbon pollution-free electricity by 2035 in the electricity sector;
- Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
- Deliver up to 400 MW of affordable, wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
- Assist with achieving California's renewable 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;
- Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 650 MW of 2-hour and/or 4-hour 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;
- Bring living-wage jobs to Riverside County; and
- 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.

Alternative 1: No Project Alternative. The No Project Alternative would fail to meet any of the Project's objectives and would not achieve any of the environmental benefits of increasing renewable energy generation consistent with federal goals and the State of California's Renewable Portfolio Standard (RPS) and helping to alleviate the "duck curve" problem.

Alternative 2: Lake Tamarisk Alternative. The Lake Tamarisk Alternative would meet the proposed Project's objectives. This alternative would remove approximately 30 acres of solar panels closest to the community of Lake Tamarisk. This alternative would also move the onsite substation and BESS farther from the community of Lake Tamarisk, and the 500 kV gen-tie line would be approximately 0.8 miles longer than the proposed 500 kV gen-tie line. The electrical output would not be appreciably reduced

compared to the proposed Project, and the impacts would be similar, therefore, it would meet the Project objectives.

5.3.2. Significant and Unavoidable Impacts

Section 3 of this EIR describes the potential environmental impacts of the proposed Project and recommends mitigation measures to reduce impacts, where feasible. Impacts in the following areas would be significant and unavoidable with construction and operation of the proposed Project, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible.

- **Aesthetics:**
  - **Impact AES-3:** The proposed Project could substantially degrade the existing visual character or quality of the site and its surroundings. The resulting visual change would be adverse and unavoidable even with implementation of mitigation, when viewed from all KOPs.
- **Agriculture and Forestry**
  - **Impact AG-1:** The proposed Project would be constructed on 222 acres of land, 190 acres are a part of seven parcels, which are subject to a Williamson Act contract. Non-renewals for the seven parcels were submitted and processed in late 2022; however, the parcels are subject to Williamson Act restrictions for nine more years. There is no feasible way to modify the Project to avoid the conflict with the Williamson Act contracts. The contracts will need to be cancelled prior to, or concurrent with the EIR certification to avoid this impact.
  - **Impact AG-3**: The Williamson Act contract lands within the Project area are within a Riverside County Agricultural Preserve, which is incompatible with the proposed Project.

The Project would result in a cumulatively considerable contribution to a significant cumulative impact under Aesthetics.

5.3.3. Summary Impacts of Alternatives

Alternative 1: No Project Alternative. No substantially adverse and long-term impacts would occur to the environment as a result of the No Project Alternative. However, the No Project Alternative would not achieve any of the environmental benefits discussed in Section 5.3.1 (Ability to Meet Project Objectives).

Alternative 2: Lake Tamarisk Alternative. Alternative 2 would have similar types of impacts to the proposed Project, but would disturb a slightly smaller area within the Project application area and would move solar panel development and associated construction disturbances farther from the community of Lake Tamarisk. This alternative would not reduce any of the Project's significant and unavoidable impacts to a less-then-significant level or result in a change to overall impact classifications or significance conclusions.

5.3.4. Alternatives Comparison Summary

Table 5-1 compares the potential impacts of the proposed Project to the alternatives.

Table 5-1. Comparison of Alternatives to the Proposed Project

Environmental Resource	Alternative 1: No Project	Alternative 2: Lake Tamarisk Alternative
Aesthetics	Fewer	Fewer
Agriculture and Forestry	Fewer	Similar
Air Quality	Greater	Similar

Environmental Resource	Alternative 1: No Project	Alternative 2: Lake Tamarisk Alternative
Biological Resources	Fewer	Similar
Cultural and Tribal Cultural Resources	Fewer	Similar
Energy	Greater	Similar
Geology, Soils, and Mineral Resources	Fewer	Similar
Greenhouse Gas Emissions	Greater	Similar
Hazards and Hazardous Materials	Fewer	Similar
Hydrology and Water Quality	Fewer	Similar
Land Use and Planning	Fewer	Similar
Noise and Vibration	Fewer	Fewer
Paleontological Resources	Fewer	Similar
Population and Housing	Fewer	Similar
Public Services and Utilities	Fewer	Similar
Recreation	Fewer	Similar
Traffic and Transportation	Fewer	Similar
Wildfire	Fewer	Similar
Potential to Meet Most Project Objectives?	NO	YES

1 - "Fewer" indicates that the alternative would create reduced or fewer impacts that the Project would create. "Similar" indicates that impacts would be similar to those of the proposed Project. "Greater" indicates that the alternative would result in a greater level of impact than would the Project.
2 - Agricultural resources impacts related to parcels under Williamson Act contracts, and Aesthetic operational impacts and cumulative impacts would be significant and unavoidable for all alternatives except the No Project Alternative.
3 - Section 5.3.1 discusses to what extent the alternatives meet the Project objectives.

5.4. Comparison of the Proposed Project and No Project Alternative

The No Project Alternative (Alternative 1) would avoid impacts from the construction, operation, maintenance, and decommissioning of the proposed Project. This alternative would result in no impacts to aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, paleontological resources, population and housing, energy usage and under public services and utilities, recreation, and traffic and transportation, but would not realize the beneficial impacts of the Project relating to long-term to air quality and greenhouse gas emissions with the use of renewable energy generation. Additionally, site remediation of existing contamination would not occur under the No Project Alternative. The No Project Alternative does not have the potential to meet any of the Project objectives.

5.5. Environmentally Superior Alternative

Section 15126.6 of the State CEQA Guidelines requires 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 proposed Project to help determine the Environmentally Superior Alternative. As presented in the comparative analysis above, the Environmentally Superior Alternative for the proposed 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 Section 3.

It is possible that if the proposed Project were not approved, another solar project would be constructed, which would have impacts similar to the Project.

In accordance with section 15126.6 of the State CEQA Guidelines, the Lake Tamarisk Alternative would be the Environmentally Superior Alternative since it would result in fewer impacts to Aesthetics and Noise and Vibration than the proposed Project and would reduce the visual impacts of the Project on the Lake Tamarisk Desert Resort, although the visual impacts would remain significant and unavoidable. The Lake Tamarisk Alternative would have a slightly reduced level of ground disturbance and would be a greater distance from the residences in Lake Tamarisk, which would reduce construction-related disturbances such as noise.

The Lake Tamarisk Alternative, like the proposed Project, would meet all of the Project objectives, would be feasible, would generate the same amount of renewable energy and would have the same energy storage capacity. Because the Lake Tamarisk Alternative would achieve the Project objectives and would have fewer impacts when compared to the proposed Project, the Lake Tamarisk Alternative is considered environmentally preferred.

6. LIST OF PREPARERS AND ORGANIZATIONS CONSULTED

An EIR is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation at multiple levels. The County of Riverside was the CEQA Lead Agency. Aspen Environmental Group 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		
Tim Wheeler	Principal Planner	Project Planner
Darren Edgington	Environmental Project Manager	
Aspen Environmental Group		
Susan Lee	Principal-in-Charge	Quality Assurance/Quality Control
Hedy Koczwara	Project Manager	Quality Assurance/Quality Control
Brewster Birdsall, P.E.	Senior Associate	Air Quality; Greenhouse Gas Emissions; Energy; Noise and Vibration
Fritts Golden	Senior Associate	Land Use and Planning; Recreation; Traffic and Transportation; Policy Consistency
Eileen Allen	Senior Associate	Agriculture and Forestry Resources
Irene Kaufman	Senior Associate	Agriculture and Forestry Resources
Aurie Patterson, P.G.	Associate	Geology, Soils and Mineral Resources; Hazards and Hazardous Materials/Public Health and Safety; Paleontological Resources
Erin Jones	Biologist	Biological Resources
Stephanie Tang	Associate	Wildfire
Grace Weeks	Associate	Energy; Population and Housing; Public Services and Utilities; Project Description; Alternatives
Beth Bagwell	Senior Associate	Cultural and Tribal Cultural Resources (review)
Phil Lowe, P.E.	Senior Associate	Hydrology and Water Quality/ Water Resources (surface water)
Jon Davidson	Principal Associate	Technical Review and Editing
Christopher Notto	GIS Specialist	Graphics
Kati Simpson	Senior Graphic Designer	Graphics
Sharon Heesh	Associate	Document Production
Michael Clayton & Associates		
Michael Clayton	Visual Resources Specialist	Aesthetics
Chronicle Heritage		
Jess DeBusk	Senior Archaeologist	Cultural and Tribal Cultural Resources
GSI Water Solutions, Inc.		
Tim Thompson	Principal	Hydrology and Water Quality/Water Resources (groundwater)
Michael McAlpin	Managing Hydrogeologist	Hydrology and Water Quality/Water Resources (groundwater)

The following is a list of agencies consulted during preparation of the EIR:

- U.S. Bureau of Land Management, Palm Springs–South Coast Field Office
- U.S. Fish and Wildlife Service
- California Department of Fish and Wildlife

7. REFERENCES

7.1. Introduction

IP Easley (IP Easley, LLC). 2023. Easley Renewable Energy Project Plan of Development. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

7.2. Project Description and Alternatives

Nichols, et al. (Mary H. Nichols, Sara E. Duke, Chandra Holifield Collins, Lauren Thompson) 2023. Legacy earthen berms influence vegetation and hydrologic complexity in the Altar Valley, Arizona. International Soil and Water Conservation Research. January 25. https://www.sciencedirect.com/science/article/pii/S2095633923000059. Accessed July 22, 2023.

7.3. Intro to Analysis

Riverside County. 2015. (as revised December 8, 2015). General Plan Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-area-plans-DCAP-120815m.pdf. Accessed January 24, 2024.

RWQCB (Colorado River Basin Regional Water Quality Control Board). 2021. Oberon Renewable Energy Project Final Environmental Impact Report. Section 3.1. State Clearinghouse 2021-03-0426. November. https://www.aspeneg.com/oberon-renewable-energy-project/.

7.4. Aesthetics

Riverside County. 2015a (as revised December 8, 2015). General Plan Chapter 5 Multipurpose Open Space Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan- general-plan-2016-elements-Ch05-MOSE-120815.pdf. Accessed on January 24, 2024.

_____. 2015b (as revised December 8, 2015). General Plan Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-area-plans-DCAP-120815m.pdf. Accessed January 24, 2024.

_____. 2020a (as revised August 4, 2020). Riverside County General Plan Chapter 3 Land Use Element. https://planning.rctlma.org/general-plan-and-zoning/riverside-county-general-plan. Accessed February 25, 2023.

_____. 2020b (as revised July 7, 2020). Riverside County General Plan Chapter 4 Circulation Element. https://planning.rctlma.org/general-plan-and-zoning/riverside-county-general-plan. Accessed February 25, 2023.

BLM (U.S. Department of the Interior, Bureau of Land Management). 1976. The Federal Land Policy and Management Act of 1976 (as amended 2016). https://www.blm.gov/sites/blm.gov/files/AboutUs_LawsandRegs_FLPMA.pdf. Accessed February 25, 2023.

_____. 1980. The California Desert Conservation Area Plan (as amended). https://eplanning.blm.gov/public_projects/lup/66949/82080/96344/CDCA_Plan.pdf. Accessed February 25, 2023.

_____. 1984. Visual Resource Management Manual 8400. https://www.blm.gov/sites/blm.gov/files/program_recreation_visual%20resource%20management_quick%20link_BLM%20Manual%20Section%208400%20-%20Visual%20Resource%20Management.pdf. Accessed February 25, 2023.

_____. 1986a. Visual Resource Inventory Manual H-8410-1. https://www.blm.gov/sites/blm.gov/files/program_recreation_visual%20resource%20management_quick%20link_%20BLM%20Handbook%20H-8410-1%2C%20Visual%20Resource%20Inventory.pdf. Accessed November 2023.

_____. 1986b. Visual Resource Contrast Rating Manual 8431. https://www.blm.gov/sites/blm.gov/files/program_recreation_visual%20resource%20management_quick%20link_BLM%20Handbook%20H-8431-1,%20Visual%20Resource%20Contrast%20Rating.pdf. Accessed February 25, 2023.

7.5. Agriculture and Forestry

BLM (U.S. Department of the Interior, Bureau of Land Management). 2015. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement. Cumulative Impacts Analysis. https://eplanning.blm.gov/eplanning-ui/project/66459/570.

_____. 2016. Desert Renewable Energy Conservation Plan Executive Summary for the Record of Decision. https://eplanning.blm.gov/public_projects/lup/66459/133459/163123/DRECP_BLM_ROD_Executive_Summary.pdf.

California Department of Conservation. 2014. California Farmland Conversion Report; Appendix A. https://www.conservation.ca.gov/dlrp/fmmp/Pages/2012-2014_Farmland_Conversion_Report.aspx. Accessed February 9, 2023.

_____. 2016. California Farmland Conversion Report; Appendix A. https://www.conservation.ca.gov/dlrp/fmmp/Pages/2014-2016_Farmland_Conversion_Report.aspx. Accessed February 9, 2023.

_____. 2023. Williamson Act Program. https://www.conservation.ca.gov/dlrp/wa. Accessed February 14, 2023.

Riverside County. 2015. Riverside County General Plan Chapter 5. Multipurpose Open Space Element. https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed February 10, 2023.

_____. 2021a. Riverside County Agricultural Production Report. Riverside County Agricultural Commissioner's Office. https://kesq.b-cdn.net/2022/10/Snapshot-127549.pdf. Accessed February 9, 2023.

_____. 2021b. Riverside County General Plan Chapter 3. Land Use Element. https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed February 10, 2023.

_____. 2021c. Riverside County General Plan, Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-DCAP-4-2022-rev-6-2022.pdf. Accessed January 24, 2024.

7.6. Air Quality

ARB (California Air Resources Board). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005. https://files.ceqanet.opr.ca.gov/221458-6/attachment/UNr-g159CW-r0G4DR8q6daNdAKT3RJTd8gGQCfz4wqFfl-eNdZNQEqjf8tfls1x6Gsae7YqpXwtFIZBd0. Accessed January 24, 2024.

_____. 2022. ARB (California Air Resources Board). Maps of Current State and Federal Area Designations. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

CAPCOA (California Air Pollution Control Officers Association). 2021. California Emission Estimator Model (CalEEMod), Version 2020.4.0 User's Guide. May. http://www.aqmd.gov/caleemod/user's-guide. Accessed September 2022.

CIRA (Cooperative Institute for Research in the Atmosphere). 2022a. Chart of IMPROVE 2000-2020, Annual Average Light Extinction. Clearest Days - Joshua Tree NP. Provided by Federal Land Manager Environmental Database (FED). https://views.cira.colostate.edu/fed. Accessed September 2022.

_____. 2022b. Chart of IMPROVE 2000-2020 Annual Average Light Extinction. Most Impaired Days - Joshua Tree NP. Provided by Federal Land Manager Environmental Database (FED). https://views.cira.colostate.edu/fed. Accessed September 2022.

DIR (Department of Industrial Relations). 2022. Protection from Valley Fever. https://www.dir.ca.gov/dosh/valley-fever-home.html. Accessed December 9, 2022.

OEHHA (Office of Environmental Health Hazard Assessment, California Environmental Protection Agency). 2015. Air Toxics Hot Spots Program: Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments. February 2015. https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

Riverside County. 2018. Riverside County General Plan Chapter 9. Air Quality Element. https://planning.rctlma.org/general-plan-and-zoning/riverside-county-general-plan.

SCAQMD (South Coast Air Quality Management District). 2009. Localized Significance Thresholds (LSTs). Appendix C - Mass Rate LST Look-up Tables. October. http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

_____. 2022. SCAQMD Air Quality Management Plan (AQMP). December. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan.

_____. 2023. SCAQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

U.S. EPA (Environmental Protection Agency). 2022. EPA Region 9 Air Quality Maps and Geographic Information. https://www3.epa.gov/region9/air/maps/index.html.

WRAP (Western Regional Air Partnership). 2016. Public Hearing Testimony, Proposed Amendments to the Regional Haze Rule. June 1, 2016. https://www.wrapair2.org/pdf/WRAP%20Regional%20Haze%20Public%20Hearing%20Testimony_June1_2016_final_1.pdf.

7.7. Biological Resources

Allison, L.J. and A.M. McLuckie. 2018. Population trends in Mojave desert tortoises (*Gopherus agassizii*). Herpetological Conservation and Biology 13(2):433–452.

APLIC (Avian Power Line Interaction Committee). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. PEIR Final Project Report CEC-500-2006-022. Edison Electric Institute, APLIC, and the California Energy Commission.

_____. 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.

Aspen (Aspen Environmental Group). 2022. Oberon Renewable Energy Project, Final Desert Tortoise Protection and Translocation Plan. Plan of Development Appendix H. Prepared for IP Oberon, LLC. Prepared by Aspen Environmental Group. Submitted to the U.S. Bureau of Land Management.

_____. 2023. Easley Renewable Energy Project, Desert Tortoise Protection and Translocation Plan. Plan of Development Appendix I. Prepared for IP Oberon, LLC. Prepared by Aspen Environmental Group. Submitted to the U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Averill-Murray, RC, T.C. Esque, L.J. Allison, S. Bassett, S.K. Carter, K.E. Dutcher, S.J. Hromada, K.E. Nussear, and K. Shoemaker. 2021. Connectivity of Mojave Desert Tortoise Populations: Management Implications for Maintaining a Viable Recovery Network. (U.S. Geological Society). Open-File Report 2021–1033. https://pubs.er.usgs.gov/publication/ofr20211033.

Barron-Gafford, G. A. et al. 2016. The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures. Sci. Rep. 6, 35070; doi: 10.1038/srep35070.

Beatty, B. et al. 2017. Native Vegetation Performance under a Solar PV Array at the National Wind Technology Center. National Renewable Energy Laboratory. Technical Report NREL/TP-1900-66218.

BLM (U.S. Department of the Interior, Bureau of Land Management). 2007. Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States; Programmatic Environmental Impact Statement. June.

_____. 2015. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement. Prepared in partnership with U.S. Fish and Wildlife Service, California Energy Commission, and California Department of Fish and Wildlife. October. https://eplanning.blm.gov/eplanning-ui/project/66459/570.

_____. 2016a. Desert Renewable Energy Conservation Plan: Land Use Plan Amendment to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. Prepared by U.S. Bureau of Land Management. BLM/CA/PL-2016/03+1793+8321. September.

_____. 2016b. Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States; Programmatic Environmental Impact Statement. August.

_____. 2018. Palen Solar Project Final Supplemental EIS. Sections III.21 and IV.21 Wildlife Resources. May.

_____. 2022. Environmental Assessment, DOI-BLM-CA-D060-2020-0040-EA, Oberon Renewable Energy Project. Palm Springs – South Coast Field Office. https://eplanning.blm.gov/eplanning-ui/project/2001226/510. Accessed September 2023.

Broadbent, A. et al. 2019. The Observed Effects of Utility-Scale Photovoltaics on Near-Surface Air Temperature and Energy Balance. Journal of Applied Meteorology and Climatology. 58: 989-1006.

CDFW (California Department of Fish and Wildlife). 2022. Sensitive Natural Communities (State Ranks 1-3). The California Biologist's Handbook. https://biologistshandbook.com/natural-communities/sensitive-natural-communities/

_____. 2023. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline

Cook, L. and McCuen, H. 2013. Hydrologic Response of Solar Farms. Journal of Hydrologic Engineering. 18(5): 536-541.

Devitt, D.A.; Apodaca, L.; Bird, B.; Dawyot, J.P., Jr.; Fenstermaker, L.; Petrie, M.D. 2022 Assessing the Impact of a Utility Scale Solar Photovoltaic Facility on a Down Gradient Mojave Desert Ecosystem. Land. 11: 1315. https://doi.org/10.3390/land11081315

Fthenakis, V. and Yu, Y. 2013. Analysis of the Potential for a heat Island Effect in large Solar Farms. Center for Life Cycle Analysis, Department of Earth and Environmental Engineering, Columbia University, New York, NY.

Hagerty, B.E., and C.R. Tracy. 2010. "Defining population structure for the Mojave desert tortoise." Conservation Genetics 11: 1795–1807.

IP Easley (IP Easley, LLC). 2023. Easley Renewable Energy Project Plan of Development. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Ironwood (Ironwood Consulting). 2021a. Biological Resources Technical Report, Oberon Renewable Energy Project, Riverside County, California, in Oberon Renewable Energy Project Plan of Development Prepared for Aspen Environmental Group. https://eplanning.blm.gov/eplanning-ui/project/2001226/510.

_____. 2021b. Jurisdictional Waters Report, Oberon Renewable Energy Project, Riverside County, California, in Oberon Renewable Energy Project Plan of Development. Prepared for Intersect Power & Aspen Environmental Group. https://eplanning.blm.gov/eplanning-ui/project/2001226/510.

_____. 2023a. Biological Resources Technical Report, Easley Renewable Energy Project, Riverside County, California, in Easley Renewable Energy Project Plan of Development, Appendix G. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510

_____. 2023b. Jurisdictional Waters Report, Easley Renewable Energy Project, Riverside County, California, in Easley Renewable Energy Project Plan of Development, Appendix H. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Kosciuch, K., D. Riser-Espinoza, M. Gerringer, and W. Erickson. 2020. A Summary of Bird Mortality at Photovoltaic Utility Scale Solar Facilities in the Southwestern U.S. PLoS ONE 15(4): e0232034. doi: 10.1371/journal.pone.0232034.

Nussear, K.E., T.C. Esque, R.D. Inman, Leila Gass, K.A. Thomas, C.S.A. Wallace, J.B. Blainey, D.M. Miller, and R.H. Webb. 2009. Modeling habitat of the desert tortoise (*Gopherus agassizii*) in the Mojave and parts of the Sonoran Deserts of California, Nevada, Utah, and Arizona: U.S. Geological Survey Open-File Report 2009-1102, 18 p.

Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona. https://map.dfg.ca.gov/metadata/ds0822.html.

Riverside County. 2015. Riverside County General Plan. https://planning.rctlma.org/General-Plan-Zoning/General-Plan.

RWQCB (Colorado River Basin Regional Water Quality Control Board). 2021. Oberon Renewable Energy Project Final Environmental Impact Report. SCH No. 2021030426. November. https://www.aspeneg.com/oberon-renewable-energy-project/.

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

U.S. Fish and Wildlife Service (USFWS). 2011. Biological Opinion on the Desert Sunlight Solar Farm Project, Riverside County, California [CACA48649]. https:// eplanning. blm. gov/public_projects/nepa/65802/79683/92405/ROD_Appendix_3_Biological_Opinion.pdf

_____. 2013. Biological Opinion on the Proposed Desert Harvest Solar Project, Riverside County, California [CACA044919]. https:// eplanning.blm.gov/public_projects/nepa/65699/79580/92213/Appendix 1_DesertHarvest_Biological_Opinion_ROD.pdf

_____. 2014. Status of the desert tortoise and critical habitat. Unpublished report available on the Desert Tortoise Recovery Office's website: "02/10/2014 Status of the Desert Tortoise and Critical Habitat (.704MB PDF)." Reno, NV.

_____. 2015. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2013 and 2014 Annual Reports. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. 44 pages.

_____. 2016. Biological Opinion on the Proposed Land Use Plan Amendment under the Desert Renewable Energy Plan [1340 (CA 930) P, 1150 (CA 930) P]. FWS-KRN/SBD/INY/LA/IMP/RIV-16B0138-16F0200.

_____. 2017. Status of the Desert Tortoise and Critical Habitat (dated 11 October 2017). Unpublished report prepared by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. 24 pages.

_____. 2019. Preparing for any Action that May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) 22 pp. U.S. Fish and Wildlife Service, Reno, Nevada (Desert Tortoise Recovery Office). https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2019.pdf

_____. 2021. Status of the desert tortoise and critical habitat (dated 16 August 2021). Unpublished report prepared by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.

WEST (WEST Environmental & Statistical Consultants). 2020. Bird and Bat Impacts: Victory Pass and Arica Solar Projects. Technical Memorandum. December.

7.8. Cultural and Tribal Cultural Resources

Bean, Lowell John, and Sylvia Brakke Vane. 1978. Persistence and Power: A Study of Native American Peoples in the Sonoran Desert and Devers-Palo Verde High Voltage Transmission Line. Cultural Systems Research, Inc., Menlo Park, California.

BLM (U.S. Department of the Interior, Bureau of Land Management). 2004. Manual 8110—Identifying and Evaluation Cultural Resources. U.S. Department of the Interior, Bureau of Land Management, Washington, D.C.

_____. 2011. Memorandum of Agreement Among the Bureau of Land Management, U.S. Department of Energy, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Desert Sunlight Solar Farm Project, Riverside County, California.

_____. 2015a. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement. BLM/CA/PL-2016/03+1793+8321. Section III.14.1. October 2015. https://eplanning.blm.gov/eplanning-ui/project/66459/570. Accessed June 2023.

_____. 2015b. "Proposed Final Programmatic Agreement Among the Bureau of Land Management California, the California Office of Historic Preservation, and the Advisory Council on Historic Preservation, Regarding Renewable Energy Development on a Portion of Public Lands Administered by the Bureau of Land Management – California." November 20, 2015.

CGS (California Geological Survey). 2002. California Geomorphic Provinces. California Department of Conservation, California Geological Survey, Note 36. Sacramento, California.

CPUC (California Public Utilities Commission). 2011. Decision Granting Southern California Edison Company a Permit to Construct the Red Bluff Substation Project. Decision 11-07-020. July 14, 2011.

Clark, Tiffany, Joseph Curran, Joy Vyhmeister, and Matthew Tennyson. 2023. Phase I Cultural Resources Inventory for the Easley Renewable Energy Project, Riverside County, California. Submitted to the Riverside County Planning Department, California.

County of Riverside Assessor. 2023. Records for Assessor Parcel Number 808-030-011. https://ca-riverside-acr.publicaccessnow.com/Search.aspx.

Dice, Michael H. 2013. Phase I Cultural Resource Assessment of the Indigo 1 Photovoltaic Project, Community of Desert Center, Riverside County, California. On file, California Historical Resources Information System, Eastern Information Center, University of California, Riverside.

Dyste, Diana T., Evan Mills, M. Colleen Hamilton, Annie McCausland, and Andrew D. Miller. 2018. Phase I Cultural Resource Inventory for the Athos Renewable Energy Project, Riverside County, California. Applied EarthWorks, Inc. Submitted to the County of Riverside, California. Copies available from Applied EarthWorks, Inc., Fresno.

Hall, Jr., Clarence A. 2007. Introduction to the Geology of Southern California and Its Native Plants. University of California Press, Berkeley, Los Angeles, London.

Hanes, Richard C., Amy L. Ollendorf, Diana T. Dyste, Andrew D. Miller, Evan Mills, Annie McCausland, and Jessica Jones. 2019a. Class I Cultural Resource Inventory, Research Design, and Work Plan for the Athos Renewable Energy Project, Riverside County, California. Applied EarthWorks, Inc., Submitted to Bureau of Land Management, Palm Springs Field Office and Intersect Power, San Francisco. Copies available from Applied EarthWorks, Inc., Hemet, California.

Hanes, Richard C., Diana T. Dyste, Susan Wood, Jessica Jones, Annie McCausland, Andrew D. Miller, Evan Mills, and Randy Ottenhoff. 2019b. Class III Cultural Resource Inventory and Evaluation for the Athos Renewable Energy Project, Riverside County, California. Applied EarthWorks, Inc., Fresno, California. Submitted to Bureau of Land Management, Palm Springs Field Office, and Intersect Power, San Francisco. Copies available from Applied EarthWorks, Inc., Hemet, California.

Kelly, Isabel T., and Catherine Fowler. 1986. Southern Paiute. In Handbook of North American Indians, Great Basin, Volume 11, edited by Warren L. D'Azevedo and William G. Sturtevant, general editor, pp. 368–397. Smithsonian Institution, Washington, D.C.

Knabb, Kyle, Roberta Thomas, Tiffany Clark, Evan Mills, Dennis McDougall, and Matthew Tennyson. 2021. Class III Cultural Resources Inventory for the Oberon Solar Project, Riverside County, California. Report prepared for Aspen Environmental Group and Bureau of Land Management Palm Springs Field Office, Palm Springs.

Laird, Carobeth. 1976. The Chemehuevi. Malki Museum Press. Banning, California.

Millington, Chris, Victoria Harvey, Katie Martin, Sara Ferland, Laura Hoffman, Steven Treffers, Samantha Murry, John Dietler, Benjamin Vargas, and Suzanne Griset. 2013. California Solar Energy Zones (SEZs): Class II Cultural Resources Inventory of the Imperial East and Riverside East SEZs, Riverside and Imperial Counties, California. In Bandy and Railey (2013) Cultural Resource Sensitivity Analysis of Nine Solar Energy Zones in Arizona, California, and Nevada. Unpublished report submitted to the Bureau of Land Management. On file with SWCA Environmental Consultants.

Riverside County Historical Committee. 1982. Department of Parks and Recreation Form for P-33-006825. Form on file at the Eastern Information Center, University of California, Riverside.

Riverside County Planning Department. 2019. Final Environmental Impact Report for IP Athos LLC's Athos Renewable Energy Project. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Postings-Athos-FinalEIR-IPAthosFinalEIR.pdf. Accessed on August 25, 2023.

Riverside County. 2015. General Plan, Chapter 5: Multipurpose Open Space Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-elements-Ch05-MOSE-120815.pdf. Accessed August 30, 2023.

Ross, Delmer G. 1992. Gold Road to La Paz: An Interpretive Guide to the Bradshaw Trail. Tales of the Mojave Road Number Nineteen. Tales of the Mojave Road Publishing Company, Essex, California.

RWQCB (Colorado River Basin Regional Water Quality Control Board). 2021. Oberon Renewable Energy Project Final Environmental Impact Report. State Clearinghouse 2021-03-0426. November. https://www.aspeneg.com/oberon-renewable-energy-project.

SHPO (State Historic Preservation Officer). 2019. "RE: Section 106 Consultation Eligibility and Finding of Effect for the Athos Solar Project, Riverside County." Letter dated October 25, 2019. State of California, Office of Historic Preservation.

_____. 2021. "RE: Oberon Solar Project, Riverside County." Letter dated December 20, 2021. State of California, Office of Historic Preservation.

7.9. Energy

California Legislative Information. 2018. Senate Bill No. 100. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100. Accessed January 24, 2024.

CARB (California Air Resources Board). 2018. AB 32 Global Warming Solutions Act of 2006. https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006/printable/print. Accessed May 2023.

CEC (California Energy Commission). 2020. Clean Energy and Pollution Reduction Act. Senate Bill 350. https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350. Accessed May, 2023.

_____. 2023. 2021 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation. Accessed January 24, 2024.

CPUC (California Public Utilities Commission). 2008. Energy Action Plan. https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/2008-energy-action-plan-update.pdf. Accessed January 24, 2024.

Riverside County. 2015. Riverside County General Plan Chapter 5. Multipurpose Open Space Element. https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed February 10, 2023.

_____. 2021. (as revised September 28, 2021). General Plan Chapter 3 Land Use Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Ch03-Land-20Use-FINAL-209-28-21.pdf. Accessed January 24, 2024.

SCE (Southern California Edison). 2023. Who We Are. https://www.sce.com/about-us/who-we-are. Accessed February 2023.

7.10. Geology, Soils, and Minerals

BLM (U.S. Department of the Interior, Bureau of Land Management). 2015. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement; Section III.15, Mineral Resources and Section III.4, Geology and Soils, October. https://eplanning.blm.gov/public_projects/lup/66459/20012410/250016957/00c._Main_Title.pdf. Accessed January 24, 2024.

_____. 2023a. Land and Mineral System Reports (LR2000) website. https://reports.blm.gov/reports/LR2000/. Accessed March 2023.

_____. 2023b. Mining and Land Records System Reports (MLRS) website. https://reports.blm.gov/reports/MLRS/. Accessed January 24, 2024.

CDOC (California Department of Conservation). 2023. Mines Online. Accessed March 2023. https://maps.conservation.ca.gov/mol/index.html.

CGS (California Geologic Survey). 1994. Mineral Land Classification of the Eastern Half of Riverside County, California, Plate 3B – Industrial Mineral Deposits, Central Part of the Study Area. Open File Report 94-11. https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc.

_____. 2014. Eolian System Map of the East Riverside Area: A Project for the California Department of Fish and Wildlife.

_____. 2023. Earthquake Zones of Required Investigation Interactive website. https://maps.conservation.ca.gov/cgs/EQZApp/App/. Accessed March 2023

Google Earth. 2023. Google Earth Pro v. 7.3.6.9345 (64-bit), eastern Riverside County and Desert Center Area.

IP Easley (IP Easley, LLC). 2023. Easley Renewable Energy Project Plan of Development, Appendix U: Dust Control Plan. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Ironwood (Ironwood Consulting). 2023. Biological Resources Technical Report, Easley Renewable Energy Project, Riverside County, California, in Easley Renewable Energy Project Plan of Development, Appendix G. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Jennings, C.W. 1967. Geologic Map of California: Salton Sea Sheet. California Division Geological Survey. Scale 1:250,000. https://www.conservation.ca.gov/cgs/Documents/Publications/Geologic-Atlas-Maps/GAM_13-SaltonSea-1967-Map.pdf. Accessed November 2023.

Kenney (Kenney GeoScience). 2017. Geomorphic and stratigraphic evaluation of the stable early to mid-Holocene eolian (wind-blown) dune systems for proposed Desert Quartzite Solar Project, eastern Chuckwalla Valley and Palo Verde Mesa area, Riverside County, California, in Desert Quartzite

Solar Project, DRAFT Plan Amendment/EIS/EIR, Appendix O. https://eplanning.blm.gov/public_projects/nepa/68211/153604/188120/Desert_Quartzite_EISEIR_Appendix_O_KGS_Eolian_Report_ready_508_reduced.pdf.

Norris, Robert M., and Robert W. Webb. 1976. Geology of California, published by John Wiley & Sons Inc., pp. 147 156.

NRCS (Natural Resources Conservation Service). 2016. State Soil Survey Geographic (STATSGO) Database for California. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

_____. 2023. Official Soil Series Descriptions. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053587. Accessed March 2023.

Potter, Christopher. 2016. Mapping Changes in Desert Pavement Surfaces of the Lower Colorado Desert of Southern California using Landsat Time Series Analysis. https://ntrs.nasa.gov/api/citations/20190000224/downloads/20190000224.pdf. Accessed March 2023.

Riverside County. 2015. Riverside County General Plan, Chapter 5 – Multipurpose Open Space Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf. Accessed November 2023.

_____. 2016. Riverside County General Plan, Appendix H – Safety Element Technical Background Report, Part 1. https:// planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-appendices-Appendix-HPart-1.pdf. . Accessed November 2023.

_____. 2019. Riverside County General Plan, Chapter 6 Safety Element. Adopted August 6.

_____. 2021a. Riverside County General Plan, Chapter 6 Safety Element. Adopted September 28. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2021-elements-Ch06-Safety-092821.pdf. Accessed January 24, 2024.

_____. 2021b. Riverside County General Plan, Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-DCAP-4-2022-rev-6-2022.pdf. Accessed January 24, 2024.

Terracon. 2018. Geotechnical Engineering Report, Athos Solar Facility, Desert Center, California, prepared for Intersect Power, San Francisco, California, Terracon Project No. 60185052, dated June 29, 2018. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Postings-Athos-AppendixF.pdf. Accessed January 24, 2024.

USGS (United States Geological Survey). 1986. Corn Spring Quadrangle California, Riverside County, 7.5 Minute Topographic Map. https://ngmdb.usgs.gov/topoview/viewer/#13/33.7510/-115.3595

_____. 1987. Desert Center Quadrangle California, Riverside County, 7.5 Minute Topographic Map. https://ngmdb.usgs.gov/topoview/viewer/#13/33.7510/-115.3595

_____. 2023a. U.S. Quaternary Faults Interactive website of the USGS Geologic Hazards Science Center. https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf&showLayers=NSHM_Fault_Sources_4251%3BNSHM_Fault_Sources_4251_0. Accessed March 2023.

_____. 2023b. Subsiding Areas in California – USGS California Water Science Center interactive website. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html. Accessed March 2023.

7.11. Greenhouse Gas Emissions

CAPCOA (California Air Pollution Control Officers Association). 2021. California Emission Estimator Model (CalEEMod), Version 2020.4.0 User's Guide. May. https://www.aqmd.gov/caleemod/user's-guide. Accessed January 24, 2024.

CARB (California Air Resources Board). 2022a. California Greenhouse Gas Inventory for 2000-2020, by Category as Defined in the 2008 Scoping Plan. October. https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/ghg_inventory_scopingplan_sum_2000-20.pdf. Accessed February 27, 2023.

_____. 2022b. California's Scoping Plan for Achieving Carbon Neutrality. November 16, 2022. https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf. Accessed February 22, 2023.

CEC (California Energy Commission). 2019. Estimated Cost of New Utility-Scale Generating in California: 2018 Update. CEC-200-2019-500. May 2019. https://www.energy.ca.gov/publications/2019/estimated-cost-new-utility-scale-generation-california-2018-update.

CPUC (California Public Utilities Commission). 2022. Greenhouse Gas and Criteria Pollutant Accounting Methodology for use in Load-Serving Entity Portfolio Development in 2022 Integrated Resource Plans. July. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2022-irp-cycle-events-and-materials/clean-system-power-calculator-documentation.pdf.

OEHHA (Office of Environmental Health Hazard Assessment, California Environmental Protection Agency). 2018. *Indicators of Climate Change in California*. May. https://oehha.ca.gov/climate-change/report/2018-report-indicators-climate-change-california.

Riverside County. 2015. Climate Action Plan. https://planning.rctlma.org/general-plan-and-zoning/riverside-county-general-plan/riverside-county-general-plan-december-2015-0.

_____. 2019. Climate Action Plan (CAP) Update. https://planning.rctlma.org/general-plan-and-zoning/riverside-county-climate-action-plan.

SCAQMD (South Coast Air Quality Management District). 2008. Board Meeting Report. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. December. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf.

_____. 2023. SCAQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

UNFCCC (United Nations Framework Convention on Climate Change). 1998. Text of the Kyoto Protocol. https://unfccc.int/process/the-kyoto-protocol.

7.12. Hazards and Hazardous Materials

AirNav. 2023a. Information on Blythe Airport. http://www.airnav.com/airport/KBLH. Accessed February 20, 2023.

_____. 2023b. Information on Julian Hinds Pump Plant Airstrip, Desert Center, California, USA. https://www.airnav.com/airport/73CL. Accessed February 20, 2023.

BLM (U.S. Department of the Interior, Bureau of Land Management). 1985. Desert Training Center, California – Arizona Maneuver Area, Interpretive Plan. https://archive.org/details/deserttrainingce00unit.

CAL FIRE (California Department of Forestry and Fire Protection). 2007. Draft Fire Hazard Severity Zones in LRA, Eastern Riverside County. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/upload-6/fhszl06_1_map61.jpg. Accessed January 24, 2024.

CalEPA (California Environmental Protection Agency). 2023. Unified Program. https://calepa.ca.gov/cupa/. Accessed February 2023.

CDPH (California Department of Public Health). 2013. Preventing Work-Related Coccidioidomycosis (Valley Fever) Fact Sheet, Hazard Evaluation System & Information Service, CDPH Occupational Health Branch. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/HESIS/CDPH%20Document%20Library/CocciFact.pdf

_____. 2020. Valley Fever (Coccidioidomycosis) in California, 2019, Surveillance and Statistics Section, Infectious Diseases Branch, Division of Communicable Disease Control, Center for Infectious Diseases, California Department of Public Health. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf

_____. 2022. CDPH Infectious Diseases Branch (IDB) Yearly Summaries of Selected Communicable Diseases in California, 2012–2020, Surveillance and Statistics Section, Infectious Diseases Branch, Division of Communicable Disease Control, Center for Infectious Diseases, California Department of Public Health. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/YearlySummariesofSelectedCommDiseasesinCA2012-2020.pdf

_____. 2023a. Valley Fever Basics, California Department of Public Health website. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/ValleyFeverBasics.aspx. Accessed February 2023.

_____. 2023b. Symptoms, California Department of Public Health website. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/ValleyFeverSymptoms.aspx. Accessed February 2023.

_____. 2023c. Coccidioidomycosis in California Provisional Monthly Report, January 2023. Center for Infectious Diseases, Division of Communicable Disease Control, Infectious Diseases Branch, Surveillance and Statistics Section. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciinCAProvisionalMonthlyReport.pdf

CMLUCA (California Military Land Use Compatibility Analysis). 2023. California Military Land Use Compatibility Analyst website. https://cmluca.gis.ca.gov/

Conzen et al (Jens Conzen, Sunil Lakshmipathy, Anil Kapahi, Stefan Kraft, and Matthew DiDomizio). 2022. Lithium ion battery energy storage systems (BESS) hazards, in *Journal of Loss Prevention in the Process Industries* Volume 81, February 2023, 104932. https://www.sciencedirect.com/science/article/abs/pii/S095042302200208X?via%3Dihub. Accessed March 2023.

DTSC (Department of Toxic Substances Control). 2023. EnviroStor database review of Desert Center area. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=desert+center. Accessed February 2023.

EPA (U.S. Environmental Protection Agency). 2010. Spill Prevention, Control, and Countermeasure (SPCC) Regulation. 40 CFR part 112. https://www.epa.gov/sites/production/files/documents/spccbluebroch.pdf. Accessed February 2023.

FAA (Federal Aviation Administration). 2018. Technical Guidance for Evaluating Selected Solar Technologies on Airports. https://www.faa.gov/sites/faa.gov/files/airports/environmental/FAA-Airport-Solar-Guide-2018.pdf. Accessed February 20,2023.

IP Easley (IP Easley, LLC). 2023. Easley Renewable Energy Project Plan of Development. Submitted to U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2025816/510.

Meller, Sgt. Sidney L. 1946. The Desert Training Center and C-AMA, Study No. 15. The Army Ground Forces. https://apps.dtic.mil/sti/pdfs/ADB959180.pdf. Accessed November 2023.

Military Museum. 2020. Historic California Posts, Camps, Stations, and Airfields, Desert Center Army Air Field website. http://www.militarymuseum.org/DesertCenterAAF.html. Accessed February 2023.

Peplow, Mark. 2022. Solar panels face recycling challenge - Researchers and companies are preparing for a looming tsunami of photovoltaic waste, in Chemical & Engineering News, Volume 100, Issue 18. https://cen.acs.org/environment/recycling/Solar-panels-face-recycling-challenge-photovoltaic-waste/100/i18. Accessed January 24, 2024.

RCALUC (Riverside County Airport Land Use Commission). 2004. Riverside County Airport Land Use Compatibility Plan, Volume 1, Chapter 12 – Desert Center. https://rcaluc.org/sites/g/files/aldnop421/files/migrated/Portals-13-PDFGeneral-plan-newplan-12--20Vol.-201-20Desert-20Center.pdf. Accessed January 24, 2024.

RCDWR (Riverside County Department of Waste Resources). 2022. Semi-Annual Compliance Monitoring Report (January 1, 2022 – June 30, 2022) for the Desert Center Sanitary Landfill, 17-991 Kaiser Road, Desert Center, California.https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/3405688285/L10009957466.PDF

Riverside County (Riverside County Planning Department). 2021. Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-DCAP-4-2022-rev-6-2022.pdf

SWRCB (State Water Resources Control Board). 2023. State Water Resources Control Board. Database review of Desert Center area. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=desert+center. Accessed February 2023.

USACE (U.S. Army Corps of Engineers). 1996. Defense Environmental Restoration Program for Formerly Used Defense Sites, Ordnance and Explosives, Archives Search Report, Findings for the Former Desert Center Division Camp, Desert Center, California. http://www.militarymuseum.org/Camp-Desert-Center-History.pdf.

_____. 2021. DESERT CNTR ARPT, Formerly Used Defense Sites Program Management Action Plan, published by the USACE Environmental Programs, Data as of 2021 Annual Report to Congress. https://fudsportal.usace.army.mil/ems/inventory/map?id=61057.

West Coast Solar Energy. 2023. Solar Panel Recycling – Can Solar Panels be Recycled?. https://westcoastsolarenergy.com/can-solar-panels-be-recycled/#:~:text=More%20than%2090%25%20of%20the,lot%20of%20time%20and%20effort. Accessed March 2023.

Wilken, Jason A., Gail Sondermeyer, Dennis Shusterman, Jennifer McNary, Duc Vugia, Ann McDowell, Penny Borenstein, Debra Gilliss, Benedict Ancock, Janice Prudhomme, Deborah Gold, Gayle C. Windham, Lauren Lee, and Barbara L. Materna. 2015. Coccidioidomycosis among Workers Constructing Solar Power Farms, California, USA, 2011–2014, in Emerging Infectious Diseases (EID) Journal, Volume 21, Number 11 – November 2015, published by the Centers for Disease Control. https://wwwnc.cdc.gov/eid/article/21/11/15-0129_article. Accessed January 24, 2024.

7.13. Hydrology and Water Quality

AECOM. 2010. Water Supply Assessment, Palen Solar Power Project, Riverside County, California. Attachment G. California Energy Commission. January 2010.

_____. 2011. Desert Sunlight Solar Farm Project: Response to Public Comments Regarding Potential Relationship Between Groundwater Pumping Levels and Impacts to the Colorado River. Appendix O – Accounting Surface Technical Memorandum. Desert Sunlight Solar Farm Project Final EIS and CDGA Plan Amendment. To Bureau of Land Management, Palm Springs–South Coast Field Office. From Amanda Beck, First Solar. January 5, 2011.

Argonne (Argonne National Laboratory). 2013. A Groundwater Model to Assess Water Resource Impacts at the Riverside East Solar Energy Zone. Argonne National Laboratory. Environmental Science Division, U.S. Department of Energy, Office of Scientific and Technical Information. ANL/EVS/R 13/8. December 2013.

Aspen (Aspen Environmental Group). 2021. Oberon Renewable Energy Project, Water Supply Assessment. Plan of Development Appendix O. Prepared for IP Oberon, LLC. Prepared by Aspen Environmental Group. Submitted to the U.S. Bureau of Land Management. https://eplanning.blm.gov/eplanning-ui/project/2001226/570.

BLM (U.S. Department of the Interior, Bureau of Land Management). 2016a. Land Use Plan Amendment, Desert Renewable Energy Conservation Plan, Record of Decision for the Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. U.S. Department of the Interior Bureau of Land Management. September 2016.

_____. 2016b. Record of Decision, Desert Renewable Energy Conservation Plan, Record of Decision for the Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. U.S. Department of the Interior Bureau of Land Management. September 2016.

_____. 2011. Plan Amendment/Final EIS for the Palen Solar Power Project. U.S. Department of the Interior Bureau of Land Management. DOI Control No. FES 11 06. May 2011.

_____. 2012. Desert Harvest Solar Project Final Environmental Impact Statement and Proposed California Desert Conservation Area Plan Amendment. U.S. Department of the Interior Bureau of Land Management. CACA 49491. November 2012.

_____. 2023. Rights-of-Way, Leasing, and Operations for Renewable Energy Proposed Rule. Federal Register, 88 FR 39726. 43 CFR Part 2800. Published June 16, 2023. https://www.federalregister.gov/documents/2023/06/16/2023-12178/rights-of-way-leasing-and-operations-for-renewable-energy.

CEC (California Energy Commission). 2010. Palen Solar Power Project Revised Staff Assessment, Part II. California Energy Commission (CEC). CEC 700 2010 007 REV-PT2, Docket Number 09 AFC 07.

DWR (California Department of Water Resources). 2004. California's Groundwater, Working Toward Sustainability: Bulletin 118, Hydrologic Region Colorado River, Chuckwalla Valley Groundwater Basin. Prepared by California Department of Water Resources (DWR).

_____. 2015. California's Groundwater Update 2013. A Compilation of Enhanced Content for California Water Plan Update 2013. Colorado River Hydrologic Region. Prepared by California Department of Water Resources (DWR).

_____. 2020. Sustainable Groundwater Management Act 2019 Basin Prioritization, Process and Results. Prepared by the State of California, California Natural Resources Agency, Department of Natural Resources, Sustainable Groundwater Management Program. May 2020.

Fang, K., X. Ji, C. Shen, N. Ludwig, P. Godfrey, T. Mahjabin, and C. Doughty. 2021. *Assessing the Nexus between Groundwater and Solar-Energy Plants in a Desert Basin with a Dual-Model Approach under Uncertainty.* https://escholarship.org/uc/item/1zd1c78j. June 2021.

GEI (GEI Consultants, Inc.). 2010. *Eagle Mountain Pumped Storage Project, Draft Environmental Impact Report*. Volume I. State Clearinghouse No. 2009011010, FERC Project No. 13123. Prepared for the State Water Resources Control Board. Prepared by GEI Consultants, Inc. July 2010.

GSI (GSI Water Solutions, Inc.). 2024. Easley Renewable Energy Project Water Supply Assessment. Prepared for IP Easley, LLC, and Aspen Environmental Group.

Ironwood (Ironwood Consulting). 2023. Jurisdictional Waters Report Easley Solar Project. Ironwood Consulting, 370 Alabama Street, Suite A, Redlands, CA 92373. https://eplanning.blm.gov/eplanning-ui/project/2025816/510. Accessed September 2023.

NOAA (National Oceanic and Atmospheric Administration). No date[a]. Applied Climate Information System (ACIS). NOAA Regional Climate Centers. National Oceanic and Atmospheric Administration (NOAA). https://scacis.rcc-acis.org/. Accessed January 10, 2024.

_____. No date[b]. Global Summary of the Year Station Details. Network ID: GHCND:USC00040924. Blythe, California. Start Date 1931-01-01, End Date 2021-01-01. National Centers for Environmental Information (NCEI), National Oceanic and Atmospheric Administration (NOAA). https://www.ncdc.noaa.gov/cdo-web/datasets/GSOY/stations/GHCND:USC00040924/detail. Accessed January 10, 2024.

RWQCB (California Regional Water Quality Control Board, Colorado River Basin Region). 2019. *Water Quality Control Plan for the Colorado River Basin Region (includes amendments effective on or before January 8, 2019)*. California Regional Water Quality Control Board (RWQCB), Colorado Basin Region, State Water Resources Control Board. https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/.

_____. 2021. Oberon Renewable Energy Project Final Environmental Impact Report. State Clearinghouse 2021-03-0426. Prepared by Aspen Environmental Group. https://www.aspeneg.com/oberon-renewable-energy-project/.

Shen, C., K. Fang, N. Ludwig, P. Godfrey, and C. Doughty. 2017. *Impact of Water Use by Utility-Scale Solar on Groundwater Resources of the Chuckwalla Basin, CA: Final Modeling Report*. Prepared for the U.S. Department of Energy. Prepared by the Lawrence Berkeley National Laboratory. https://doi.org/10.2172/1398492. June 2017.

SWRCB (California State Water Resources Control Board). 2013. *Eagle Mountain Pumped Storage Project, Final Environmental Impact Report*. Prepared by the State Water Resources Control Board (SWRCB). July 2013. https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/eagle_mountain_pumped_ferc13123/eir/vol2/em_feir_3_3.pdf. Accessed April 12, 2023.

_____. 2020. 2018 Integrated Report or Clean Water Act Sections 305(b) and 303(d). Adopted by the State Water Resources Control Board on October 20, 2020. https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html.

U.S. Drought Monitor. 2023. Conditions and Outlooks. https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?West

USGS (United States Geological Survey). 2007. *Ground-Water Recharge in the Arid and Semiarid Southwestern United States*. Stonestrom, D.A., J. Constantz, T.P.A. Ferré, T.P.A., and S.A. Leake, eds. U.S. Geological Survey (USGS) Professional Paper 1703.

_____. 2009. Update of the Accounting Surface Along the Lower Colorado River. Scientific Investigations Report 2008–5113. https://pubs.usgs.gov/sir/2008/5113/. Accessed April 2023.

_____. 2023. Groundwater Levels for California. U.S. Geological Survey (USGS), National Water Information Systems: Web Interface. https://nwis.waterdata.usgs.gov/ca/nwis/gwlevels/?site_no=333527114511901, https://nwis.waterdata.usgs.gov/ca/nwis/gwlevels/?site_no=333527114511902, https://nwis.waterdata.usgs.gov/ca/nwis/gwlevels/?site_no=333527114511903 Accessed April 12, 2023.

Westwood. 2023. Preliminary Hydrology Study Easley Solar Project, Riverside County, California. February 17, 2023. Westwood, 12701 Whitewater Drive, Suite 300, Minnetonka, MN 55343.

Wilson, R.P., and S.J. Owen-Joyce. 1994. *Method to Identify Wells That Yield Water That Will Be Replaced by Colorado River Water in Arizona, California, Nevada, and Utah*. U.S. Geological Survey, Water-Resources Investigations Report 94-4005. Prepared in cooperation with the U.S. Bureau of Reclamation.

WorleyParsons. 2009. *Groundwater Resources Investigation, Genesis Solar Energy Project, Riverside County, California*. Prepared for Genesis Solar, LLC. Prepared by WorleyParsons Infrastructure and Environment. January 8, 2009.

WRCC (Western Regional Climate Center). 2023. Eagle Mtn, California (042598) Period of Record Monthly Climate Summary. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2598.

7.14. Land Use and Planning

Elmallah, S. et al. 2023. “Shedding light on large-scale solar impacts: An analysis of property values and proximity to photovoltaics across six U.S. states” Article in Energy Policy, Vol 175, April 2023 (An Elsevier publication) https://eta-publications.lbl.gov/sites/default/files/lspvp_journal_article.pdf. Accessed March 19, 2023.

Gaur, V. and C. Lang. 2020. “Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island” University of Rhode Island. https://www.uri.edu/news/wp-content/uploads/news/sites/16/2020/09/PropertyValueImpactsOfSolar.pdf. Accessed March 19, 2023.

Riverside County. 2021a (as revised September 28, 2021). General Plan Chapter 3 Land Use Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Ch03-Land-20Use-FINAL-209-28-21.pdf. Accessed January 24, 2024.

_____. 2021b. Riverside County General Plan, Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-DCAP-4-2022-rev-6-2022.pdf. Accessed January 24, 2024.

_____. 2023. Ordinance No. 348 Providing for Land Use Planning and zoning Regulations and Related Functions of the County of Riverside, Effective April 28, 2023. https://planning.rctlma.org/sites/g/files/aldnop416/files/2023-06/Ord348-04-28-2023-FINAL.pdf. Accessed December 18, 2023.

7.15. Noise and Vibration

BLM (U.S. Department of the Interior, Bureau of Land Management). 2010. Solar Energy Development Draft PEIS (Draft Solar PEIS), Chapter 4: Affected Environment. https://solareis.anl.gov/documents/dpeis/Solar_DPEIS_Chapter_4.pdf. Accessed February 14, 2023.

Caltrans. 2020. California Department of Transportation. Division of Environmental Analysis. Transportation and Construction Vibration Guidance Manual. April 2020. https://dot.ca.gov/programs/environmental-analysis/noise-vibration/guidance-manuals.

_____. 2023. Traffic Census Program. Traffic Volumes: Annual Average Daily Traffic (AADT) and Truck Traffic. https://dot.ca.gov/programs/traffic-operations/census. Accessed February 10, 2023.

FHWA (Federal Highway Administration). 2006. Roadway Construction Noise Model, User's Guide. January. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf. Accessed March 17, 2023.

FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment Manual (Report 0123). September. https://www.transit.dot.gov/research-innovation/transit-noise-and-vibration-impact-assessment-manual-report-0123. Accessed March 17, 2023.

OPR (Governor's Office of Planning and Research). 2017. General Plan Guidelines: 2017 Update. Updated September 2017. https://www.opr.ca.gov/docs/OPR_Appendix_D_final.pdf. Accessed March 17, 2023.

Riverside County. 2015a. General Plan, Appendix I-1, Noise Element Data. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-appendices-Appendix-I-1-120815.pdf. Accessed January 24, 2024.

_____. 2015b. General Plan, Chapter 7, Noise Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-elements-Ch07-Noise-120815.pdf. Accessed January 24, 2024.

U.S. EPA (United States Environmental Protection Agency). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. No. 550/9 74 004, Washington, D.C. https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF? Dockey=2000L3LN.PDF.

U.S. Forest Service. 2023. Sound Measurements Toolkit; Sound Measurements of Helicopters During Logging Operations. https://www.fs.usda.gov/t-d/programs/im/sound_measure/helo_index.shtml. Accessed January 24, 2024.

7.16. Paleontological Resources

BLM (U.S. Department of the Interior, Bureau of Land Management). 2008. Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources. IM 2009-011. https://www.blm.gov/policy/im-2009-011. Accessed November 2023.

_____. 2016. Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands. IM 2016-124. https://www.blm.gov/policy/im-2016-124. Accessed November 2023.

Jennings, C.W. 1967. Geologic Map of California: Salton Sea Sheet. California Division Geological Survey. Scale 1:250,000.https://www.conservation.ca.gov/cgs/Documents/Publications/Geologic-Atlas-Maps/GAM_13-SaltonSea-1967-Map.pdf Accessed November2023.

PaleoWest. 2023. Paleontological Resource Assessment for the Easley Project, Riverside County, California. https://eplanning.blm.gov/eplanning-ui/project/2025816/510. Accessed September 2023.

Riverside County. 2015 (as revised December 8, 2015). General Plan Chapter 5 Multipurpose Open Space Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2016-elements-Ch05-MOSE-120815.pdf. Accessed January 24, 2024.

SVP (Society of Vertebrate Paleontology). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impact to Paleontological Resources. http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx.

7.17. Population and Housing

CA DOF (California Department of Finance). 2021. Report P-2A: Total Estimated and Projected Population for California and Counties: July 1, 2010 to 2060. https://dof.ca.gov/Forecasting/Demographics/projections/. Accessed February 2023.

_____. 2022. E 5: Population and Housing Estimates for Cities, Counties, and the State, January 2022. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/. Accessed January 24, 2024.

CA EDD (California Employment Development Department). 2022. Labor Force and Unemployment Rate for Cities and Census Designated Places – March 2021 Benchmark, Annual Average. https://labormarketinfo.edd.ca.gov/geography/riverside-county.html. Accessed February 15, 2023.

US Census Bureau (United States Department of Commerce, Census Bureau). 2021a. American Community Survey 5 Year Estimates, Table DP05 - ACS Demographic and Housing Estimates Desert Center, CA). https://data.census.gov/table?g=1600000US0618982&d=ACS+5-Year+Estimates+Data+Profiles&tid=ACSDP5Y2021.DP05. Accessed February 18, 2023.

_____. 2021b. American Community Survey 5 Year Estimates, DP04 - Selected Housing Characteristics (Desert Center, Riverside County, and San Bernardino County, CA). https://data.census.gov/table?g=0500000US06065,06071_1600000US0618982&d=ACS+5-Year+Estimates+Data+Profiles&tid=ACSDP5Y2021.DP04. Accessed February 18, 2023.

_____. 2021c. 2010 2015 American Community Survey 5 Year Estimates, Table DP03 – Selected Economic Characteristics (Desert Center, CA). https://data.census.gov/table?g=1600000US0618982&d=ACS+5-Year+Estimates+Data+Profiles&tid=ACSDP5Y2021.DP03. Accessed February 18, 2023.

7.18. Public Services and Utilities

BLM (U.S. Department of the Interior, Bureau of Land Management). 2023. BLM's Law Enforcement Authority. https://www.blm.gov/programs/public-safety-and-fire/law-enforcement/laws-and-regulations. Accessed March 2023.

CalRecycle. 2023a. SWIS Facility/Site Activity Details. Blythe Sanitary Landfill (33-AA-0017) https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2256?siteID=2378. Accessed February 2023.

_____. 2023b. SWIS Facility/Site Activity Details. Desert Center Sanitary Landfill (33-AA-0016). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2255?siteID=2377. Accessed February 2023.

CDE (California Department of Education). 2023. California School Directory, Eagle Mountain Elementary. https://www.cde.ca.gov/SchoolDirectory/details?cdscode=33670416031900. Accessed February 2023.

CEC (California Energy Commission). 2020a. Electric Utility Service Areas. https://cecgis-caenergy.opendata.arcgis.com/documents/c69c363cafd64ad2a761afd6f1211442/explore. Accessed February 2023.

_____. 2020b. Natural Gas Utility Service Area. https://cecgis-caenergy.opendata.arcgis.com/documents/142ff453ebba49b88e07b51a08c215a7/explore. Accessed February 2023.

CHP (California Highway Patrol). 2023. Find an Office. https://www.chp.ca.gov/find-an-office. Accessed January 24, 2024.

CPUC (California Public Utilities Commission). 2023. California Interactive Broadband Map. https://www.broadbandmap.ca.gov/. Accessed February 2023.

Desert Care Network. 2023. Desert Regional Medical Center. https://www.desertcarenetwork.com/locations/detail/desert-regional-medical-center. Accessed February 2023.

Palo Verde Hospital. 2023. About Us, Palo Verde Healthcare District. https://www.paloverdehospital.org/54/About-Us. Accessed February 2023.

Riverside County. 2021. (as revised September 28, 2021). Riverside County General Plan Chapter 6 Safety Element.https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2021-elements-Ch06-Safety-092821.pdf. Accessed January 24, 2024.

Riverside County Fire Department 2023a. Service Area. https://www.rvcfire.org/about-us/service-area. Accessed February 2023.

_____. 2023b. Fire Stations Map. https://www.rvcfire.org/resources/fire-stations-map. Accessed February 2023

Riverside County Library System. 2023. Riverside County Library System Locations. https://www.rivlib.net/locations. Accessed February 2023.

Riverside County RPOSD (Regional Park and Open Space District). 2023. Explore RivCo Parks – Camping & Day Use Sites. https://rivcoparks.org/regional-parks-campgrounds. Accessed January 24, 2024.

Riverside County Sheriff. 2023. Colorado River Station. https://www.riversidesheriff.org/608/Colorado-River-Station. Accessed February 2023.

7.19. Recreation

BLM (U.S. Department of the Interior, Bureau of Land Management). 1999. The California Desert Conservation Area Plan 1980 As Amended. https://eplanning.blm.gov/public_projects/lup/66949/82080/96344/CDCA_Plan.pdf. Accessed February 2023.

_____. 2002. Proposed Northern and Eastern Colorado [NECO] Desert Coordinated Management Plan and Final Environmental Impact Statement. https://eplanning.blm.gov/public_projects/lup/67044/82327/97324/neco_rod_final.pdf#:~:text=An%20environmental%20impact%20statement%20was%20prepared%20for%20the,is%20available%20on%20BLM%E2%80%99s%20web%20site%20at%20http%3A%2F%2Fwww.ca.blm.gov. Accessed February 2023.

_____. 2015. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement. https://www.blm.gov/programs/planning-and-nepa/plans-in-development/california/desert-renewable-energy-conservation-plan. Accessed February 2023.

_____. 2018. Final Supplemental Environmental Impact Statement/Environmental Impact Report/Land Use Plan Amendment for the Palen Solar Project. DOI-BLM-CA-060-2017-001-EIS. https://eplanning.blm.gov/eplanning-ui/project/68122/570. Accessed January 24, 2024.

_____. 2020. BLM Recreation Management Information System Report 23c, Visits and Visitor Days by RMA, Oct 2019- Sept 2020. December 14, 2020

_____. 2023. BLM website search for recreation-related areas near Desert Center, CA. https://www.blm.gov/visit/search?field_location=All&field_activities=All&search_api_fulltext=desert+center. Accessed January 24, 2024.

NPS (National Park Service). 2023. Joshua Tree National Park: Park Statistics. https://www.nps.gov/jotr/learn/management/statistics.htm. Accessed January 24, 2024.

Rode, Erin. 2023. New national monument proposed south of Joshua Tree National Park. Desert Sun. January 3. https://www.desertsun.com/story/news/environment/2023/01/03/new-national-monument-chuckwalla-proposed-south-of-joshua-tree-national-park/69759850007/. Accessed June 2023.

7.20. Traffic and Transportation

AirNav. 2023a. Information on Blythe Airport. http://www.airnav.com/airport/KBLH. Accessed May 3, 2023.

_____. 2023b. Information on Desert Center Airport. https://www.airnav.com/airport/CN64. Accessed January 24, 2024.

CMLUCA (California Military Land Use Compatibility Analysis). 2023. Report for Desert Center area. http://cmluca.gis.ca.gov/. Accessed May 3, 2023.

FAA (Federal Aviation Administration). 2018. Technical Guidance for Evaluating Selected Solar Technologies on Airports. https://www.faa.gov/sites/faa.gov/files/airports/environmental/FAA-Airport-Solar-Guide-2018.pdf. Accessed January 24, 2024.

Palo Verde Valley Transit Agency. 2023. Bus Routes. https://pvvta.com/. Accessed February 20, 2023.

Riverside County. 2020. General Plan Circulation Element. Riverside County General Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2019-elements-Ch04-Circulation-072720v2.pdf. Accessed January 24, 2024.

7.21. Wildfire

BLM (U.S. Department of the Interior, Bureau of Land Management). 2023a. BLM Fire Program. https://www.blm.gov/programs/fire. Accessed January 24, 2024.

_____. 2023b. California Desert District Office. https://www.blm.gov/office/california-desert-district-office. Accessed January 24, 2024.

CAL FIRE (California Department of Forestry and Fire Protection). 2022. 2022 Incident Archive. https://www.fire.ca.gov/incidents/2022/. Accessed January 24, 2024.

_____. 2023. FHSZ Viewer. https://egis.fire.ca.gov/FHSZ/. Accessed January 24, 2024.

RCFD (Riverside County Fire Department). 2020. Riverside County Fire Department Office of the Marshal. Technical Policy. Fire Apparatus Access and Fire Protection Water Supplies for One-and Two-Family Dwellings, Additions Thereto and Associated Accessory Structures. https://rvcfire.org/pdf/fire-marshal/technical-policies/TP23-001PrivateFireProtectionWaterSupplyTanksandHydrantsforOneandTwoFamilyDwellings020223.pdf?v=5464. Accessed January 24, 2024.

_____. 2023. Riverside County Fire Stations. https://www.rvcfire.org/resources/fire-stations. Accessed February 21, 2023.

Riverside County. 2019. Riverside County General Plan, Chapter 6 Safety Element. Revised August 6.

_____. 2021a. Chapter 6, Safety Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2021-elements-Ch06-Safety-092821.pdf. Revised September 28. Accessed January 24, 2024.

_____. 2021b. Desert Center Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-DCAP-4-2022-rev-6-2022.pdf. Revised September 28. Accessed January 24, 2024.

USEPA (U.S. Environmental Protection Agency). 2023. Climate Change Indicators: Weather and Climate. https://www.epa.gov/climate-indicators/weather-climate. Accessed January 24, 2024.

7.22. Other CEQA Considerations

Brown, Jeffry R., Christine A. Bishop, and Ronald J. Brooks. 2010. Effectiveness of Short-Distance Translocation and its Effects on Western Rattlesnakes, Journal of Wildlife Management 73(3), 419-425, (1 April 2009). https://wildlife.onlinelibrary.wiley.com/doi/abs/10.2193/2007-558. Accessed May 2023.

Buczkowski, G. and C. Bertelsmeier. 2017. Invasive termites in a changing climate: A global perspective. Ecology and Evolution 2017; 7(3):974-985. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5288252/pdf/ECE3-7-974.pdf. Accessed May 2023.

Clark, Tiffany, Joseph Curran, Joy Vyhmeister, and Matthew Tennyson. 2023. Phase I Cultural Resources Inventory for the Easley Renewable Energy Project, Riverside County, California. Submitted to the Riverside County Planning Department, California.

Dyste, Diana, Matthew Tennyson, Joy Vyhmeister, Paige Kohler, and Kyle Knabb. 2023 Cultural Resource Class I Report for the Easley Renewable Energy Project, Riverside County, California. Submitted to BLM Palm Springs Field Office, Palm Springs, California.

EPA (U.S. Environmental Protection Agency). 2010 Indoor Environmental Quality and Climate Change. https://www.epa.gov/sites/default/files/2014-08/documents/climate_change_brennan.pdf. Accessed May 2023.

Hinojosa, Marlen, Heather Landazuri, Tiffany Clark, Joy Vyhmeister, and Matthew Tennyson. 2023. Class III Cultural Resources Inventory for the Easley Renewable Energy Project, Riverside County, California. Submitted to BLM Palm Springs Field Office, Palm Springs, California.

Lewis, V.R. 2014. Pest Notes: Subterranean and Other Termites, Integrated Pest Management in and around the Home. University of California Agriculture and Natural Resources Statewide Integrated Pest Management Program. https://ipm.ucanr.edu/PMG/PESTNOTES/pn7415.html. Accessed May 2023.

Lomas, Emily, Jared R. Maida, Christine A. Bishop, and Karl W. Larsen. 2019. Movement Ecology of Northern Pacific Rattlesnakes (*Crotalus o. oreganus*) in Response to Disturbance. Herpetologica 2019; 75(2):153-161. https://meridian.allenpress.com/herpetologica/article-abstract/75/2/153/439125/Movement-Ecology-of-Northern-Pacific-Rattlesnakes. Accessed May 2023.

Miller, Dini M. 2010. Subterranean Termite Biology and Behavior. Virginia Cooperative Extension Publication 444-502. https://vtechworks.lib.vt.edu/bitstream/handle/10919/56812/444-502.pdf?sequence=1. Accessed May 2023.

Nowak, Erika M., Trevor Hare, and Jude McNally. 2017. Management of "Nuisance" Vipers: Effects of Translocation on Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Biology of the Vipers. http://eaglemountainpublishing.s3.amazonaws.com/PDF/Biology%20of%20the%20Vipers/CH%2034_nowak_.pdf. Accessed May 2023.

Olson, D.H. and D. Saenz. 2013. Reptiles and Climate Change. U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. https://www.fs.usda.gov/ccrc/topics/reptiles-and-climate-change. Accessed January 24, 2024.

Putman, B.J. and R.W. Clark. 2017. Behavioral thermal tolerances of free-ranging rattlesnakes (*Crotalus oreganus*) during the summer foraging season. Journal of Thermal Biology Volume 65, April 2017, Pages 8-15. https://www.sciencedirect.com/science/article/abs/pii/S0306456516303291. Accessed May 2023.

Riverside County. 2019. Final Environmental Impact Report for IP Athos LLC's Athos Renewable Energy Project (SCH No. 2018051021). Accessed November 12,2023 at https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Postings-Athos-FinalEIR-IPAthosFinalEIR.pdf.

SHPO (State Historic Preservation Officer). 2021. RE: Oberon Solar Project, Riverside County. Letter dated December 20, 2021. State of California, Office of Historic Preservation.

Tennyson, Matthew. 2023. Oberon Solar Project – SR-177. Submitted to the Aspen Environmental Group, Agoura Hills, California.