# FINAL

# Environmental Impact Report

**for**

# IP Oberon LLC's
# Oberon Renewable Energy Project

## (SCH No. 2021030426)



**Lead Agency:**

CALIFORNIA WATER BOARDS
Colorado River - R7

**Technical Assistance by:**

Aspen environmental group

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# LIST OF ACRONYMS

| | |
|---|---|
| AB | Assembly Bill |
| AC | Alternating current |
| ACEC | Area of Critical Environmental Concern |
| ACHP | Advisory Council on Historic Preservation |
| ADT | Average daily trips |
| AIRFA | American Indian Religious Freedom Act |
| ANSI | American National Standards Institute |
| AO | Authorized Officer |
| APE | Area of Potential Effect |
| APLIC | Avian Power Line Interaction Committee |
| APS | Arizona Public Service |
| ARB | Air Resources Board |
| ARMR | Archaeological Resource Management Reports |
| ARPA | Archaeological Resources Protection Act |
| ASTM | American Society of Testing and Materials |
| ATCM | Airborne Toxic Control Measures |
| BACI | Before-after/control-impact |
| BACM | Best Available Control Measure |
| BAT | Best available technology economically achievable |
| BBCS | Bird and Bat Conservation Strategy |
| BCR | Bird conservation region |
| 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 |
| BO | Biological Opinion |
| BRTR | Biological Resources Technical Report |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalARP | California Accidental Release Prevention |
| Cal-EPA | California Environmental Protection Agency |
| CAP | Climate Action Plan |
| CAPCOA | California Air Pollution Control Officers Association |
| CBC | California Building Code |
| CBG | California Botanic Garden |
| CCR | California Code of Regulations |
| 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 |
| CGS | California Geologic Survey |
| CHP | California Highway Patrol |
| CHRIS | California Historical Resources Information System |
| CHU | Critical habitat unit |
| CIWMB | California Integrated Waste Management Board |
| CMA | Conservation and Management Action |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | Carbon monoxide |
| $CO_2$ | Carbon dioxide |
| CPRC | California Public Resources Code |
| CPUC | California Public Utilities Commission |
| CRA | Colorado River Aqueduct |
| CRHR | California Register of Historical Resources |
| CRIT | Colorado River Indian Tribes |
| CRPR | California Rare Plant Rank |
| CRR | Cultural Resources Report |
| CRS | Cultural Resources Specialist |
| CRUP | Cultural resource use permit |
| CSA | County Service Area |
| CSP | Concentrating solar power |
| 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 |
| DDWW | Desert Dry Wash Woodland |
| DEH | Department of Environmental Health |
| DESCP | Drainage Erosion and Sedimentation Control Plan |
| DFA | Development Focus Area |
| DPM | Diesel particulate matter |
| DPR | Department of Parks and Recreation |
| DPV | Devers–Palo Verde |
| DRECP | Desert Renewable Energy Conservation Plan |
| DTCCL | Desert Training Center Cultural Landscape/Historic District |
| DTSC | Department of Toxic Substance Control |

| | |
|---|---|
| EA | Environmental Assessment |
| EAP | Energy Action Plan |
| EIC | Eastern Information Center |
| EIR | Environmental Impact Report |
| EMF | Electromagnetic field |
| EO | Executive Order |
| ERMA | Extensive Recreation Management Area |
| ERP | Emergency response plan |
| ESA | Endangered Species Act |
| ESS | Energy Storage Systems |
| FAA | Federal Aviation Administration |
| FEIS | Final Environmental Impact Statement |
| FEMA | Federal Emergency Management Agency |
| FHSZ | Fire Hazard Severity Zones |
| FLPMA | Federal Land Policy and Management Act |
| FMPP | Fire Management and Prevention Plan |
| FRA | Federal Responsibility Area |
| FUDS | Formerly Used Defense Sites |
| GHG | Greenhouse gas |
| GMRMP | Groundwater Monitoring, Reporting, and Mitigation Plan |
| GSA | Groundwater Sustainability Agency |
| HEPA | High-efficiency particulate air |
| HFC | Hydrofluorocarbon |
| HMBP | Hazardous Materials Business Plan |
| HMMP | Hazardous Materials Management Plan |
| HSC | Health and Safety Code |
| HVAC | Heating, ventilation, and air conditioning |
| HWCL | Hazardous Waste Control Law |
| IEEE | Institute of Electrical and Electronics Engineers |
| IIPP | Injury and Illness Prevention Program |
| ITP | Incidental Take Permit |
| IWMB | Integrated Waste Management Board |
| IWMP | Integrated Weed Management Plan |
| JTNP | Joshua Tree National Park |
| KOP | Key Observation Point |
| LADWP | Los Angeles Department of Water and Power |
| LAMP | Local Agency Management Program |
| LD-IGR | Local Development–Intergovernmental Review |
| LED | Light-emitting diode |
| LPS | Low-pressure sodium |
| LR2000 | BLM Land and Records System |
| LRA | Local Responsibility Area |
| LSAA | Lake and Streambed Alteration Agreement |
| LST | Localized Significance Threshold |

| | |
|---|---|
| LTMP | Long-Term Management Plan |
| LUPA | Land Use Plan Amendment |
| MD | Munitions debris |
| MDAB | Mojave Desert Air Basin |
| MEC | Munitions and explosives of concern |
| MET | Meteorological |
| MLD | Most Likely Descendant |
| MLRS | Mineral and Land Records System |
| MM | Mitigation Measure |
| MMRP | Mitigation Monitoring and Reporting Program |
| MOG | Management Oversight Group |
| MRZ | Mineral Resource Zone |
| MW | Megawatt |
| NAGPRA | Native American Graves Protection and Repatriation Act |
| NAHC | Native American Heritage Commission |
| NBMP | Nesting Bird Management Plan |
| NCCP | Natural Community Conservation Plan |
| NCP | National Contingency Plan |
| NDMC | National Drought Mitigation Center |
| NECO | Northern and Eastern Colorado Desert Coordinated Management |
| NEPA | National Environmental Policy Act |
| 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 |
| NHPA | National Historic Preservation Act |
| NIS | Non-ionic surfactant |
| NO | Nitric oxide |
| NOA | Notice of Availability |
| NOAA | National Oceanic and Atmospheric Administration |
| NOC | Notice of Completion |
| NOD | Notice of Determination |
| 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 | National Resource Conservation Service |
| NRHP | National Register of Historic Places |
| NSHM | National Seismic Hazard Model |
| NTP | Notice to Proceed |
| OEHHA | Office of Environmental Health Hazard Assessment |
| OHV | Off-Highway Vehicle |

| | |
|---|---|
| OPLMA | Omnibus Public Lands Management Act |
| OSHA | Occupational Safety and Health Administration |
| OWTS | Onsite Wastewater Treatment System |
| PA | Programmatic Agreement |
| PBF | Physical and Biological Feature |
| PCB | Polychlorinated biphenyl |
| PERP | Portable Equipment Registration Program |
| PFC | Perfluorocarbon |
| 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) |
| POCO | Point-of-change-of-ownership |
| POD | Plan of Development |
| PPA | Power Purchase Agreement |
| PPE | Personal protective equipment |
| PPV | Peak particle velocity |
| PR | Professional of Record |
| PRC | Public Resources Code |
| PRMP | Paleontological Resources Monitoring and Mitigation Plan |
| PRPA | Paleontological Resources Preservation Act |
| PTNCL | Prehistoric Trails Network Cultural Landscape/Historic District |
| PUP | Pesticide Use Proposal |
| PV | Photovoltaic |
| PVMGB | Palo Verde Mesa Groundwater Basin |
| 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 |
| RIT | Recovery Implementation Team |
| RMP | Resource Management Plan |
| ROD | Record of Decision |
| ROG | Reactive organic gas |
| ROW | Right-of-way |
| RPS | Renewable Portfolio Standard |
| ~~RSABG~~ | ~~Rancho Santa Ana Botanic Garden~~ |
| 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 |
| SCAG | Southern California Association of Governments' |
| 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 |
| SEZ | Solar Energy Zone |
| SF299 | Standard Form 299 |
| SHPO | State Historic Preservation Office |
| SLF | Sacred Lands File |
| SMARA | Surface Mining and Reclamation Act |
| SMARTS | Stormwater Multiple Application and Report Tracking System |
| SMD | Sonoran and Mojave Deserts |
| SMZ | Sand migration zone |
| SPCC | Spill Prevention, Control, and Countermeasure |
| SR | State Route |
| SRP | Special Recreation Permit |
| SSURGO | Soil Survey Geographic |
| STATSGO | State Soil Geographic |
| SVP | Society of Vertebrate Paleontology |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TAC | Toxic air contaminant |
| TCA | Desert Tortoise Conservation Area |
| TCR | Tribal cultural resources |
| TDS | Total Dissolved Solids |
| TISG | Transportation Impact Study Guide |
| TP | Technical Policy |
| TSCA | Toxic Substances Control Act |
| UBC | Uniform Building Code |
| USBR | U.S. Bureau of Reclamation |
| USC | United States Code |
| USDA | U.S. Department of Agriculture |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| UST | Underground storage tank |
| UXO | Unexploded ordnance |
| VOC | Volatile organic compound |
| VPLs | Variance Process Lands |
| VRM | Visual Resource Management |
| VRMP | Vegetation Resources Management Plan |
| WDRs | Waste Discharge Requirements |
| WEAP | Worker Environmental Awareness Program |
| WSA | Water Supply Assessment |
| WSC | Western Science Center |
| WWII | World War II |

# Executive Summary

## ES.1 Introduction

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

The proposed project site is approximately 5,000 acres of Bureau of Land Management (BLM) administered land located immediately north of Interstate 10 (I-10) near Desert Center, California. Project facilities would occupy approximately 2,700 acres of the 5,000-acre site (see Figure ES-1, Project Vicinity). Renewable electric power generated by the project would be delivered to the State's power grid by way of a new 500 kilovolt (kV) generation tie (gen-tie) line interconnecting to Southern California Edison's (SCE) existing 500 kV Red Bluff Substation, located approximately 500 feet south of I-10. Project construction would occur over approximately 15 to 20 months, concluding in or before the fourth quarter of 2023. 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 condition to the extent feasible.

The project site and surrounding region are within the California Desert Conservation Area (CDCA) Planning Area. The land is within a Development Focus Area (DFA), which was designated pursuant to the Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA) and associated Record of Decision (ROD).

Although located on federal land and under review by the BLM, the project is subject to review and approval by the Colorado River Basin Regional Water Quality Control Board (RWQCB) under the California Environmental Quality Act (CEQA). Based on its review of IP Oberon, LLC's Waste Discharge Requirements application, additional information requested of the Applicant, and the information contained in this Environmental Impact Report (EIR), the RWQCB will determine whether to issue the required permit. The BLM's separate review under the National Environmental Policy Act (NEPA) will determine compliance with the DRECP Conservation and Management Actions (CMAs), assist that agency in determining whether it will approve the project and issue required right-of-way (ROW) grants.

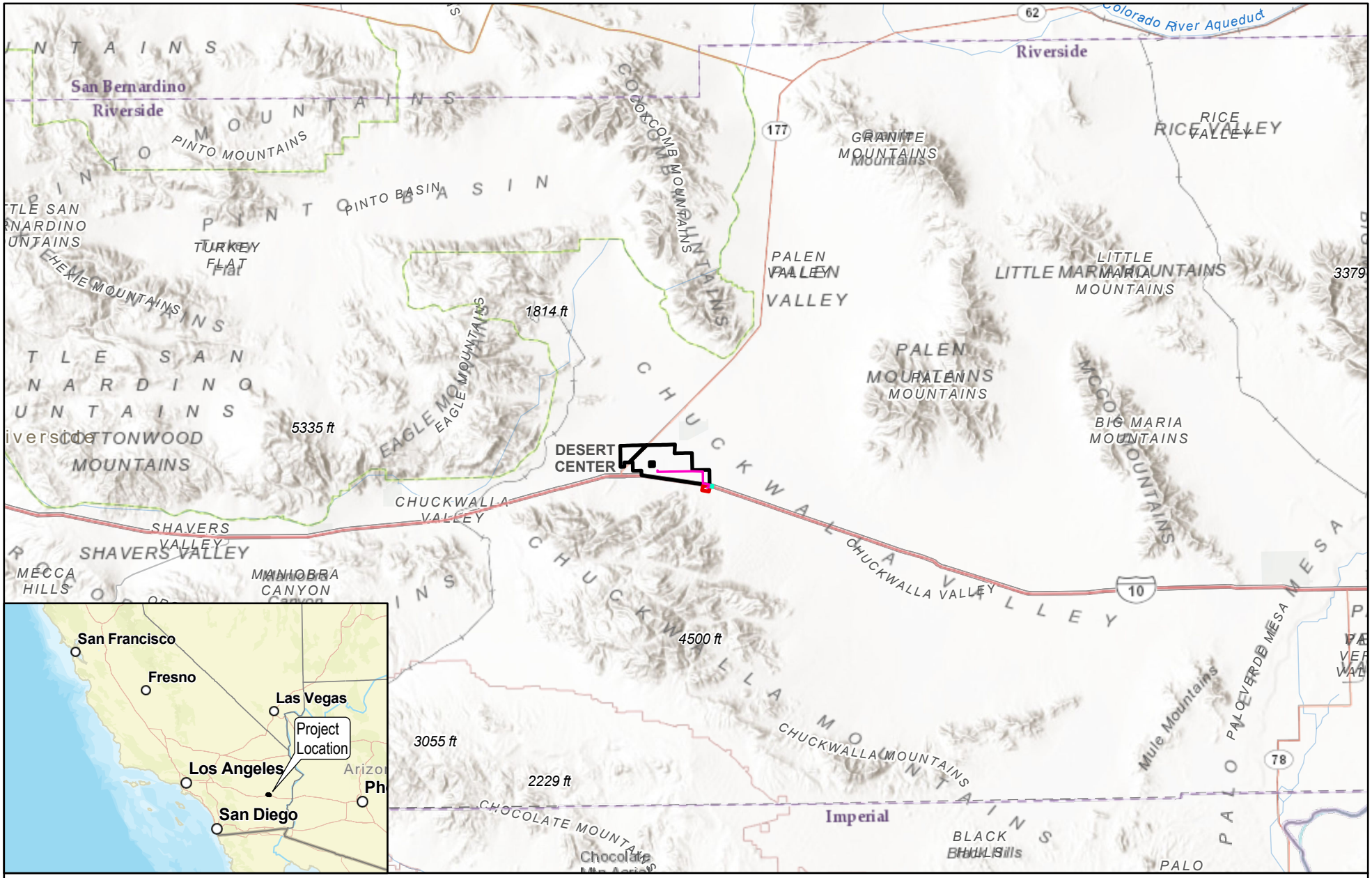



**Figure ES-1**

**Project Vicinity**

## ES.2 Project Objectives

The purpose of the project is to generate, store, and transmit 500 megawatts (MW) of renewable energy to the statewide wholesale electricity grid. The Applicant's project objectives are to:

1. Deliver 500 MW of affordable wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
2. 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 the 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;
3. Bring living-wage renewable energy construction jobs to eastern Riverside County, including Native American construction and monitoring jobs;
4. Minimize environmental impacts and land disturbance associated with solar development by siting the facility on relatively flat, contiguous lands receiving high solar insolation, that are in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access;
5. Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
6. Assist the nation in meeting 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 emissions from 2005 levels by 2030, and to achieve 100 percent carbon pollution-free electricity by 2035 in the electricity sector;
7. Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 500 MW of 2-hour and/or 4-hour battery energy storage capacity;
8. Conform with the Desert Renewable Energy Conservation Plan's Conservation and Management Actions to the maximum extent practicable, while also optimizing the balance between renewable energy generation and protection and conservation of sensitive habitat; and
9. Support before-after/control-impact (BACI) scientific research at the project site to further the public's understanding of the interactions between wildlife and solar energy facilities.

# ES.3 CEQA Lead Agency and Permits

The Colorado River Basin RWQCB is the Lead Agency for the review of the project under CEQA. For purposes of this EIR, the term "project" refers to the discretionary actions required to issue Waste Discharge Requirements for dredge or fill discharges to Waters of the State.

Below is a list of known discretionary and ministerial actions anticipated to be needed 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.

| Agency | Permit/Action |
|---|---|
| **Federal** | |
| BLM | Grant of right-of-way |
| U.S. Fish & Wildlife Service | Biological Opinion |
| **State or Regional** | |
| Colorado River Basin Regional Water Quality Control Board (RWQCB) | CWA section 401 Water Quality Certification or Waste Discharge Requirements |
| South Coast Air Quality Management District (SCAQMD) | Indirect Source Review |
| | Dust Control Plan |
| | Authority to Construct and Permit to Operate |
| California Department of Transportation, District 8 | Encroachment Permit |
| California Department of Fish & Wildlife (CDFW) | Lake and Streambed Alteration Agreement |
| | Incidental Take Permit |

# ES.4 Public Involvement

## ES.4.1 Notice of Preparation

In compliance with CEQA Guidelines section 15082, a Notice of Preparation (NOP) was issued on March 18, 2021. The notice briefly described the proposed project and location, environmental review process, the potential environmental effects, contact information, and announced the time and location of the public scoping meeting.

## ES.4.2 CEQA Public Scoping

The 30-day public scoping period commenced on March 18, 2021, with the issuance of the NOP, which summarized the proposed project and requested comments from

interested parties. Owing to the COVID-19 pandemic, an in-person meeting format was not used. Instead, an online web-based virtual meeting was conducted by the Colorado River Basin RWQCB and BLM on April 13, 2021. The public scoping period ended on April 19, 2021. In total, 15 CEQA and NEPA comment letters were received.

### ES.4.3 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: aesthetics/visual resources; air resources; biological resources, including impacts to desert tortoise critical habitat, the multi-species linkage corridor, and desert dry wash woodland; climate change; cultural resources; hazards; land use; water resources; soils; solid waste; public health and safety; land use; recreation, and transportation and traffic. Comments also were received regarding environmental justice; project description; statement of purpose and need; mitigation measures; indirect and cumulative impacts; project alternatives; document format; permitting issues; and agency consultation. A scoping report was prepared for the project and is provided in EIR Appendix A. Public scoping comments also are summarized in EIR Section 1.5 (Scoping Comments Summary) and in the individual resource topics addressed in Chapter 3 (Environmental Analysis).

### ES.4.4 Review of Draft EIR

On August 13, 2021, the Draft EIR was 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). The 45-day public comment period ended on September 30, 2021. A hard copy of the Draft EIR was available at the Lake Tamarisk Branch Library located at 43880 Tamarisk Drive; Desert Center, CA 92239.

Per CEQA Guidelines 15085, a Notice of Completion was filed with the State of California Governor's Office of Planning and Research (State Clearinghouse) on August 16, 2021. The Notice of Availability (NOA) of a Draft EIR was filed with the Riverside County Clerk on August 13, 2021 (CEQA Guidelines Section 15087) and mailed to over 200 agencies, tribes, businesses/organizations, and individuals. The NOA announced the commencement of the public review of the Draft EIR. A legal notice of availability of the Draft EIR was also published in the Desert Sun newspaper on August 18, 2021.

There were 48 comments received during the comment period. One from agencies, 1 from tribes, 6 from businesses/organizations, and 40 from individuals. Issues raised included concerns about biological resources, namely impacts to desert dry wash woodland and its buffer, critical habitat, and the multi-species linkage corridor, cultural and tribal resources, hydrology, project description, alternatives, impact significance, compliance with the DRECP CMAs and BLM's consideration of and the precedence set by a land use plan amendment, and the environmentally superior alternative.

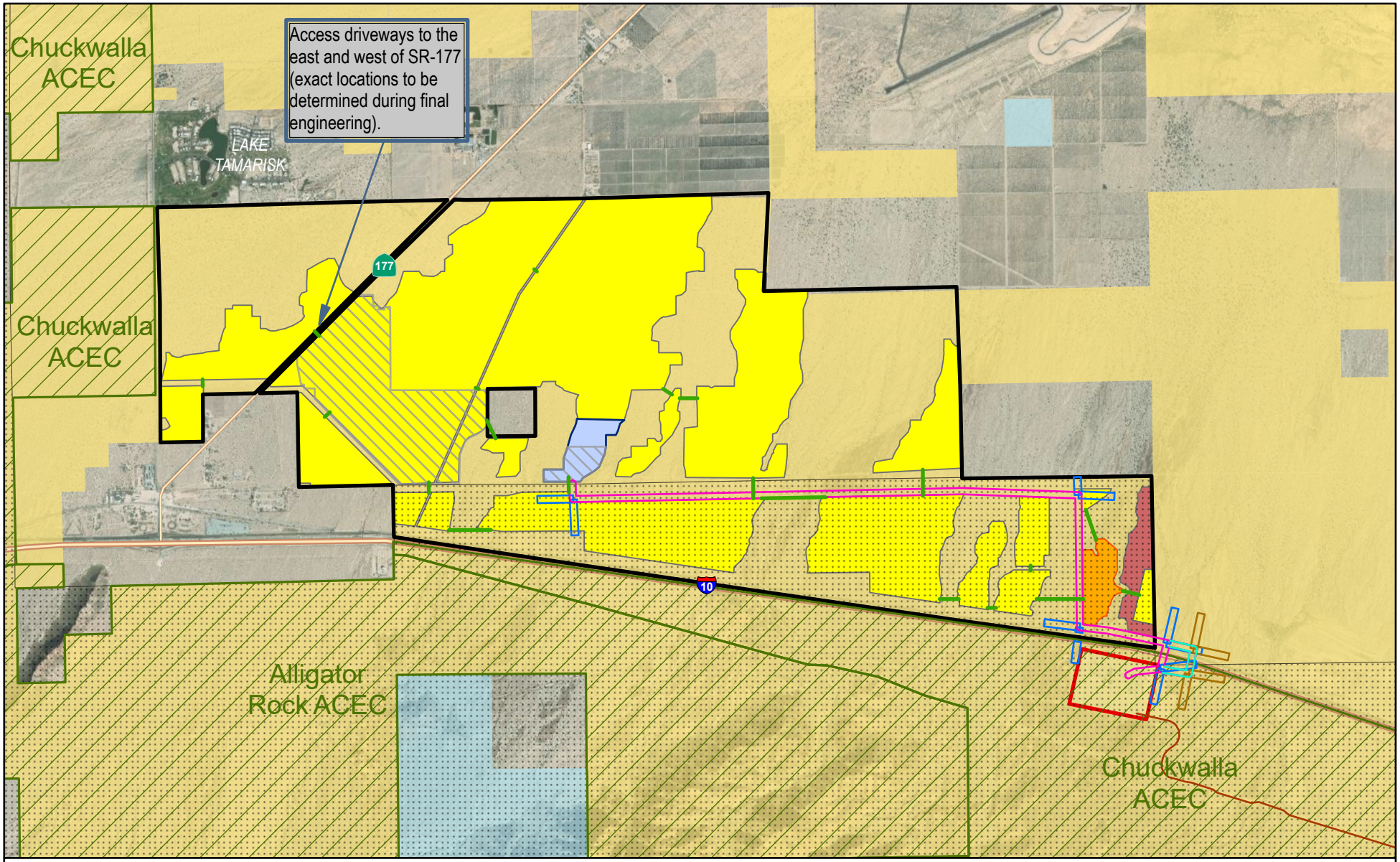
All significant environmental issues raised in comments received during the public review period for the Draft EIR have been responded to in this Final EIR (see Appendix D).

# ES.5 Proposed Project

## ES.5.1 Project Location

The Oberon Project site is on BLM-administered land adjacent to the northside of I-10, just east of Desert Center in eastern Riverside County, California (see Figure ES-2, Project Area). Lake Tamarisk Desert Resort is adjacent to the northwest corner of the project, on Kaiser Road. Three large solar projects are in operation in the vicinity. Two of these, Desert Sunlight and Desert Harvest, are approximately 4.5 and 4 miles north of the Oberon site, respectively. The third, Palen Solar, is approximately 4.2 miles east of the Oberon site. A fourth project, the approved multi-parcel Athos Renewable Energy Project, is under construction on private land north and east of the Oberon site. Some of the Athos project parcels abut portions of the northern and eastern boundaries of the Oberon site.

In addition to the Oberon Project, three solar projects are proposed for development on BLM-administered lands north and east of the Oberon site. If approved, the proposed Victory Pass Solar Project would be directly east of the Oberon site. The proposed Arica Solar Project would be adjacent to and immediately north of the Victory Pass project. The recently proposed Easley Solar and Green Hydrogen Project would be on parcels located between Lake Tamarisk Desert Resort and the Desert Harvest Project and on land generally north and east of the Oberon site.


Chuckwalla ACEC
Access driveways to the east and west of SR-177 (exact locations to be determined during final engineering).
LAKE TAMARISK
177
Chuckwalla ACEC
10
Alligator Rock ACEC
Chuckwalla ACEC
Project Boundary
Substation and BESS Area
Substation and BESS Area Option (based on final engineering and crossing agreements)
Fenced Solar Array
Eagle Crest Gen-tie Line
Early Proposed Fencing
Proposed 500-kV Gen-tie Line Corridor
500-kV Gen-tie Line Option (based on final negotiations with SCE and ROW holders)
34.5 kV MVAC Lines
Pull Tensioning Area
Optional Pull Tensioning Area
Existing SCE Red Bluff Substation
Area of Critical Environmental Concern
Desert Tortoise Designated Critical Habitat
Gen-tie Access Road (existing)
Land Ownership
Bureau of Land Management
State
Figure ES-1
Oberon Renewable Energy Project Area
N
0
0.5
1
Miles
Sources: Aspen, 2021; Intersect Power, 2021; Westwood, 2021; BLM, 2021; Esri, 2021.

### ES.5.2 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 Facility** (approximately 2,700 acres)
  - Multiple solar array fields that employ single-axis solar PV trackers.
  - Inverter-transformer stations, each with up to six inverters, a transformer, and an 8- to 11-foot-high switchboard.
  - A network of 34.5 kV collection power lines between inverters-transformer stations and an on-site substation.
  - An on-site substation to step up power from 34.5 kV to 500 kV and including a 100-foot microwave tower.
  - Battery energy storage system capable of storing up to 500 MW of electricity for 4 hours.
  - Interior access roads and a meteorological data collection system.
  - An operation and maintenance (O&M) building of approximately 3,000 square feet.
  - Supervisory Control and Data Acquisition System (SCADA) and telecommunications facilities.
  - Security fencing to prohibit unauthorized entry and to exclude wildlife during construction activities; altered during O&M at some locations to allow passage of desert tortoise and other small wildlife through solar fields.
- New 500 kV Gen-tie Line
  - Nearly 4 miles of gen-tie line would be located within the solar facility application area.
  - Outside of the solar facility boundaries, approximately 0.5 miles of gen-tie line on BLM land would connect to the existing SCE Red Bluff Substation immediately south of I-10.
  - Upgrades to Red Bluff Substation by SCE to accommodate the Oberon 500 kV gen-tie line interconnection.

## ES.6 Alternatives

### ES.6.1 Alternatives Analyzed

This EIR includes evaluations of project alternatives that would reduce impacts, including a No Project Alternative. CEQA also 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. Alternatives to the proposed project were identified through the scoping process, informational public meetings, and preliminary studies.

- **No Project Alternative.** Under the No Project Alternative, the construction of the proposed solar generating facility and associated infrastructure would not occur. The No Project Alternative describes existing conditions as well as what would be expected to occur in the reasonably foreseeable future if the proposed project is not developed. The project site is within the East Riverside ~~East Solar Energy Zone (SEZ) and a~~ DFA near an existing substation with available capacity for transmission of additional power.

  Given the locational advantages of the site (e.g., level of insolation, ~~SEZ and~~ DFA status, proximity to transmission), if the Oberon Project were not constructed, it is highly likely that another developer would apply to construct a solar project here. If a different solar project were to be constructed in this location, the impacts of that project would be similar or the same as those identified for the proposed project in Chapter 3 of this EIR.

- **Land Use Plan Compliant Alternative.** Under the Land Use Plan Compliant Alternative, the Applicant would comply with all CMAs specified in the DRECP LUPA and no LUPA to the CDCA would be required by BLM. Most aspects the Land Use Plan Compliant Alternative would be similar to the proposed project. However, this alternative would establish a 200-foot setback from desert dry wash woodland, removing approximately 600 acres from the development footprint. To offset for some of the land lost to development with the setback, panels would be installed in the BLM Section 368 utility corridor along I-10, which under the proposed project would have a 300-foot setback from the freeway. Overall, this alternative would reduce the project's capacity to 75 percent of the electricity (375 MW) that would be produced under the proposed project. During construction desert tortoise exclusion fencing would be installed around the project development footprint. Under this alternative during O&M this fencing would remain in place and not be modified to allow wildlife to enter certain parts of the project area. Exclusion fencing would maximize desert tortoise safety during O&M activities,

- **Resource Avoidance Alternative with Prehistoric Resources/TCR Option.** The Resource Avoidance Alternative with Prehistoric Resources/TCR Option would avoid direct impacts to prehistoric archaeological resources. Otherwise, the Resource Avoidance Alternative would be similar to the Land Use Plan Compliant Alternative with a 200-foot setback from desert dry wash woodland and maintaining the exclusion fencing during O&M, except it would also exclude development in areas of desert tortoise critical habitat and the multi-species linkage corridor on the project site. Avoiding prehistoric archaeological resources with the Prehistoric Resources/TCR Option and removing desert tortoise critical habitat and the multi-species linkage corridor (which overlaps the desert tortoise

critical habitat at the eastern end of the project area) would eliminate approximately 1,100 acres from the project. This would result in the project being able to generate only 300 MW of solar power, 60 percent of its objective of 500 MW under the proposed project.

## ES.6.2 Alternatives Considered but Eliminated

Some potential alternatives did not have the potential to meet the project objectives or did not have the potential to avoid or minimize adverse environmental effects. The alternatives below were initially considered but eliminated from further evaluation for the reasons noted.

### Private Land Alternative

An alternative that would develop the solar facility on private lands was not considered further, because it is considered speculative and infeasible based on the large number of landowners whose agreement would be needed to assemble a project site of comparable size to the proposed project. In addition, another site would likely have environmental impacts equal to or greater than the proposed site, which is located primarily on disturbed (retired agricultural) land and is surrounded by BLM-administered land that is within the East Riverside DFA targeted for renewable energy development and close to available transmission.

### Federal Land Alternative

Similar to the project, an alternative site elsewhere on BLM-managed lands would involve the construction, operation, maintenance, and decommissioning of an up to 500 MW solar facility and 500 kV gen-tie line. This alternative would be located within the East Riverside DFA less than 15 miles from the Red Bluff Substation, because IP Oberon, LLC, has interconnection requirements at the Red Bluff Substation, where it holds queue position and additional capacity remains. It is also assumed that this alternative would require a BLM ROW Grant to allow for the construction and operation of solar facilities within BLM-managed lands.

The Federal Land Alternative on BLM-managed lands would not likely reduce any potentially significant impacts from the proposed project, as the project site has undergone extensive refinements to avoid sensitive resources and is located on BLM-administered land surrounded by proposed and approved solar generation facilities as well as I-10 and is in close proximity to the Red Bluff Substation, resulting in a short 0.5-mile gen-tie line. 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 and visual resource impacts, as it would likely have a longer gen-tie line, could be within the sand transport corridor, and/or could be located closer to Joshua Tree National Park. Also, it may not be feasible to find an alternative site on BLM-managed lands, because most of the land within the DFA is already in use, proposed for other solar energy projects, or within mountainous areas. Lands outside

the DFA have already been preliminarily screened and determined to be more likely to have greater environmental impacts. Site control is also an issue, given that the Western Solar Plan, DRECP and BLM Rents and Bonds Policy require a competitive auction to secure land within ~~SEZs/~~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 potential feasibility issues associated with site control; therefore, it has thus been eliminated from consideration.

### Full Build Alternative

Most often, when an agency is considering a utility solar project, the agency reviews the location proposed for the project, identifies the most substantial impacts, and develops a reduced footprint alternative to avoid these locations. To meet the requirements of the CDCA Plan, as amended by the DRECP, this process was completed prior to defining the proposed project and resulted in the removal of approximately 3,800 acres from the original ROW application. The larger sized project would have allowed for additional flexibility when siting the 500 MW project within the project site or could have accommodated more MW. While the amount of MW proposed for construction at the project site has not changed with the smaller footprint, the MW hours are fewer than originally proposed. This is because the proximity of the solar panels under the smaller footprint increases shading and other technical constraints compared with a more widespread layout.

The full build alternative would have greatly increased impacts to desert dry wash woodland, desert tortoise habitat, and wildlife connectivity habitat. Additionally, solar panels would be developed adjacent to I-10 further restricting the utility corridor in desert tortoise critical habitat, and a greater number of prehistoric cultural resources would be directly affected. Given that this alternative would have much greater environmental impacts and would comply with the DRECP CMAs to a less extent than the project, this alternative was eliminated from consideration.

### 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 impact 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. The mirrored reflectors focus sunlight on the pipes to heat the heat transfer fluid inside, similar to the solar power tower technology. The hot fluid is used to boil water to make steam to run conventional steam turbines and generators.

  Solar trough fields have stringent grading requirements, as parabolic troughs must be almost level; therefore, most of the solar facility site would need to be graded and scraped free of vegetation. Engineered drainage channels likely would be required along the facility boundary to intercept off-site surface flows and convey them around and through the site.

  Therefore, 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 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.

  The Energy Commission's 2011 Integrated Energy Policy Report defined 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 but do not require transmission to get to the areas in which the power is used.

  To create a viable alternative to the proposed project, a sufficient number of newly installed PV panels would need to be installed to generate up to 500 MW of capacity, which would be similar in size to the proposed project. 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. This would result in developers needing to obtain more surface area for the project to achieve the 500 MW objective. The transaction costs of obtaining use of multiple rooftops, the complexity of mobilizing construction crews across multiple projects in a region, including the transporting and deployment of construction materials in a less efficient manner,

the need to develop the deals to secure the same amount of PV-produced electricity, and building upgrades required to prepare rooftops to support the weight of the systems make this type of alternative infeasible for firms that are in the business of developing utility-scale facilities.

Rooftop systems that are not connected to the utility side of the electric grid only generate power for on-site consumption. 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 as an alternative to the project.

### 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 and so would not be technically or economically feasible for the Applicant to implement.

### Conservation and Demand-Side Management

This alternative is not technically feasible as a replacement for the proposed project. California utilities are required to achieve aggressive energy efficiency goals. Conservation and demand-side management are strategies implemented by utilities and public agencies. 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 Regional Water Quality Control Board, and/or the Applicant. It is speculative to assume that conservation and energy efficiency alone would achieve the State's greenhouse gas reduction goals. These goal hinge on reduced fossil fuel use, which is achieved in part by replacement of traditional energy generation with renewable energy. 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.

## ES.7 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.7.1 Proposed Project

Table ES-2 at the end of this section provides a summary of impacts and mitigation measures, where applicable, for the proposed project.

Aesthetics and cultural resources have significant impacts that cannot be mitigated to a less-than-significant level. When considering other existing and planned projects in the region, aesthetics and cultural resources also have a cumulatively considerable contribution to a significant cumulative impact.

## ES.7.2 Alternatives

**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 project site is within a Development Focus Area; therefore, it is foreseeable that the site would eventually be developed as a solar facility. The benefits of expanding access to renewable energy resources at this time would not be realized.

**Land Use Plan Compliant Alternative.** The Land Use Plan Compliant Alternative differs from the proposed project in two aspects. It would comply with all current CMAs applicable to the project site, including a 200-foot setback from desert dry wash woodland, and it would be fenced to exclude desert tortoise, desert kit fox, and other wildlife from all areas of the project through the life of operations. To offset some of the difference between a 200- and a 50-foot setback, solar panels would be installed in the utility corridor along I-10, which was not proposed for use under the proposed project. This alternative would eliminate approximately 600 acres from the project, reducing its output from 500 MW to 375 MW. By comparison, the proposed project would have a 50-foot setback from desert dry wash woodland for solar panels and would modify construction wildlife exclusion fencing to allow passage of wildlife through portions of the project area during operations. Due to a smaller amount of habitat impacted under this alternative, less than 5,400 acres of habitat would be permanently protected under a conservation easement (in compliance with DRECP CMA LUPA-BIO-COMP-1) compared to over ~~6,800~~6,200 acres with the proposed project. All other aspects of the Land Use Plan Compliant Alternative are similar to the proposed project.

**Resource Avoidance Alternative with Prehistoric Resources/TCR Option.** The Resource Avoidance Alternative with implementation of the Prehistoric Resources/TCR Option would eliminate significant direct impacts to TCR and cultural resources by avoiding all prehistoric archaeological resources; significant and unavoidable indirect and cumulative impacts to TCR and cultural resources would remain.

Otherwise the alternative is similar to the Land Use Plan Compliant Alternative with regard to the desert dry wash woodland setback of 200 feet and continued use of exclusion fencing during operations, but this alternative would also exclude from development desert tortoise critical habitat near I-10 and the multi-species linkage corridor (which overlaps the desert tortoise critical habitat at the eastern end of the

project area). This alternative would eliminate approximately 1,100 acres from the project, reducing its output from 500 MW to 300 MW. The amount of compensation land needed would be substantially reduced under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option at less than 1,800 acres compared with ~~over~~ approximately ~~6,800~~6,200 acres under the proposed project. All other aspects of the Resource Avoidance Alternative with Prehistoric Resources/TCR Option are similar to the proposed project.

# ES.8 Alternatives Comparison and Environmentally Superior Alternative

## ES.8.1 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 of increasing renewable energy generation consistent with the State of California's Renewable Portfolio Standard (RPS). The Land Use Plan Compliant Alternative and Resource Avoidance Alternative would meet all project objectives, but to a less extent compared to the proposed project.

The Land Use Plan Compliant Alternative would not reduce any of the project's significant and unmitigable impacts to a less-~~then~~than-significant level or result in a change to overall impact classifications or significance conclusions. The Resource Avoidance Alternative with implementation of the Prehistoric Resources/TCR Option would eliminate direct impacts to prehistoric archaeological resources, a significant and unavoidable impact of the proposed project and Land Use Compliant Alternative.

Table ES-1 compares the potential impacts of the proposed project to the solar facility 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.

**Table ES-1. Summary Comparison of Alternatives to Proposed Project**

| Environmental Resource | No Project Alternative[1] | Land Use Plan Compliant Alternative[1] | Resource Avoidance Alternative with Prehistoric Resources/ TCR Option[1] |
|---|---|---|---|
| Aesthetics[2] | Fewer | Fewer | Fewer |
| Air Quality | Greater | Fewer | Fewer |
| **Biological Resources** | Fewer | Fewer | **Greater** |

**Table ES-1. Summary Comparison of Alternatives to Proposed Project**

| Environmental Resource | No Project Alternative[1] | Land Use Plan Compliant Alternative[1] | Resource Avoidance Alternative with Prehistoric Resources/ TCR Option[1] |
|---|---|---|---|
| **Cultural Resources/ Tribal Cultural Resources[2]** | Fewer | Fewer | **Fewer** |
| Energy | Greater | Fewer | Fewer |
| Geology, Soils, and Mineral Resources | Fewer | Fewer | Fewer |
| **Greenhouse Gas Emissions** | Greater | **Greater** | **Greater** |
| Hazards and Hazardous Materials | Fewer | Fewer | Fewer |
| Hydrology and Water Quality | Fewer | Fewer | Fewer |
| Land Use and Planning | Fewer | Similar | Similar |
| Noise | Fewer | Fewer | Fewer |
| Paleontological Resources | Fewer | Fewer | Fewer |
| Population and Housing | Fewer | Fewer | Fewer |
| Public Services | Fewer | Fewer | Fewer |
| Recreation | Fewer | Fewer | Fewer |
| Traffic and Transportation | Fewer | Fewer | Fewer |
| Wildfire | Fewer | Fewer | Fewer |
| Potential to Meet Most Project Objectives?[3] | *NO* | *YES* | *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. Bolded text indicates issue areas where the difference in impacts between the proposed project and an alternative is more substantial, even if the overall significance determinations are similar.

2 - Aesthetic operational impacts and Cultural Resources/Tribal Cultural Resources indirect and cumulative impacts would be significant and unavoidable for all alternatives except the No Project Alternative. Direct impacts to prehistoric resources would be avoided with the Prehistoric Resources/TCR Option.

3 - Section 4.3.2 discusses to what extent the alternatives meet the project objectives.

## ES.8.2 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires an EIR to 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 ES-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 as a result of the No Project Alternative. The No Project Alternative would also avoid the impacts of the project analyzed in Chapter 3. However, as described above, the No Project Alternative would fail to meet the Applicant's objectives for the project and would not contribute to achieving any of the state or federal energy generation goals or GHG reduction goals, and thus, is not a feasible alternative to the project. Although another project might ultimately be developed on the Oberon site, the analysis assumes that the construction and operational impacts of the proposed project would not occur under the No Project Alternative.

In accordance with Section 15126.6(e)(2) of the CEQA Guidelines, the **Land Use Plan Compliant Alternative including implementation of the Prehistoric Resources/TCR Option is identified as the Environmentally Superior Alternative** since it would result in fewer impacts to biological resources than the proposed project, would eliminate significant direct impacts to cultural resources that are also Tribal Cultural Resources, and would have a reduced level of ground disturbance. This alternative would have greater setbacks from desert dry wash woodland than the proposed project and at the same time would have a comprehensive mitigation package conserving nearly 5,400 acres of high value habitat off site. It would exclude desert tortoise and other wildlife from accessing the secured solar panel development areas, thereby protecting them during O&M from potential harm were they to be within fenced areas. In contrast to the proposed project, this alternative would use desert tortoise exclusion fencing instead of passage fencing around all solar panel development areas during both construction and operation. All other project components and construction methods and resulting impacts would remain similar to those of the proposed project.

The Land Use Plan Compliant Alternative with the Prehistoric Resources/TCR Option would be the Environmentally Superior Alternative since it would result in fewer impacts at the project site than the proposed project due to the smaller footprint and reduction in direct impacts to biological resources and cultural resources that are also considered Tribal Cultural Resources. However, by reducing the amount of land developed at the project site, the amount of off-site mitigation required at a 5:1 ratio would be reduced by over 1,400 acres. This would result in the retention of lesser quality habitat at the project site in lieu of acquisition and protection of a five-fold amount of higher-quality habitat at an off-site conservation location. The alternative would meet most of the project objectives and would be feasible, but it would generate 375 MW of renewable energy (compared to 500 MW under the proposed project).

In order to supply the energy output of the proposed project, an additional energy project may be developed on another site and could have environmental impacts equal to or greater than the proposed site, which is surrounded by proposed and approved solar generation projects and located on BLM-administered land that is within the DRECP DFA, and thus, targeted for renewable energy development.

Because the Land Use Plan Compliant Alternative with Prehistoric Resources/TCR Option would achieve the project objectives, which include the provision of environmental benefits, to a lesser extent compared with the proposed project (see Section 4.3.2), the proposed project is considered preferred.

## ES.9 Summary of Impacts and Mitigation Measures

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.

Table ES-2 applies to the proposed project, the Land Use Plan Compliant Alternative, and the Resource Avoidance Alternative, except significant direct impacts to prehistoric archaeological resources that are also Tribal Cultural Resources would be avoided with implementation of the with Prehistoric Resources/TCR Option. Potential impacts from the project would be eliminated under the No Project Alternative and no mitigation would be implemented.

**Table ES-2. Summary of Impacts and Mitigation Measures**

| | | |
|---|---|---|
| **Aesthetics** | | |
| ***Impact AES-1.*** *Would the project have a substantial adverse effect on a scenic vista?* | | |
| • Construction: No Impact | | |
| • O&M: No Impact | | |
| ***Impact AES-2.*** *Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?* | | |
| • Construction: No Impact | | |
| • O&M: No Impact | | |
| ***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?* | | |
| • Construction: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM BIO-5 | Vegetation Resources Management Plan |
| | MM AQ-1 | Fugitive Dust Control Plan |
| | MM AES-1 | Night Lighting Management Plan |

## Table ES-2. Summary of Impacts and Mitigation Measures

| | | |
|---|---|---|
| • O&M: *Significant and Unavoidable* | | |
| *Mitigation Measures* | MM AES-2 | Surface Treatment of Project Structures and Buildings |
| | MM AES-3 | Project Design |
| | MM AES-4 | Retention of Roadside Vegetation |
| ***Impact AES-4.*** *Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?* | | |
| • Construction: Less than Significant | | |
| • O&M: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM AES-1 | Night Lighting Management Plan |
| | MM AES-2 | Surface Treatment of Project Structures and Buildings |
| ***Impact AES-5.*** *Would project construction or the presence of project components result in an inconsistency with local regulations, plans, and standards applicable to the protection of visual resources?* | | |
| • Construction: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM BIO-5 | Vegetation Resources Management Plan |
| | MM AQ-1 | Fugitive Dust Control Plan |
| | MM AES-1 | Night Lighting Management Plan |
| • O&M: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM AES-1 | Night Lighting Management Plan |
| | MM AES-2 | Surface Treatment of Project Structures and Buildings |
| **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, and in the surrounding mountains and wilderness | |
| *Mitigation Measures* | MM AES-1 | Night Lighting Management Plan |
| | MM AES-2 | Surface Treatment of Project Structures and Buildings |
| | MM AES-3 | Project Design |
| | MM BIO-5 | Vegetation Resources Management Plan |

## Table ES-2. Summary of Impacts and Mitigation Measures

### Air Quality

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

- Construction: Less than Significant
- O&M: 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: 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: 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: No Impact
- O&M: No Impact

**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 |

## Table ES-2. Summary of Impacts and Mitigation Measures

### 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: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-7 | Emory's Crucifixion Thorn Mitigation |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation |

- O&M: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-7 | Emory's Crucifixion Thorn Mitigation |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation |

***Impact BIO-2:*** *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

- Construction: 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 | Compensation for Natural Habitat Impacts |

## Table ES-2. Summary of Impacts and Mitigation Measures

- O&M: 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 | Compensation for Natural Habitat Impacts |

***Impact BIO-3:*** *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means?*

- Construction: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-14 | Streambed and Watershed Protection |

- O&M: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-14 | Streambed and Watershed Protection |

***Impact BIO-4:*** *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

- Construction: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation) |

## Table ES-2. Summary of Impacts and Mitigation Measures

- O&M: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation) |

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

- Construction: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-7 | Emory's Crucifixion Thorn Mitigation |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation |
| | MM BIO-14 | Streambed and Watershed Protection |

- O&M: 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-7 | Emory's Crucifixion Thorn Mitigation |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation |
| | MM BIO-14 | Streambed and Watershed Protection |

## Table ES-2. Summary of Impacts and Mitigation Measures

### 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 | Compensation for Natural Habitat Impacts |
| | MM BIO-7 | Emory's Crucifixion Thorn Mitigation |
| | MM BIO-8 | Wildlife Protection |
| | MM BIO-9 | Desert Tortoise Protection |
| | MM BIO-10 | Bird and Bat Conservation Strategy (BBCS) |
| | MM BIO-11 | Gen-tie Lines |
| | MM BIO-12 | Burrowing Owl Avoidance and Relocation |
| | MM BIO-13 | Desert Kit Fox and American Badger Relocation |
| | MM BIO-14 | 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: Significant and Unavoidable

| | | |
|---|---|---|
| *Mitigation Measures* | MM CUL 1 | Retain a Cultural Resources Specialist |
| | MM CUL 2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery, and Unanticipated Effects |
| | MM CUL 3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL 4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL 6 | Unanticipated Discovery |
| | MM CUL 7 | Cultural Resources Monitoring Report and Cultural Resources Report (CRR) |
| | MM CUL-8 | Long-Term Management Plan |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |
| | MM CUL-10 | Flag and Avoid |
| | MM CUL-11 | Reburial of Artifacts |
| | MM CUL-12 | Historic District for Prehistoric Rock Rings |
| | MM CUL-13 | DTC/C-AMA Supplemental Resource Documentation. |

- O&M: *Significant and Unavoidable*

| | |
|---|---|
| *Mitigation Measures* | MM CUL-1 through MM CUL-13 |

## Table ES-2. Summary of Impacts and Mitigation Measures

***Impact CUL-2:*** *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: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-7 | Cultural Resources Monitoring Report and Cultural Resources Report |
| | MM CUL-8 | Long Term Management Plan |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |
| | MM CUL-10 | Flag and Avoid |
| | MM CUL-11 | Reburial of Artifacts |
| | MM CUL-12 | Historic District for Prehistoric Rock Rings |
| | MM CUL-13 | DTC/C-AMA Supplemental Resource Documentation |

- O&M: Less than Significant with Mitigation

| | |
|---|---|
| *Mitigation Measures* | MM CUL-1 though MM CUL-13 |

***Impact CUL-3:*** *The project would disturb any human remains, including those interred outside of formal cemeteries.*

- Construction: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery, and Unanticipated Effects |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |

## Table ES-2. Summary of Impacts and Mitigation Measures

| | | |
|---|---|---|
| • O&M: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery, and Unanticipated Effects |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-9 | Inadvertent Discovery 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: *Significant and Unavoidable* | | |
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-7 | Cultural Resources Monitoring Report and Cultural Resources Report |
| | MM CUL-8 | Long Term Management Plan |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |
| | MM CUL-10 | Flag and Avoid |
| | MM CUL-11 | Reburial of Artifacts |
| | MM CUL-12 | Historic District for Prehistoric Rock Rings |
| | MM CUL-13 | DTC/C-AMA Supplemental Resource Documentation |
| • O&M: *Significant and Unavoidable* | | |
| *Mitigation Measures* | MM CUL-1 through MM CUL-13 | |

## Table ES-2. Summary of Impacts and Mitigation Measures

***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: *Significant and Unavoidable*

| | | |
|---|---|---|
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-7 | Cultural Resources Monitoring Report and Cultural Resources Report |
| | MM CUL-8 | Long Term Management Plan |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |
| | MM CUL-10 | Flag and Avoid |
| | MM CUL-11 | Reburial of Artifacts |
| | MM CUL-12 | Historic District for Prehistoric Rock Rings |
| | MM CUL-13 | DTC/C-AMA Supplemental Resource Documentation |

- O&M: *Significant and Unavoidable*

| | |
|---|---|
| *Mitigation Measures* | MM CUL-1 through MM CUL-13 |

**Cumulative Impacts**

| | | |
|---|---|---|
| Significance after Mitigation | Cumulatively Considerable *(Significant)* | |
| *Mitigation Measures* | MM CUL-1 | Retain a Cultural Resources Specialist |
| | MM CUL-2 | Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan |
| | MM CUL-3 | Develop and Implement Cultural Resources Environmental Awareness Training |
| | MM CUL-4 | Archaeological Monitoring |
| | MM CUL-5 | Native American Monitoring |
| | MM CUL-6 | Unanticipated Discovery |
| | MM CUL-7 | Cultural Resources Monitoring Report and Cultural Resources Report |
| | MM CUL-8 | Long Term Management Plan |
| | MM CUL-9 | Inadvertent Discovery of Human Remains |
| | MM CUL-10 | Flag and Avoid |
| | MM CUL-11 | Reburial of Artifacts |
| | MM CUL-12 | Historic District for Prehistoric Rock Rings |
| | MM CUL-13 | DTC/C-AMA Supplemental Resource Documentation |

## Table ES-2. Summary of Impacts and Mitigation Measures

### 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: Less than Significant
- O&M: 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: No impact
- O&M: No impact

**Cumulative Impacts**

| | |
|---|---|
| Significance | Beneficial; no mitigation required. |

### Geology, Soils and Mineral Resources

***Impact GS-1.*** *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

*1a. Strong seismic ground shaking?*

- Construction: Less than Significant
- O&M: Less than Significant

*1b. Seismic-related ground failure, including liquefaction?*

- Construction: Less than Significant
- O&M: Less than Significant

***Impact GS-2.*** *Would the project result in substantial soil erosion or the loss of topsoil?*

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM AQ-1 | Fugitive Dust Control Plan. |
| | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-4 | Project Drainage Plan. |

***Impact GS-3.*** *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: Less than Significant
- O&M: Less than Significant

***Impact GS-4.*** *Would the project be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

- Construction: Less than Significant
- O&M: Less than Significant

## Table ES-2. Summary of Impacts and Mitigation Measures

***Impact GS-5.*** *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

- Construction: Less than Significant
- O&M: 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: Less than Significant
- O&M: Less than Significant

**Cumulative Impacts**

| | | |
|---|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) | |
| *Mitigation Measures* | MM AQ-1 | Fugitive Dust Control Plan |
| | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-4 | 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: Less than Significant
- O&M: 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: Less than Significant
- O&M: Less than Significant

**Cumulative Impacts**

| | |
|---|---|
| Significance | Not Cumulatively Considerable (Less than Significant);<br>No mitigation required. |

### 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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

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

## Table ES-2. Summary of Impacts and Mitigation Measures

***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: Less than Significant with Mitigation
- O&M: 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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM HAZ-1 | UXO Identification, Training, and Reporting 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: Less than Significant
- O&M: 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: Less than Significant
- O&M: 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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

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

## Table ES-2. Summary of Impacts and Mitigation Measures

### 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?*

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control 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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-2 | Mitigation of Impacts to the Palo Verde Mesa Groundwater Basin (PVMGB) |
| | MM HWQ-3 | Groundwater Monitoring, Reporting, and Mitigation Plan |

***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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |

***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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-4 | Project Drainage Plan |

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

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-4 | Project Drainage Plan |

## Table ES-2. Summary of Impacts and Mitigation Measures

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

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-4 | Project Drainage Plan |
| | MM HWQ-5 | Flood Protection |

**Cumulative Impacts**

| | |
|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) |

| | | |
|---|---|---|
| *Mitigation Measures* | MM HWQ-1 | Drainage Erosion and Sedimentation Control Plan |
| | MM HWQ-2 | Mitigation of Impacts to the Palo Verde Mesa Groundwater Basin (PVMGB) |
| | MM HWQ-3 | Groundwater Monitoring, Reporting, and Mitigation Plan |
| | MM HWQ-4 | Project Drainage Plan |
| | MM HWQ-5 | Flood Protection |

## 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: No conflict
- O&M: 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
- O&M: Less than Significant with Mitigation

| | | |
|---|---|---|
| *Mitigation Measures* | MM N-1 | Construction Restrictions |
| | MM N-2 | Public Notification Process |
| | MM N-3 | Noise Complaint Process |
| | MM N-4 | Noise Performance Standard |

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

- Construction: Less than Significant
- O&M: Less than Significant

## Table ES-2. Summary of Impacts and Mitigation Measures

***Impact N-3.*** *For projects located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

- Construction: Less than Significant
- O&M: Less than Significant

**Cumulative Impacts**

| | | |
|---|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) | |
| *Mitigation Measures* | MM N-1 | Construction Restrictions |
| | MM N-2 | Public Notification Process |
| | MM N-3 | Noise Complaint Process |
| | MM N-4 | Noise Performance Standard |

### Paleontological Resources

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

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM PR-1 | Paleontological Resource Monitoring and Mitigation Plan |
| | MM PR-2 | Worker Environmental Awareness Program |
| | 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) | |
| *Mitigation Measures* | MM PR-1 | Paleontological Resource Monitoring and Mitigation Plan |
| | MM PR-2 | Worker Environmental Awareness Program |
| | 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: Less than Significant
- O&M: Less than Significant

***Impact PH-2.*** *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

- Construction: No Impact
- O&M: No Impact

## Table ES-2. Summary of Impacts and Mitigation Measures

### 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: Less than Significant with Mitigation
- O&M: Less than Significant with Mitigation

| | |
|---|---|
| *Mitigation Measures* | MM FIRE-1 Fire Safety |

*Police protection?*

- Construction: Less than Significant
- O&M: Less than Significant

*Schools?*

- Construction: Less than Significant
- O&M: Less than Significant

*Parks?*

- Construction: Less than Significant
- O&M: Less than Significant

*Other public facilities (health services, libraries)?*

- Construction: Less than Significant
- O&M: 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: Less than Significant
- O&M: 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: Less than Significant
- O&M: Less than Significant

## Table ES-2. Summary of Impacts and Mitigation Measures

***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: Less than Significant
- O&M: Less than Significant with Mitigation

***Impact PSU-5.*** *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

- Construction: Less than Significant
- O&M: Less than Significant

**Cumulative Impacts**

| | | |
|---|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) | |
| *Mitigation Measures* | MM FIRE-1 | Fire Safety |

## Recreation

***Impact REC-1.*** *Would the project's construction or operation directly or indirectly disturb recreational users, reduce or block access to recreational areas, or change the character of a recreational area, diminishing its value?*

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

| | | |
|---|---|---|
| *Mitigation Measures* | MM AES-1 | Night Lighting Management. |
| | MM AQ-1 | Fugitive Dust Control Plan. |
| | MM N-2 | Public Notification Process. |

**Cumulative Impacts**

| | | |
|---|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) | |
| *Mitigation Measures* | MM AES-1 | Night Lighting Management. |
| | MM AQ-1 | Fugitive Dust Control Plan. |
| | MM N-2 | Public Notification Process. |

## 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: Less than Significant
- O&M: Less than Significant

## Table ES-2. Summary of Impacts and Mitigation Measures

| | | |
|---|---|---|
| ***Impact TRA-2.*** *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) [Criteria for Analyzing Transportation Impacts]?* | | |
| • Construction: Less than Significant with Mitigation | | |
| • O&M: Less than Significant | | |
| *Mitigation Measures* | MM TRA-1 | Construction Traffic Carpool and Trip Reduction 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: Less than Significant with Mitigation | | |
| • O&M: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM TRA-2 | Repair Roadways and Transportation Facilities Damaged by Construction Activities |
| ***Impact TRA-4.*** *Would the project result in inadequate emergency access?* | | |
| • Construction: Less than Significant | | |
| • O&M: Less than Significant | | |
| *Mitigation Measures* | No mitigation required | |
| **Cumulative Impacts** | | |
| Significance after Mitigation | No Cumulatively Considerable (Less than Significant) | |
| *Mitigation Measures* | MM TRA-1<br>MM TRA-2 | Construction Traffic Carpool and Trip Reduction Plan<br>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 | | |
| • O&M: Less than Significant | | |
| ***Impact FIRE-2.*** *Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?* | | |
| • Construction: Less than Significant with Mitigation | | |
| • O&M: Less than Significant with Mitigation | | |
| *Mitigation Measures* | MM FIRE-1 | Fire Safety |

## Table ES-2. Summary of Impacts and Mitigation Measures

***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 or that may result in temporary or ongoing impacts to the environment?*

- Construction: Less than Significant
- O&M: Less than Significant

***Impact FIRE-4.*** *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

- Construction: Less than Significant
- O&M: Less than Significant

**Cumulative Impacts**

| | |
|---|---|
| Significance after Mitigation | Not Cumulatively Considerable (Less than Significant) |
| *Mitigation Measures* | MM FIRE-1 Fire Safety |

# CHAPTER 1: Introduction

## 1.1 Overview

IP Oberon, LLC (Applicant), a subsidiary of Intersect Power, LLC, proposes to construct, operate, maintain, and decommission a 500 megawatt (MW) solar photovoltaic (PV) electricity generating station, battery energy storage facility, electrical substation, generation-tie (gen-tie) line and associated access roads on approximately 5,000 acres of land managed by the U.S. Bureau of Land Management (BLM) near Desert Center in Riverside County, California (see Figure 1-1, Project Vicinity). The Oberon Renewable Energy Project would interconnect to SCE existing 500 kV Red Bluff Substation via one new 500 kV gen-tie transmission line. The proposed 500 kV gen-tie line would be located within one 175-foot ROW across BLM-administered land to the SCE Red Bluff Substation. All of the lands within the project application area are within the CDCA Planning Area and within the East Riverside Development Focus Area of the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD).

The proposed project is entirely on federal land and BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq. As part of the NEPA process, the BLM requires a Plan of Development (POD) to specify the terms under which a right-of-way across federal lands is to be granted for the Oberon Renewable Energy Project (IP Oberon, 2021).

The project is also under the jurisdiction of the Colorado River Basin Regional Water Quality Control Board (RWQCB or Regional Water Board), who will issue Waste Discharge Requirements (WDRs) for the discharge of dredged or fill materials to waters of the State. The RWQCB is the lead agency responsible for environmental review of the project in compliance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq.

## 1.2 California Environmental Quality Act

This Environmental Impact Report (EIR) has been prepared in conformance with CEQA (Public Resources Code §§ 21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000 et seq.) (CEQA Guidelines). Under the CEQA process, an EIR must be prepared when there is substantial evidence that supports a fair argument that significant effects may result from project implementation.

### 1.2.1 Purpose of the EIR

The RWQCB generally regulates discharges of waste to waters of the State through the issuance of WDRs pursuant to California Water Code Section 13263, including discharges of dredged or fill materials.

Issuing a permit under the State's Dredged or Fill WDRs Program is a discretionary action that requires the Regional Water Board to comply with CEQA in accordance with CEQA Guidelines Sections 15021 and 15040. The RWQCB is the lead agency for CEQA review because the WDRs permit is the main discretionary permit being requested for the action.

Consistent with Section 15121(a) of the CEQA Guidelines, this EIR is a public information document that assesses and discloses the potential environmental effects of construction, operation, and decommissioning of the proposed solar PV project. CEQA requires a lead agency to impose feasible mitigation that will "substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the 'nexus' and 'rough proportionality' standards established by case law (citations omitted)." (CEQA Guidelines, § 15041, subd. a.) The aim of CEQA mitigation is to reduce project impacts to a less-than-significant level.

~~This~~ The Draft EIR ~~has been~~was distributed for review to responsible agencies and other interested agencies and individuals. The RWQCB 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~~ this Final EIR as complying with CEQA and take action on the proposed project.

Comments on ~~this~~ the Draft EIR ~~should~~ were directed to 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

### 1.3.1 Decisions to be Made by Colorado River Basin RWQCB

Based on its review of IP Oberon, LLC's waste discharge requirements application, additional information requested of the Applicant, and the information contained in this EIR, the RWQCB will determine whether to issue the required permit.

### 1.3.2 Applicant's Project Objectives

The purpose of the project is to generate, store, and transmit 500 MW of renewable energy to the statewide wholesale electricity grid. The Applicant's project objectives, which have been considered by the RWQCB in developing a reasonable range of alternatives, are as follows:

1. Deliver 500 MW of affordable wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
2. 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;

3. Bring living-wage renewable energy construction jobs to eastern Riverside County including Native American construction and monitoring jobs;
4. Minimize environmental impacts and land disturbance associated with solar development by siting the facility on relatively flat, contiguous lands receiving high solar insolation, that are in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access;
5. Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
6. 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;
7. Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 500 MW of 2-hour and/or 4-hour battery energy storage capacity;
8. Conform with the Desert Renewable Energy Conservation Plan's Conservation and Management Actions to the maximum extent practicable, while also optimizing the balance between renewable energy generation and protection and conservation of sensitive habitat; and
9. Support before-after/control-impact (BACI) scientific research at the project site to further the public's understanding of the interactions between wildlife and solar energy facilities.

## 1.4 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 a project be monitored after it has 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.

### 1.4.1 Notice of Preparation

In compliance with CEQA Guidelines section 15082, a Notice of Preparation (NOP) was issued on March 18, 2021. The notice, which included a project map, briefly described the proposed project, its location, the environmental review process, potential environmental effects, and opportunities for public involvement.

The NOP was uploaded to the Office of Planning and Research (State Clearinghouse) website for issuance to State agencies. It was mailed to agencies, organizations, local governments, elected officials, Native American Tribes, residents in the Desert Center area and interested parties. The NOP was also posted on the RWQCB's website.

A notice regarding a combined scoping meeting with BLM was published in the Desert Sun newspaper on two consecutive weeks. Along with the NOP, the public notice solicited input regarding the scope and content of the environmental information to be included in the draft environmental review documents being prepared by the RWQCB and BLM. The public comment period ended on April 18, 2021. The Scoping Report, including a copy of the NOP, is provided in EIR Appendix A. A total of 10 CEQA comment letters and 5 additional NEPA scoping letters were received during the scoping period. Section 1.5 includes a summary of the comments received.

### 1.4.2 Public Scoping Meeting

In compliance with California Code of Regulations Section 15082(c), the RWQCB conducted a public scoping meeting to inform the public about the project and provide information regarding the environmental review process. This scoping meeting was hosted by both the BLM and RWQCB. Due to the COVID19 pandemic, the traditional format of in-person meetings was not used. The public scoping meeting was held virtually through the online web-based platform Zoom. This meeting took place on April 13, 2021, and was attended by 32 people. The Scoping Report, provided in Appendix A of this EIR, contains a copy of the scoping meeting PowerPoint presentation.

### 1.4.3 Native American Tribal Outreach

On December 31, 2020, the RWQCB mailed certified letters to representatives of 3 tribes that had previously submitted a written request to the RWQCB to receive notification of proposed project, in compliance with Assembly Bill 52 (AB 52). These tribes included: Colorado River Indian Tribes of the Colorado River Indian Reservation, Morongo Band of Mission Indians, and Torres-Martinez Desert Cahuilla Indians. Additionally, courtesy notification letters were mailed to 14 additional tribes.

The letters included a brief description of the proposed project, information on how to contact the lead agency Project Manager, and a USGS topographic quadrangle showing the project's components and lay-down areas. The letters noted that requests for consultation needed to be received within 30 days of the date of receipt of the notification letter. Responses were received from the Quechan Tribe of the Fort Yuma Reservation, San Manuel Band of Mission Indians, and the Agua Caliente Band of Cahuilla Indians. Additional details on the AB 52 consultation process are included in Section 3.5 (Cultural Resources and Tribal Cultural Resources).

### 1.4.4 Review of Draft EIR

The Draft EIR ~~will be~~was available for 45 days for review and comment by public agencies and interested organizations and individuals from August 13 to September 30, 2021.

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

A Notice of Availability of publication of the Draft EIR was mailed to over 200 agencies, tribes, businesses/organizations, and individuals. A hard copy of the Draft EIR was available at the Lake Tamarisk Branch Library located at 43880 Tamarisk Drive; Desert Center, CA 92239. Also, a newspaper ad announcing publication of the Draft EIR and the public review period was published in the Desert Sun on August 18, 2021.

There were 48 comments received during the comment period. One from agencies, 1 from tribes, 6 from businesses/organizations, and 40 from individuals. Issues raised included concerns about biological resources, namely impacts to desert dry wash woodland and its buffer, critical habitat, and the multi-species linkage corridor, cultural and tribal resources, hydrology, project description, alternatives, impact significance, compliance with the DRECP CMAs and BLM's consideration of and the precedence set by a land use plan amendment, and the environmentally superior alternative.

All significant environmental issues raised in comments received during the public review period for the Draft EIR have been responded to in the Final EIR (see Appendix D).

### 1.4.5 Preparation and Certification of Final EIR and MMRP

~~The~~ This Final EIR ~~will~~ includes the comments received during the public review period (and a complete list of commenters), written responses to the comments related to environmental issues, and any revisions that are made to the Draft EIR in response to the comments.

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~~has been prepared for the project and included as part of the Final EIR in EIR Appendix E.

If there are any unavoidable adverse environmental effects that cannot be mitigated to a less-than-significant level, an adoption of findings and a statement of the overriding considerations will be issued. The RWQCB would then certify the Final EIR prior to taking action on the project.

Should the RWQCB approve or determine to carry out the project, the RWQCB will file a Notice of Determination (NOD) with the State Clearinghouse. The filing of the NOD completes the CEQA environmental review process.

## 1.5 Scoping Comments Summary

In total, 15 different entities submitted comment letters during the CEQA and NEPA comment periods: 12 from federal, state, and local agencies or organizations, 1 from a tribe, and 2 from individuals. The Scoping Report includes all scoping comments received during the scoping period.

Scoping concerns included the following topics:

- Project Description
- Statement of Purpose and Need
- Aesthetic/Visual Resources
- Cultural Resources
- Existing or Planned Land Uses
- Solid Waste
- Public Health and Safety
- Environmental Justice
- Transportation and Traffic
- Hazards
- Biological Resources
- Water Resources
- Air Resources
- Soils
- Mitigation Measures
- Indirect and Cumulative Impacts
- Project Alternatives
- Document Format, and Permitting Issues
- Document Format/Analysis
- Agency Permits/Consultation

Applicable scoping comments for each resource are summarized in the introduction to each issue area section in Chapter 3 and considered during the impact analysis.

## 1.6 EIR Format and Content

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

> *An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers 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 provided as necessary in each section to graphically represent the topic at hand.

- **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 on the proposed project evaluated in the EIR and a summary of the project's objectives. This section also discusses agency use of the document and provides a summary of the scoping comments.
- **Section 2. Description of the Proposed Project:** This chapter 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.
- **Section 3. Environmental Analysis:** This chapter contains a detailed environmental analysis of the existing conditions, impacts from construction, operation, and decommissioning of the project, mitigation measures, and cumulative impacts. The Section includes subsections for individual resource topics.
- **Section 4. Alternatives:** This chapter provides descriptions of the alternatives that were evaluated in the document. The section also presents alternatives that were not evaluated in the document and provides a screening analysis that was used to identify such 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 5. Other CEQA Considerations:** This chapter presents an analysis of the project's growth-inducing impacts and other CEQA requirements, irreversible commitment of resources, and significant and unavoidable impacts.
- **Section 6. Comments and Responses to Comments.** This chapter will contain comment letters and all responses the comment letters submitted on the Draft EIR.
- **Section 7. List of Preparers:** This chapter provides a list of individuals that prepared or contributed to this Draft EIR.
- **Section 8. References:** This chapter lists reference materials used to prepare the Draft EIR.
- **Appendices:** The CEQA Scoping Report, technical reports and studies, and other relevant information are included as appendices to support the environmental analyses. In this Final EIR, a new Appendix D includes comments and responses to comments submitted on the Draft EIR. A new Appendix E contains the project's Mitigation Monitoring and Reporting Program (MMRP).

### 1.6.1 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:

**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 is 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.

**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 (CEQA Guidelines § 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 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.

## 1.7 Agencies Relying on the EIR; Anticipated Permits and Approvals

The project would be located entirely on public lands under jurisdiction of the BLM. 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. The BLM will prepare a separate Environmental Assessment (EA) under NEPA. Other federal, state, and local agencies or regulatory entities that could exercise authority over specific elements of the proposed Projects are described in Table 1-1.

The Colorado River Basin RWQCB, as the CEQA lead agency, will act first on the project before any of the responsible agencies. If the proposed project is approved by all required permitting agencies, the RWQCB would be responsible for overseeing compliance with the mitigation measures.

**Table 1-1. Other Permits and Approvals for the Oberon Renewable Energy Project**

| Agency | Permit | Applicability |
|---|---|---|
| **Federal** | | |
| BLM | Grant of right-of-way | For solar and storage facility 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. |
| **State or Regional Approvals** | | |
| 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. |

**Table 1-1. Other Permits and Approvals for the Oberon Renewable Energy Project**

| Agency | Permit | Applicability |
|---|---|---|
| South Coast Air Quality Management District (SCAQMD) | Indirect Source Review | An Indirect Source Review (District Rule 9510) will be filed with the SCAQMD to determine potential mitigation, if any, for oxides of nitrogen (NOx) and particulate matter less than or equal to 10 microns in diameter (PM10) emissions. |
| | 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, District 8 | Encroachment Permit | An encroachment permit would be required for installation of any ingress egress lane along SR-177, construction of the collector line(s) across I-10 to access the Red Bluff Substation, and the installation of a telecommunication line, if required. |
| California Department of Fish & Wildlife (CDFW) | Lake and Streambed Alteration Agreement | For compliance with Fish and Game Code Section 1602 for all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. |
| | Incidental Take Permit | For compliance with Section 2081 of the California Endangered Species Act. |

## 1.8 Primary Contact Person

The Project Manager for this EIR is:

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# CHAPTER 2: Description of the Proposed Project

## 2.1 Introduction

IP Oberon, LLC (Applicant), a subsidiary of Intersect Power, LLC, is proposing development of the Oberon Renewable Energy Project (proposed project) in eastern Riverside County, California. The Applicant would construct, operate, maintain, and decommission a solar facility consisting of a 500-megawatt (MW) solar photovoltaic (PV) electricity generating station with battery energy storage system (BESS), electrical substation, generation intertie (gen-tie) lines and associated access roads on land managed by the BLM.

The project would be located immediately north of Interstate 10 (I-10) near Desert Center, California and would interconnect to SCE 500 kilovolt (kV) Red Bluff Substation via one new 500 kV gen-tie line. IP Oberon, LLC, plans to collocate the Oberon gen-tie line with the proposed Easley Solar and Green Hydrogen Project gen-tie line. Construction would occur over approximately 15 to 20 months, concluding in or before the fourth quarter of 2023. While the BLM typically issues ROW grants for a period of 30 years, the project would be capable of producing energy for a period of 35 years 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 condition to the extent feasible. Revegetation would be attempted, although revegetation success would be subject to the microclimatic conditions in the area at the time of decommissioning.

The project application area covers approximately 5,000 acres of BLM-administered land for the solar facility (see Figure 2-1, Project Area). Project facilities would occupy less than 2,700 acres of the overall site.[1] All of the land within the project application area is within the CDCA Planning Area and within a Development Focus Area (DFA) pursuant to the Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA) and associated ROD. Standard Form 299 (SF299) applications for a ROW grant for the BLM land included in the project were submitted to the BLM in April and August 2019.

Various electrical line ROWs exist and are pending within portions of the proposed BLM ROW for the project (see Figure 2-2, Desert Center Solar Projects). Intersect Power subsidiary, IP Land Holdings, LLC, would work closely with other ROW holders and pending holders in the area to consolidate ROWs and minimize and avoid conflicts in coordination with BLM staff.

[1] If the portion of the approved gen-tie ROW for the Eagle Mountain Pumped Storage Project that overlaps the Oberon Project application area (approximately 60 acres) is moved outside of the Oberon application area, then solar panels may be developed in this area by IP Oberon, LLC. Likewise, if the on-site substation is constructed in the southeastern project area, then the unused 175-foot gen-tie corridor (~80 acres) may be developed with solar panels.

### 2.1.1 Overview of Solar Technology

Solar cells, or photovoltaic cells (PV cells), convert sunlight directly into electricity. The PV cell gets its name from the process of converting light (photons) to electricity (voltage), which is called the "PV effect." PV cells are assembled on panels, which are mounted at a fixed angle facing south or on a tracking device that follows the sun's path. 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. A diagram of power flow from the solar arrays to Red Bluff Substation is shown in Figure 2-3 (Solar PV and BESS Power Flow Diagram).

### 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 ($W/m^2$) or kilowatt-hours per square meter per day ($kWh/m^2/day$). The region in which the proposed project site is located receives greater than 6.5 $kWh/m^2/day$ of solar radiation energy, giving it a higher level of solar radiation than most areas within the United States (NREL, 2012).

## 2.2 Proposed Project

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 decision regarding 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 (which uses focused sunlight as a heat source) is not being considered. The proposed panel mounting system would 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 (single-faced) or bi-facial (two-faced) modules could be used, and modules would either be mounted as single panels or stacked two high.

The PV modules would be manufactured at an off-site location and transported to the project site. Panels would be arranged in strings with a maximum height of 8 feet at full tilt or slightly higher due to topography. Panel faces would be minimally reflective, dark in color, and highly absorptive.

Panels would be arranged on the site in solar arrays. For single-axis tracking systems, the length of each row of panels would be approximately 350 feet along a north/south axis and would be mounted as single panels or stacked.

The PV modules would be supported on steel piles (e.g., cylindrical pipes, H-beams, helical screws, or similar), 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. For a single-axis tracking system, piles 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). Following pile installation, for single-axis tracking systems, 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 steel piles, would then be field-assembled and attached according to the manufacturer's guidelines.

Tracking arrays would be installed along a north-south axis with panels tracking east to west, following the movement of the sun.

The majority of any proposed excavation would be limited to less than 6 feet in depth; however, some excavations, such as those for the installation of collector poles and gen-tie line dead-end structures, may reach depths of 40 feet or more.

## 2.2.1 Project Components

### 2.2.1.1 Solar Facility

#### *Inverters, Transformers, and Electrical Collection System*

The project would be designed and laid out primarily in blocks of 2 to 5 MW, which would include an inverter equipment area measuring 40 feet by 25 feet. The color of the inverter equipment would be standard 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 project footprint and avoid environmentally sensitive areas. For instance, the project has been designed with a 50-foot setback of solar panels from desert dry wash(microphyll) woodland and to avoid historic properties that are eligible for listing on the National Register of Historic Places.

The final module block sizes would depend on available technology and market conditions. Each 2 to 5 MW block would include an inverter-transformer station constructed on a concrete pad or steel skid centrally located within the PV arrays. Each inverter-transformer station would contain up to six inverters, a transformer, a battery enclosure, and an 8- to 11-foot-high switchboard.

The pads would contain a security camera at the top of an approximately un-guyed 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 installed, would extend up to 10 feet above the ground surface.

Panels would be electrically connected in 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 to combiner boxes located throughout the PV arrays, from where it would go to inverters to convert the DC to alternating current (AC). The output voltage of the inverters would be stepped up to the collection system voltage of 34.5 kV by pad mounted transformers located in proximity to the inverters. The 34.5 kV collection cables would ~~primarily~~ be buried underground within the solar facility with some segments ~~potentially~~ installed overhead on wood poles, including a crossing of Rice Road/Highway 177.

If the 34.5 kV collection system is installed overhead, up to approximately 30 wood poles located between 150 to 250 feet apart could be installed 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 2-4, Typical 34.5 kV Medium Voltage Line Structures).

### *Project Substation Yard*

A project substation yard would transform or “step up” the voltage from 34.5 kV to 500 kV. The substation yard and associated equipment would be developed within a 20-acre area in either the southeastern corner or a central location of the solar facility site. The 34.5 kV/500 kV substation would collect and consolidate the medium voltage cables of the PV collector system. Electrical transformers, switchgear, and related substation facilities would be designed and constructed to transform medium-voltage (34.5 kV) power from the project to the 500 kV needed to enter the SCE system at Red Bluff Substation.

The internal arrangement for a 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 and disconnect switches;
- One microwave tower adjacent to the control building comprising a galvanized steel monopole structure up to 100 feet in height mounted with an antenna up to 5 feet in diameter; and

- Dead-end structure(s) up to 200 feet in height to connect the project substation to Red Bluff Substation.

The substation area would be graded and compacted to an approximately level grade. Concrete pads would be constructed for substation equipment, and the remaining area would be graveled to a maximum depth of approximately 12 inches. The substation equipment would be primarily constructed of galvanized metal with any enclosures colored in tan, as available from the manufacturer, or treated BLM standard environmental color Carlsbad Canyon. 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. The substation equipment would be surrounded by an up-to 6-foot-high chain link galvanized metal fence topped with one foot of 3-strand barbed wire. Each of the dead-end structures would require foundations excavated to a depth of 40 feet or more.

**Substation Yard Location Option~~s~~.** As shown in Figure 2-1 (Project Area), a ~~secondary~~ two substation and battery energy storage system location option~~s , in addition to the proposed location, has~~have been retained for analysis on approximately 45 acres in either the central or southeastern area~~s~~ of the project site. Only one substation and BESS yard would ultimately be constructed, and the location would be selected by the Applicant based on final design. Should the ~~secondary~~ southeastern substation location be constructed, the 500 kV gen-tie line would be substantially shorter, no crossings of existing and proposed gen-tie lines would be required, and solar panels would be constructed within the unused 175-foot gen-tie corridor adjacent to existing ROWs and outside of desert dry wash woodland (with a 50-foot buffer). The selected substation and BESS location option and supporting gen-line would be determined during final engineering based on SCE's interconnection requirements and the crossing agreement requirements of other solar project gen-tie lines. The Applicant is currently coordinating with existing and pending ROW holders in the area.

### *Operation and Maintenance (O&M) Building*

An O&M building would be constructed at the project site. The building would be designed for project security, employee offices, and parts storage. The approximately 3,000 square-foot O&M building would be approximately 15 feet at its tallest point. The building would be constructed on a concrete foundation with its exterior color to be determined in coordination with the BLM.

### *12 kV Electrical Distribution Line*

Electrical power for the O&M building and substation would be supplied via a new overhead or underground 12 kV distribution line extending from the existing SCE distribution system adjacent to the solar facility site.

### *SCADA and Telecommunications Facilities*

The facility would be designed with a comprehensive 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 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 SCADA system cabinets 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 an external fiber optic network at the on-site substation, and no additional disturbance associated with telecommunications is anticipated.

### *Battery Energy Storage System*

Battery energy storage systems (BESS) can assist grid operators in more effectively integrating intermittent renewable resources, such as PV solar generation, into the statewide grid. The project would include an AC-coupled battery or other similar storage system capable of storing up to 500 MW of power for 4 hours. If provided, the storage system would be housed in electrical enclosures and buried electrical cable. The battery system would be concentrated on approximately 25 acres[2] in the southeastern area of the project site near the on-site substation and would consist of one of the of the following options:

- Up to 200 electrical enclosures measuring either 40 feet or 52 feet by 8 feet by 8.5 feet high installed on concrete foundations. The color of the electrical enclosures would be finalized in the Surface Treatment Plan, as available from the manufacturer to comply with BLM Visual Resources BMPs as well as maintain thermal properties;
- Up to 2,600 outdoor rated cabinets (5 feet by 4 feet by 7 feet high) installed on concrete foundations. The color of the outdoor rated cabinets would be finalized in the Surface Treatment Plan, as available from the manufacturer to comply with BLM Visual Resources BMPs as well as maintain thermal properties; or
- One or multiple buildings totaling approximately 110,000 square feet.

The project 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 would require air conditioners or heat exchangers and inverters.

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

[2] Should the BESS occupy fewer than 25 acres, solar panels may be developed adjacent to the BESS within this area.

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 signed off by the State Fire Marshal.

### *Meteorological Data Collection System*

The project would include a meteorological (MET) data collection system with up to 15 MET stations throughout the solar facility. Each MET station would be up to 10 feet tall and would have multiple weather sensors: a pyranometer for measuring solar irradiance, a thermometer, a barometric pressure sensor, and wind sensors to measure speed and direction.

### *Solar Facility Site Security, Fencing and Lighting*

**Controlled Access**. Site ingress/egress would be via locked gates located at multiple points. Each fenced area of solar development would have at least one point of access. It is anticipated that there would be solar facility entrances off of Rice Road to both the east and west, as well as along Orion Road to access the northern project area.

**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 development areas would be secured by up-to 6-foot-high chain-link perimeter fences, topped with one foot of three strand barbed wire, or as dictated by BLM specifications. The fence would be set approximately 10 to 100 feet (average of 20 feet) from the edge of any array. Desert tortoise exclusion fencing would be constructed along the bottom of the security fence (see Section 2.2.2.2). Other Project areas are proposed to incorporate a gap at the bottom of the security fence to allow for wildlife passage during long-term operations (see Section 2.2.3.3). Also, cattle fencing would be installed along segments of BLM Open Route DC 379 where it traverses desert dry wash woodland areas[3] to prevent the public from entering these areas.

**Lighting**. Coordination with the California Department of Transportation (Caltrans) would be initiated to ensure compliance with exterior lighting regulations along I-10. Care would be taken to prevent undue light pollution from nighttime security lighting. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent areas and major roadways.

To reduce off-site 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. The level and intensity of lighting during operations would be the minimum

[3] Desert dry wash woodland areas are considered prime habitat for desert tortoise.

needed. Portable lighting may be used occasionally and temporarily for maintenance activities during operations, such as emergency work that must occur on panels at night.

**Other Security Measures**. Off-site security personnel could be dispatched during nighttime hours or could be on site, depending on security risks 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 and/or at the inverters. Security cameras located at the inverters would be posted on poles approximately 20 feet high.

#### 2.2.1.2 500 kV Generation-Tie Line and Red Bluff Substation Upgrades

The proposed Oberon 500 kV gen-tie line would begin at the proposed on-site substation yard located in either the central or southeastern area of the solar facility. Figure 2-1 (Project Area) shows two gen-tie route options for its approach into Red Bluff Substation. Depending on crossing agreements negotiated with other ROW holders and if the substation is centrally located, the Oberon gen-tie line would cross either overhead or underground to the south side of the existing Desert Harvest and Desert Sunlight gen-tie line ROWs and would run east approximately 1.5 miles, paralleling an existing BLM Open Route and the Desert Sunlight and Desert Harvest gen-tie line ROWs. The Oberon gen-tie line would cross another existing transmission line corridor either overhead or underground and then would turn south on the eastern side of the proposed and existing transmission ROWs to cross Interstate 10 and connect into the eastern side of SCE's Red Bluff Substation. ~~Figure 2-1 (Project Area) shows two gen-tie route options for its approach into Red Bluff Substation.~~

If the substation and BESS location is moved to the southern project area, the overhead gen-tie line would be substantially shorter. The 175-foot ROW would run approximately 0.5 miles (2,640 feet) southeast from the substation and solar facility, crossing BLM-administered land and I-10, to the SCE Red Bluff Substation.

The exact location of the gen-tie line will be determined during final engineering based on SCE's interconnection requirements and the locations of other solar project gen-tie lines. The Applicant is currently coordinating with existing and pending ROW holders in the area.

The project gen-tie lines would be constructed with either monopoles, lattice steel structures, or H-frame poles. Gen-tie structures would be on average 120 feet tall, with a maximum height up to approximately 200 feet for dead-end structures near the Red Bluff Substation or to cross other gen-tie lines overhead.

Span lengths generally range from a minimum of 400 feet to a maximum of 2,200 feet for 500 kV structures. Given the I-10 crossing and substation approach, up to 20 gen-tie support structures would be needed. See Figure 2-5 for a depiction of typical 500 kV gen-tie structures.

Upgrades to Red Bluff Substation would be required by SCE at the point-of-change-of-ownership (POCO) structure adjacent to the Red Bluff Substation and within the existing substation fence line to accommodate interconnection of the Oberon 500 kV gen-tie line.

#### 2.2.1.3 Off-site Habitation Mitigation

In accordance with DRECP CMA LUPA-BIO-COMP-1, impacts to specified biological resources, including native habitat and designated critical habitat, are proposed to be compensated by the Applicant in a comprehensive mitigation package compiled and managed by Wildlands.

The off-site compensation package consists of a total of approximately ~~5,500~~6,200 acres comprised of numerous mitigation parcels ranging from 20 to 640 acres primarily located in the Colorado Desert, as well as the Mojave Desert, within Imperial, Riverside and San Bernardino Counties. The mitigation properties are largely private inholdings within public conservation landscapes, including Wilderness Areas and ACECs. As dictated by CMA BIO-LUPA-COMP-1, all compensation for the impacts to desert tortoise critical habitat will be in the same critical habitat unit (CHU) as the impact (Chuckwalla Desert Tortoise CHU) (Appendix AA in IP Oberon, 2021).

Any additional desert dry wash woodland mitigation beyond what is currently proposed would be verified based on DRECP mapping; no additional field mapping would be required. The mitigation properties would be unfenced in order to protect against wildlife entanglement and for the additional purpose of not attracting human activity.

### 2.2.2 Construction Activities

#### 2.2.2.1 Construction Schedule and Workforce

Pending project approval and issuance of applicable permits and notices to proceed by the RWQCB and BLM, c~~C~~onstruction is anticipated to occur over an approximately 15- to 20-month period dictated by the Applicant's Power Purchase Agreement (PPA) and financing requirements. The on-site construction workforce would consist of laborers, craftsmen, supervisory personnel, supply personnel, and construction management personnel. The on-site workforce is expected to reach a peak of approximately 530 individuals, with an average construction-related on-site workforce of 320 individuals.

Construction would begin with pre-construction surveys, and then the following activities would occur simultaneously and/or in sequence as needed: construction of the main access road, security fencing around the 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 equipment would operate Monday through Friday between 7:00 a.m. and 7:00 p.m., with a daily maximum of up to 8 hours per piece of equipment. Weekend

construction work is not expected to be required, but may occur on occasion, depending on schedule considerations. Similarly, if nighttime construction is performed, a night lighting construction plan would be developed.

#### 2.2.2.2 Pre-construction Activities

A number of activities would be undertaken to prepare the site and crews for construction. These pre-construction activities are described below.

***Environmental Resource Surveys***

Qualified biologists would conduct pre-construction surveys for sensitive species. Sensitive resource areas would be flagged so they are avoided or appropriately managed during construction. A temporary desert tortoise exclusion fence would be erected around work areas, and desert tortoise clearance surveys would be performed in accordance with the U.S. Fish and Wildlife Service's (USFWS) protocol. If necessary, desert tortoise, other wildlife, and certain types of qualifying cacti would be removed from the site and relocated so that construction and necessary conservation work can be conducted in the work area. Species relocation areas would be established in consultation with USFWS and BLM staff.

***Geotechnical Evaluation***

The Applicant would conduct a geotechnical evaluation to gather information on the physical properties of the soil and rock for use in the final design of the facility. The subsurface scientific testing and analysis would include geotechnical borings approximately every 50 acres across the project site, small-scale~~,~~ trenching, and pile load testing in select areas, all in locations that would avoid known sensitive biological, cultural, and paleontological resources. Geotechnical work may be conducted in advance of a ROW Grant being granted under a scientific collection permit ~~to be obtained from the BLM~~ or a Limited Notice to Proceed. The geotechnical evaluations are anticipated to occur prior to installation of desert tortoise exclusion fencing. 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.

***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 by project vehicles/equipment would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate.

### *Environmental Awareness Training*

Under the project's Worker Environmental Awareness Program (WEAP), prior to construction, all contractors, subcontractors, and project personnel would receive training regarding the appropriate work practices necessary to effectively understand and implement the biological commitments in the project description; implement the mitigation measures; comply with applicable environmental laws and regulations; avoid and minimize impacts; and understand the importance of these resources and the purpose and necessity of protecting them.

### *Desert Tortoise Exclusion Fence Installation ~~(Limited Notice to Proceed)~~*

A desert tortoise exclusion fence would be installed around the project development area perimeter and clearance surveys would be conducted in accordance with the USFWS protocol. Tortoises would be removed from the site and handled in accordance with a desert tortoise management and translocation plan.

The Applicant proposes to install desert tortoise exclusion fencing in two stages: (1) January 2022: temporary exclusion fencing around one solar PV block (approximately 300 acres plus buffer); and (2) February to April 2022: a combination of temporary and long-term desert tortoise exclusion fencing in conjunction with security fencing throughout the project site.

In conjunction with installation of temporary desert tortoise exclusion fencing described in item 1, above, the Applicant is seeking a variance to the USFWS protocol and an exemption from BLM, as allowed in DRECP CMA LUPA-BIO-IFS-4 in order to comply with the CMA and perform clearance surveys outside of the desert tortoise activity window, in approximately February of 2022.

### ***Temporary Desert Tortoise Exclusion Fence***

SCE has scheduled a significant interconnection blackout window from May to December 2023, requiring the high-voltage components of the project (the project substation and gen-tie line) to be constructed and interconnected no later than April 30, 2023. The high-voltage project components require a 12-month construction duration with a 3-month buffer to account for construction delays (e.g., weather, stop work orders to protect sensitive environmental resources). High-voltage construction must begin by February 28, 2022. Therefore, the Applicant proposes to construct linear facilities and one block of PV panels beginning in January 2022 under a Limited NTP. Due to schedule constraints, desert tortoise clearance surveys for this 300-acre array area would occur outside of the desert tortoise activity period (April/May), requiring a variance from USFWS. Additional temporary desert tortoise exclusion fence would be installed around additional panel blocks under the Limited NTP, but additional desert tortoise clearance surveys would be conducted in compliance with the USFWS protocol once a Full NTP has been received.

~~The Applicant is seeking a variance to the USFWS protocol and an exemption from BLM, as allowed in DRECP CMA LUPA-BIO-IFS-4 in order to comply with the CMA and perform clearance surveys outside of the desert tortoise activity window.~~

~~In preparation for the early fencing work, desert tortoise surveys at 5-meter transects would be performed during the fall 2021 active season to determine the extent and location of desert tortoise activity in the project area planned for early fencing as well as a 150-m buffer. To supplement the surveys and minimize disturbance to individual desert tortoise in the surrounding area, cameras would be installed to remotely monitor desert tortoise activity and determine how and where desert tortoise are using the Oberon site. Performing surveys and installing cameras in the active season just prior to the proposed early fencing activity would ensure that desert tortoises are identified during the early fencing installation and clearance surveys, and that the project would comply with the intent of CMA LUPA-BIO-IFS-4.~~

~~Upon BLM approval by the end of 2021, the Applicant proposes to install desert tortoise exclusion fencing in conjunction with security fencing around a portion of the project under a Limited Notice to Proceed in January 2022. This area includes the project substation, a laydown area, and one solar PV block for a total of up to approximately 350 acres. This proposed fence installation would occur outside of the desert tortoise activity period. The exact location of the solar PV block will be determined based on biological resources survey results and in consultation with BLM and USFWS. The remaining desert tortoise exclusion fencing would be installed in March 2022 and followed by desert tortoise clearance surveys during the spring desert tortoise active period (April/May).~~

~~Installation of desert tortoise exclusion fencing at the same time as security fencing would provide more stability to the desert tortoise exclusion fence, especially during large rain events. For maximum durability, the tortoise fence would be integrated with an up to 6-foot-high chain-link site security fence that meets NESC requirements. The security fence would be topped with one foot of three strand barbed wire, or as dictated by BLM specifications.~~

~~The desert tortoise exclusion fence would be constructed along the bottom of the security fence with durable materials (i.e., 16 gauge or heavier) suitable to resist desert environments, alkaline and acidic soils, wind, and erosion. Fence material would consist of 1-inch horizontal by 2-inch vertical, galvanized welded wire, 36 inches in width. Other materials include hog rings, steel T-posts, and smooth or barbed livestock wire. Hog rings would be used to attach the fence material to existing strand fence. Steel T-posts (5- to 6-foot) are used for new fence construction. Standard smooth livestock wire fencing would be used for new fence construction, on which tortoise-proof fencing would be attached. A description of the installation process is described in Section 2.2.2.3.~~

~~Installing desert tortoise exclusion fencing in conjunction with security fencing would also serve as exclusion fencing for desert kit fox.~~

### *Fencing Installation*

No more than 10 days prior to the initiation of fence construction, a pre-construction survey will be conducted using techniques that provide 100-percent visual coverage of the disturbance area. Qualified biologists will walk linear transects throughout the potential fencing disturbance area, spaced 5 meters apart and 20 meters from each side of the fence centerline (total = 40 meters, 130 feet) with an additional buffer area of 30 meters (100 feet), spaced at 10 meters. All burrows and burrow complexes that may be used by any sensitive species will be examined to determine occupancy. If any burrow within the potential disturbance area for fence construction or inside the planned fence line is determined to be unoccupied, it will be carefully collapsed according to USFWS guidelines (2019). If a burrow is potentially occupied by a sensitive species, then further actions will be required as described in the project Desert Tortoise Protection and Translocation Plan and Wildlife Protection and Translocation Plan. All qualified cacti will be salvaged by hand, if possible, or will be marked for salvage by the construction crew.

Fence installation personnel would access the work areas using existing access roads to the extent feasible. All off-road vehicle travel across BLM-administered land would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate.

Desert tortoise fence installation would begin with vegetation clearing of the work areas (up to 12 feet on either side of the fence) using mowing or grubbing, as needed, followed by digging a 12-inch deep trench for fence installation.

T-posts would be driven approximately 24 inches below the ground surface spaced approximately 10 feet apart. Livestock wire should be stretched between the T-posts, 18 to 24 inches above the ground to match the top edge of the fence material; desert tortoise-proof fencing would be attached to this wire with hog rings placed at 12- to 18-inch intervals. Smooth (barb-less) livestock wire would be used.

Shade structures will be installed along the exterior of the desert exclusion fence per USFWS guidance only along parcel boundaries adjacent to native vegetation and near DETO critical habitat (i.e., not along Highway 177). Structures would be spaced minimally 305 meters (1,000 feet) and placed directly against the exclusion fence. The shade structures will be PVC pipe, approximately 5 to 6 feet in length and 12 to 15 inches interior diameter, to allow tortoises to move around inside them. For temporary structures, a schedule 40 PVC pipe can be used and for permanent structures, a thicker 80 PVC pipe will be used. These structures will be covered with 3 to 4 inches of soil or rocks for insulation. The integrity of shade structures will be inspected during fence inspections and will be repaired, as necessary.

Fence installation would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate. Prior to fieldwork, all field personnel would complete a DETO education program and comply with all stipulations and measures developed by the BLM and USFWS. At a minimum, the tortoise education program would cover the following topics:

- Detailed description of DETO, including color photographs;
- Distribution and general behavior of DETO;
- Sensitivity of the species to human activities;

- Protection the DETO receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation;
- Protective measures, including Best Management Practices, being implemented to conserve the DETO during construction activities; and
- Procedures and a point of contact if a DETO is observed on-site

All onsite personnel would also receive Worker Environmental Awareness training (see above), addressing not only DETO and other sensitive species protocols, but all applicable best management practices and other requirements (hazardous material handling, speed limits, no firearms/pets, etc.).

***Establishment of Construction Staging Areas and Emergency Road Construction***

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

To ensure access to all areas of early construction activities, the project's primary road between solar array blocks would be constructed under a Limited NTP with similar activities as described in Section 2.2.2.11. Grading, grubbing, compaction of the main access road would ensure access by delivery vehicles, equipment, and emergency responders.

### 2.2.2.3 500 kV Substation, and Gen-Tie Line~~, and Initial Solar Facility~~ Construction

~~SCE has scheduled a significant interconnection blackout window from May to December 2023, requiring the high-voltage components of the project (the project substation and gen-tie line) to be constructed and interconnected no later than April 30, 2023. The high-voltage project components require a 12-month construction duration with a 3-month buffer to account for construction delays (e.g., weather or material availability delays and stop work orders to protect sensitive environmental resources). Therefore, high-voltage construction must begin by February 28, 2022. Therefore, the Applicant proposes to construct the gen-tie line, 500 kV substation, a laydown/staging area, and one block of PV panels (approximately 350 acres) beginning in January 2022 under a Limited Notice to Proceed (NTP). SCE would also install upgrades to Red Bluff Substation to allow for gen-tie line interconnection. Installation of desert tortoise exclusion fencing and security fencing around the 500 kV substation, laydown/staging area and the block of PV panels would be included as part of the Limited NTP. Discussion of PV panel system construction is discussed in Section 2.2.2.5.~~

***~~Desert Tortoise Exclusion Fence Installation~~***

~~No more than 10 days prior to the initiation of fence construction, a pre-construction survey would be conducted using techniques that provide 100-percent visual coverage of the disturbance area. Qualified biologists would walk linear transects throughout the potential fencing disturbance area, spaced 5 meters apart and 20 meters from each side~~

~~of the fence centerline (total = 40 meters, 130 feet) with an additional buffer area of 30 meters (100 feet), spaced at 10 meters. All burrows and burrow complexes that may be used by any sensitive species would be examined to determine occupancy. If any burrow within the potential disturbance area for fence construction or inside the planned fence line is determined to be unoccupied, it would be carefully collapsed per guidelines from USFWS (2019). If a burrow is potentially occupied by a sensitive species, then further actions would be required as described in the Project Desert Tortoise Protection and Translocation Plan and Wildlife Protection and Translocation Plan.~~

~~Fence installation personnel would access the work areas using existing access roads to the extent feasible. All off-road vehicle travel across BLM-administered land would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate.~~

~~Exclusion fencing installation would begin with vegetation clearing of the work areas (up to 12 feet on either side of the fence) using mowing or grubbing, as needed, followed by digging a 12-inch deep trench for fence installation. All qualified cacti will be salvaged by hand, if possible, or will be marked for salvage by the construction crew.~~

~~T-posts would be driven approximately 24 inches below the ground surface spaced approximately 10 feet apart. Livestock wire should be stretched between the T-posts, 18 to 24 inches above the ground to match the top edge of the fence material; desert tortoise-proof fencing would be attached to this wire with hog rings placed at 12- to 18-inch intervals. Smooth (barb-less) livestock wire would be used.~~

~~Shade structures will be installed along the exterior of the desert tortoise exclusion fence per USFWS guidance only along parcel boundaries adjacent to native vegetation and near desert tortoise critical habitat (i.e., not along Highway 177). Structures would be spaced minimally 305 meters (1,000 feet) and placed directly against the exclusion fence. The shade structures will be PVC pipe, approximately 5 to 6 feet in length and 12 to 15 inches interior diameter, to allow tortoises to move around inside them. For temporary structures, a schedule 40 PVC pipe can be used and for permanent structures, a thicker 80 PVC pipe will be used. These structures will be covered with 3 to 4 inches of soil or rocks for insulation. The integrity of shade structures will be inspected during fence inspections and will be repaired, as necessary.~~

~~Fence installation would be monitored by qualified biologists, archaeologists, and tribal monitors, as appropriate. Prior to fieldwork, all field personnel would complete a desert tortoise education program and comply with all stipulations and measures developed by the BLM and USFWS. At a minimum, the tortoise education program would cover the following topics:~~

- ~~Detailed description of desert tortoise, including color photographs;~~
- ~~Distribution and general behavior of desert tortoise;~~
- ~~Sensitivity of the species to human activities;~~

- ~~Protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation;~~
- ~~Protective measures, including Best Management Practices, being implemented to conserve the desert tortoise during construction activities; and~~
- ~~Procedures and a point of contact if a desert tortoise is observed on site~~

~~All on-site personnel would also receive Worker Environmental Awareness training, addressing not only desert tortoise and other sensitive species protocols, but all applicable best management practices and requirements (hazardous material handling, speed limits, no firearms/pets, etc.).~~

### *500 kV Substation*

As discussed above, during pre-construction activities, a security fence with desert tortoise exclusion fencing would be installed surrounding the substation yard. 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 an 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 batched on site as necessary.

### *500 kV Gen-Tie Line*

The project gen-tie line would be located within one 175-foot ROW, running approximately 0.5 miles southeast from the solar facility, across BLM-owned land and I-10, to the SCE Red Bluff Substation. The overhead gen-tie line structure foundations would be excavated to a depth of 40 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 200 feet and would be composed of lattice steel structures, H-frames, and/or 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.

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 Oberon site. 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-foot-diameter depending on topography.

The Applicant would use existing roads to the extent feasible with new spur roads constructed from existing roadways to access each structure. South of I-10, the gen-tie line would be accessed from the Corn Springs Road exit using existing roads to the

SCE Red Bluff Substation. The new spur roads would typically have circle-type turnaround areas averaging 450 square feet around each structure location. Where a circle-type turnaround is not practical, an alternative turnaround configuration would be constructed to provide safe ingress/egress of vehicles to access the structure location. It is common to use access roads and turnaround areas for structure access, parking, laydown areas, and as a crane pad setup area during construction activities, while ensuring that public access would not be restricted. In some instances, the turnaround area would remain as a permanent feature.

SCE would also perform any required upgrades to Red Bluff Substation during this time.

#### 2.2.2.4 Solar Facility Site Preparation

***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, 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 located in areas adjacent to infrastructure where it would 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 more-or-less leveled or smoothed to provide for construction access and installation.

The site cut and fill would be approximately balanced, resulting in minimal import/export of earth. On-site pre-assembly of trackers would take place in the staging area.

***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 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 facility. It would include project information and best management practices (BMP). The BMPs would include stormwater runoff quality control measures, concrete waste management, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed.

***Long-Term Security and Exclusion Fencing***

Long-term desert tortoise exclusion fencing would be authorized under the project NTP, installed along with security fencing in March 2022, and followed by desert tortoise clearance surveys during the spring desert tortoise active period (April/May). Installation of desert tortoise fencing at the same time as security fence would provide more physical stability to the desert tortoise exclusion fence, especially during large rain events. For durability, the tortoise fence would be integrated with an up to 6-foot-high chain-link site security fence that meets National Electric and Safety Code (NESC) requirements. The security fence would be topped with one foot of three strand barbed wire, or as otherwise dictated by BLM specifications.

The long-term desert tortoise exclusion fence would be constructed along the bottom of the security fence with durable materials (i.e., 16 gauge or heavier) suitable to resist the effects of the desert environment, including alkaline and acidic soils, wind, and erosion. desert tortoise fence material would consist of 1-inch horizontal by 2-inch vertical, galvanized welded wire, 36 inches in width. Other materials include: hog rings, steel T-posts, and smooth or barbed livestock wire. Hog rings would be used to attach the fence material to an existing strand fence. Steel T-posts (5- to 6-foot) are used for new fence construction. Standard smooth livestock wire fencing would be used for new security fence construction, to which tortoise-proof fencing would be attached.

Installing desert tortoise fencing in conjunction with security fencing would also serve as exclusion fencing for desert kit fox.

#### 2.2.2.5 Photovoltaic Panel System Construction

Construction of the O&M building and 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.

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. 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 then be field-assembled and attached according to the manufacturer's guidelines.

#### 2.2.2.6 Inverters, Transformers, Electrical Collector System, and BESS

Direct current (DC) lines would be installed in the conduits. The lines would be collected and combined from the arrays and routed to the inverters to be converted to alternating current (AC). 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 collector substation.

Electrical inverters would be placed on steel skids, elevated as necessary with steel piles to allow for hydrologic flows 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 connecting 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 end of panel strings, 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, structure foundations would be excavated to an average depth of approximately 10 feet. Structure installation would consist of the following basic steps:

- Deliver new structure to structure 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 section by line truck, crane, or helicopter; and
- Install top section(s) by line truck, crane, or helicopter, if required.

[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.

Once poles are erected, the conductor will 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 interconnection alignment moving from one pole to the next. Each conductor will 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 will be removed once installation is complete.

The proposed BESS area (approximately 25 acres) would be cleared and graded, as the storage facility must be nearly level. Site preparation activities 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. The construction activities of the expanded/ upsized BESS, which are anticipated to be developed in 2022 and 2025, would be similar to the initial BESS installation.

#### 2.2.2.7 Construction Access, Equipment, and Traffic

All materials for the project's construction would be delivered by truck. A majority of truck traffic would occur on designated truck routes and major streets. Flatbed trailers and trucks would be used to transport construction equipment and construction materials to the site. Project components would be assembled on site. Traffic resulting from construction activities would be temporary and could occur along area roadways as workers and materials are transported to and from the project site. Materials deliveries during construction would travel up to 150 miles one way from source 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 roundtrips 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 an on-site or off-site groundwater well, or trucked from an off-site 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.

#### 2.2.2.8 Post-Construction Cleanup

The site 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 site 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.

#### 2.2.2.9 Construction Site Stabilization and Restoration

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 and BLM biologists, any previously relocated plants and wildlife would be reintroduced to the project site and monitored for safety and health. O&M phase wildlife friendly fencing that would allow desert tortoise passage through a portion of the site is discussed in Section 2.2.3.3 (O&M Phase Wildlife Friendly Fencing).

#### 2.2.2.10 Water Requirements

Water for construction-related dust control and operations would be obtained from either an on-site or off-site groundwater well or trucked from an off-site water purveyor.

During the construction phase, it is anticipated that a total of up to 700 acre-feet of water would be used for dust suppression, truck wheel washing, and other purposes during the 15- to 20-month construction period. During construction, restroom facilities would be portable units to be serviced by licensed providers.

During operation and maintenance water would be required for panel washing and maintenance, and for substation restroom facilities that would be located adjacent to the O&M building. An associated leach field would not be located within 0.25 miles of any drinking water well.

During operation, the project would require the use of approximately 40 acre-feet of water annually for panel washing (up to four times per year) and other uses. The water discharged from panel washing would be absorbed into the surrounding soil or would evaporate.

#### 2.2.2.11 Internal Roadway System

The project's on-site roadway system would include a perimeter road, access roads, and internal roads. The perimeter road and main access roads would be approximately 20 feet wide and constructed to be consistent with facility maintenance requirements and consistent with the California Building Code ~~County standards~~ and gates would be 24 feet wide. 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. 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 in order to facilitate tortoise movement. In addition, culverts may be placed along internal roads to reduce the potential to disturb or injure tortoise individuals.

#### 2.2.2.12 Waste Generation

Waste would be stored in a locked container within a fenced and secure temporary staging area, which would be within the project development footprint in the general vicinity of the on-site substation yard and would convert to permanent parking and storage adjacent to the O&M building following construction. 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 at off-site facilities but may be refueled on site. 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 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. 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 in accordance with recycling standards and regulations at the time at completion of construction. It is anticipated that at least 20 percent of construction waste would be recyclable, and 65 percent of those materials would be recycled. Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted. Other compostable materials, such as vegetation, might also be chipped and spread on site or composted off site. Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at municipal 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.

#### 2.2.2.13 Fire Safety

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. 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 may be placed in service if required by BLM Fire. Fire extinguishers and other portable fire-fighting equipment would be available on site, 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.

### 2.2.3 Operation and Maintenance Activities

Upon commissioning, the project would enter the operation 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:

- Solar module washing;
- Vegetation, weed, and pest management;
- Security;
- Maintenance of facilities;

- 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.

#### 2.2.3.1 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. These personnel are expected to be drawn from nearby communities in Riverside County and San Bernardino County. The O&M building would house the security monitoring equipment, inclusive of security cameras feeds for monitoring the project 24 hours per day.

#### 2.2.3.2 Site Maintenance

The project site maintenance program would be largely conducted during daytime hours but panel washing could occur at night to minimize time panels would be offline during daylight hours. Likewise, 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 help screen project elements as needed. On-site vegetation may be trimmed approximately once every three years, as needed. For the first year, weed management and control would be performed quarterly. For the next two to four years, weed control would be performed annually in compliance with the BLM-approved Integrated Weed Management Plan.

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.

Long-term maintenance schedules would be developed to arrange periodic maintenance and equipment replacement in accordance with manufacturer recommendations. Solar panels are warranted 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.

#### 2.2.3.3 O&M Phase Wildlife Friendly Fencing

Over a portion of the project site shown in Figure 2-6 (Proposed Fencing Plan), temporary desert tortoise exclusion fencing would be removed after construction but not before vegetation is substantially reestablished within the array areas in accordance with the Revegetation Plan. This would allow desert tortoise and other wildlife passage through portions of the project site for the life of the project. In these areas, 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. It is anticipated that reptiles, birds, small and medium sized mammals would easily pass through the fence gap, but that larger animals, including mule deer, coyote, and desert bighorn sheep would be excluded by the presence of the security fence. Where wildlife friendly fencing is proposed, cattle fencing would remain across undeveloped open desert dry wash woodland segments along BLM open route DC 379 to discourage people from disturbing those high value habitat areas.

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.

In addition, the Applicant has agreed to allow access to the Oberon site during construction and operation to support a BLM before-after/control-impact (BACI) scientific research study at the project site and other desert solar projects to enhance public, solar industry, and agency knowledge of how desert wildlife species interact with an operating solar facility, resulting in potential recommendations for best practices or design features and to inform adaptive management. The study will focus on bats, birds, carnivores, lizards, invertebrates (e.g., ants), pollinators (e.g., bees), and ungulates (e.g., sheep), not federally listed species.

#### 2.2.3.4 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. During construction, 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 BLM.

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

### 2.2.4 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. A ROW renewal would be sought from 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 a BLM approved Closure and Decommissioning Plan. Upon ultimate decommissioning, a majority of project components 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. Following removal of the aboveground 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 BLM policy at the time of decommissioning.

Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense. The following activities would be involved:

- Dismantling and removal of all aboveground equipment (solar panels, track units, transformers, inverters, substation, O&M buildings, switchyard, distribution lines, etc.)
- Excavation and removal of all aboveground 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 will be recycled and approximately 50 percent of aluminum and other components would be recycled.

## 2.2.5 Environmental Considerations

### 2.2.5.1 Environmental Resources

~~No known environmental resource conflicts have been identified.~~ Biological, paleontological, and cultural resources pedestrian surveys ~~will be~~were conducted after coordination with BLM, USFWS, and Native American tribes, in accordance with all procedures and field work authorizations, as appropriate. Desktop ~~paleontological,~~ geotechnical, hydrologic, and other studies ~~will be~~have also been conducted to identify, minimize, and mitigate land use conflicts**.**

### 2.2.5.2 Other ROW Holders

The project would be designed to avoid, be compatible with, or assist in optimally relocating existing ROWs.

### 2.2.5.3 Spill Prevention and Contingency Plan

During construction, all construction pickup trucks would be equipped with spill kits to clean up any accidental spills of fuels or lubricants. Should a major spill occur on BLM land, the Field Office would be notified within 24 hours. All incidents would be properly recorded and addressed in accordance with BLM requirements.

### 2.2.5.4 Integrated Weed Management and Pesticide Use Proposal

Based on the aridity of the project area and the overall low density of vegetation, it is not likely that vegetation would encroach upon structures so that access would become impaired. However, noxious weeds and other non-native 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.

Herbicides may be necessary to control the spread of invasive weeds following construction as part of an integrated pest management strategy. Control would involve the targeted use of BLM-approved herbicides to control weed populations when manual control methods are not successful in managing the spread of invasive plants, but only as reviewed and approved by USFWS and BLM biologists. All weed control using herbicides and adjuvants would be conducted with chemicals approved by BLM in California (including manufacturer application rates and use). The process for treatments would be characterized in an Integrated Weed Management Plan followed by a Pesticide Use Proposal (PUP) for specific chemical treatments, both approved by the BLM. Table 2-1 identifies the herbicides proposed for use on the project site, all of which are listed in the current List of BLM-Approved Herbicides. Table 2-2 identifies the maximum and prescribed rates of herbicide application. Herbicides would be applied to foliage using backpack sprayers. Aerial spraying and truck-mounted spray rigs would not be utilized.

Weed control activities would include both mechanical and targeted herbicide control methods, as necessary. Mechanical control activities would include hand trimming with a chainsaw outside of the desert tortoise active season. Non-motorized trimmers would be used in the vicinity of known sensitive wildlife.

**Table 2-1. Herbicides Proposed for the Oberon Renewable Energy Project**

| Active Ingredient | Trade Name | Manufacturer | EPA Reg. # | Formulation |
|---|---|---|---|---|
| **Herbicides** | | | | |
| Clopyralid | Transline | Dow | 62719-259 | Liquid |
| Chlorsulfuron | Telar XP | DuPont | 352-654 | Extruded Pellet, Dry flowable |
| Glyphosate | Roundup Custom | Monsanto | 524-343 | Liquid |

**Table 2-1. Herbicides Proposed for the Oberon Renewable Energy Project**

| Active Ingredient | Trade Name | Manufacturer | EPA Reg. # | Formulation |
|---|---|---|---|---|
| | Roundup PROMax | Monsanto | 524-579 | Liquid |
| Imazapyr | Polaris | Nu Farm | 228-534/536 | Liquid |
| Triclopyr | Garlon4 | Dow AgroSciences | 62719-40 | Liquid |
| **Adjuvants** | | | | |
| Non-ionic surfactant (NIS) | Activator 90 | Loveland | CA#34704-50034 | Liquid |
| Modified Seed Oil | MSO | Loveland | CA#34704-50067 | Liquid |

**Table 2-2. Maximum and Prescribed Rates of Herbicide Application in the Project Area**

| | Maximum Application[2] Rate/Acre/Year | | Prescribed Application[3] Rate/Acre | |
|---|---|---|---|---|
| **Herbicide[1]** | **Product** | **AI/AE** | **Product** | **AI/AE** |
| Round-Up Custom | 256 oz. (2 gallons) | 8.0 lbs. a.e. | 3 quarts | 2 lbs. a.e. |
| Round-Up PROMax | 224 oz. (1.75 gallons) | | 2.67 quarts | |
| Transline | 1.33 pints | 0.5 lb. a.e. | 15 oz. | 0.35 lb. a.e. |
| Polaris[4] | 6 pints | 1.5 lbs. a.e. | 1.33 pints | 0.3 lb. a.e. |
| Telar XP | 3.0 oz. | 0.141 oz. a.i. | 1 oz. | 0.047 oz. a.i. |
| Triclopyr | 2.0 gal/ac | 8.0 lbs. a.e. | 0.5 gal/ac | 2.0 lbs. a.e./ac |
| MSO,[5] when used, will be used at a concentration of 1% volume/volume in each tank mixture. | | | | |
| Activator 90, when used, will be used at a concentration of 0.5% v/v in each tank mixture. | | | | |

1 - Choice of prescription will depend on site constraints, target species, and time of year. Treatments will be directed foliar. Over a 3- to 5-year period, as much as 915 acres may be treated. This represents all acreage in the proposed project area on Bureau of Land Management lands (183 acres) being treated each year for up to 5 years.
2 - Maximum total application amount per year based on active ingredient.
3 - Maximum amount per application event; multiple applications may occur in a year, if needed to control weeds, until maximum annual application amount is reached.
4 - Polaris (Imazapyr) will be used only in disturbed habitat.
5 - Either “MSO Concentrate” from Loveland or “Hasten” from Wilbur Ellis is recommended.
a.e. Acid Equivalent
a.i. Active Ingredient
ac Acre
gal Gallon
lbs Pounds

Herbicide use under the Integrated Weed Management Plan would follow these principles:

- Application dates would be intended to cover the entire period of the ROW grant, beginning during the construction phase, if needed.
- Treatments would be as needed, upon emergence of the target weed species during the growing season. Growing seasons are typically during the winter months (November to April), but may include the summer months (July to September) if summer rainfall is sufficient to germinate target weed species during those months.
- The total number of applications is dependent upon the extent of invasive plants within the project area, but it is expected that early- and late-season emergence of invasive plant species would require two or more treatment periods. Treatment periods are defined as one round of treatment coverage for all sites.
- The primary invasive plant species to be targeted include Mediterranean grass, Saharan mustard, Russian thistle, saltcedar, highway ice plant, and Mexican fan palm. If additional invasive plant species are identified during monitoring, these would also be targeted for control efforts.
- Crew members who conduct weed treatment in the project area would have extensive experience working around sensitive habitats and species. In addition, crews would be monitored by a restoration ecologist. Weed control would be specifically applied to individual plants and not sprayed broadly across the project area.
- Crews would work under the direct supervision of a licensed Certified Pesticide Applicator.
- Crews would adhere to strict application guidelines when applying herbicide during wind to minimize drift and chemical contact with non-target vegetation or wildlife. Herbicide application would be suspended if winds are in excess of 10 miles per hour, or if precipitation is occurring or imminent (predicted within the next 24 hours).

# CHAPTER 3: Environmental Analysis

## 3.1 Introduction to Environmental Analysis

Chapter 3 identifies the impacts of the proposed project on the existing environment, in accordance with CEQA Guidelines sections 15125 and 15143. 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

This section provides an analysis of potential impacts on resource areas that the Regional Water Board 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
- 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

The topic of Agriculture and Forestry Resources identified in CEQA was not considered. The project is not located on lands used for agriculture, including grazing, and forestry. It is not located on lands identified as appropriate for agriculture use under the California Agricultural Land Evaluation and Site Assessment Model (1997) nor on lands zoned as forest land. There would be no potential for significant impact to agriculture and forestry resources.

Sections 3.1 through 3.18 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. Additional issues to be addressed for each environmental issue area identified above include the following:

#### Environmental Setting

This subsection presents the existing environmental conditions at the site and in the surrounding area as appropriate (the "baseline") that are relevant to the issues under evaluation, in accordance with section 15125 of the 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 proposed project, shown on Figure 2-1, and the immediate vicinity around the project where project impacts could affect the environment. Within the project area (approximately 5,000 acres), the development footprint consists of the areas within the fenceline where the solar facility, on-site substation, and BESS would be constructed (approximately 2,700 acres, including the gen-tie ROW).

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 chapter were also informed by the surveys and studies conducted for the project, as noted throughout this chapter.

### 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 Background were obtained from the same sources listed above under Environmental Setting.

### Methodology for Analysis

The Methodology for Analysis sections 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.

### Application of CEQA Significance Thresholds

The CEQA Significance Criteria section describes the criteria used to determine which impacts should be considered potentially significant. Significance thresholds are based on criteria identified in Appendix G of the CEQA Guidelines (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.

### Impact Analysis

The Impact Analysis section presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. A significant impact is defined under CEQA as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (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 measure, 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 Chapter 2, Description of the Proposed Project, including implementation of mitigation measures identified to reduce or avoid significant adverse impacts, would be monitored in accordance with a MMRP (summarized below).

### Cumulative Impacts

The Cumulative Impacts section 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.

### 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 decisionmaking and public participation. (State CEQA Guidelines, § 15126.6, subd. (f)) Section 4, Project Alternatives Analysis, describes alternatives to the proposed project and includes the impact analysis for each alternative scenario considered.

### 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 Chapter 4, and the MMRP included in the Final EIR, identify all mitigation measures to reduce significant impacts. The RWQCB and BLM would ensure implementation of all mitigation measures.

### Residual Impacts After Mitigation

The Significance after Mitigation section 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.

### 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." (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." (CEQA Guidelines § 15130, subd. (a)(1).)

CEQA Guidelines section 15130 requires that an EIR discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." 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 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.

### Methodology for Cumulative Impact Analysis

CEQA Guidelines Section 15130 provides that the following approaches can be used to adequately address cumulative impacts:

- **List Method** — A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.
- **Regional Growth Projections Method** — A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document 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 CEQA Guidelines section 15130, subdivision (a).

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 the 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.

## 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 is a localized impact, a smaller area surrounding the immediate site is appropriate for consideration. The geographic areas included within this analysis for purposes of determining whether the project's contribution to a particular impact would be cumulatively considerable and therefore significant are:

- **Aesthetics:** One-mile area around the perimeter of the solar facilities and gen-tie line
- **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 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 chapter 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 Oberon 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, 2015a). 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. |

**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 |
|---|---|---|---|---|---|---|
| 5 | Blythe Solar Power Project | Blythe | NextEra | Operational | 4,100 | A 485 MW solar PV project located 2 miles north of I-10 and 8 miles west of the City of Blythe on BLM land. A 230 kV gen-tie line connects the solar energy generating facility to the SCE Colorado River Substation. |
| 6 | Desert Sunlight Solar Project | 6 miles north of Desert Center | NextEra | Operational | 4,400 | A 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 the SCE Colorado River Substation which is located 10 miles southwest of Blythe. |

**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 |
|---|---|---|---|---|---|---|
| 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 | A 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 | A 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. |

**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 |
|---|---|---|---|---|---|---|
| 14 | Palen Solar Project | East of Desert Center | EDF-RE | Operational (first phase) | 3,400 | A 500 MW PV project located 11 miles east of Desert Center on BLM land. Includes a 6-mile gen-tie line into the 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: Riverside County, 2019.

**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 | Approximately 118-mile 500 kV transmission line from a new substation near the Blythe Energy Project to the existing Devers Substation located 10 miles north of Palm Springs, California. |
| B | Palo Verde Mesa Solar Project | East of Blythe in the, near Neighbors Boulevard | Renewable Resources Group | Approved by Riverside County in August 2017 | 3,250 | A 465 MW PV solar plant on 50 parcels totaling 3,250 acres, primarily on agriculture land. Gen-tie line is approximately 11.8 miles to the Colorado River Substation. |

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

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project Description |
|---|---|---|---|---|---|---|
| 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. | 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 | Desert Quartzite Solar Project | South of I-10, 8 miles southwest of Blythe | Desert Quartzite LLC (First Solar) | Approved by BLM in January 2020 and Riverside County in October 2019. | 3,770 | A 450 MW solar PV facility with a project substation, access road, and transmission line, all located on BLM land. |
| E | Crimson Solar Project | South of I-10, 8 miles southwest of Blythe | Sonoran West Solar Holdings, LLC (Recurrent Energy) | Approved by BLM in May 2021 and CDFW in June 2021. | 2,500 | An up to 350 MW solar PV project located on BLM land. The project would interconnect to the SCE Colorado River Substation. |
| F | Blythe Mesa Solar Project | East of Blythe | Blythe Mesa Solar II, LLC | Approved by Riverside County in May 2015. Gen-tie approved by BLM in August 2015, updated ROW approved in August 2020. | 3,600 | Up to 485 MW solar PV project located outside Blythe on private land. The gen-tie line would cross BLM land to reach the SCE Colorado River Substation. |

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

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project Description |
|---|---|---|---|---|---|---|
| G | Athos Renewable Energy Project | Desert Center | Soft Bank Energy | Approved by Riverside County and BLM in 2019; Construction underway. | 3,400 | A solar PV project located on private land in unincorporated Riverside County. Portions of the gen-tie line would cross public land to reach the SCE Red Bluff Substation. |
| H | Easley Solar & Green Hydrogen Project | Northeast of Desert Center | IP Land Holdings, LLC | Entering review by BLM. SF299 filed. | 9,825 (application area) ~7,500 (available for development) | The project on BLM land would generate and store up to 650 MW of solar PV energy. The project would include a green hydrogen electrolyzer to convert water into hydrogen gas and oxygen. |
| I | 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 review by the CPUC. | N/A | The proposal is to build a 500 kV transmission line from Tonopah, Arizona, to Blythe, California. It would span 114 miles, with all but 17 miles of the line ~~would be~~ in the Arizona counties of Maricopa and La Paz ~~with~~ and - the remainder in Riverside County, California. |

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

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project Description |
|---|---|---|---|---|---|---|
| J | Victory Pass Solar Project | 4.5 miles east of Desert Center, adjacent to north side of I-10 | Clearway Energy Group, LLC | Under review by BLM in 2021. | 1,800 | The project located on BLM-administered land would generate 200 MW of solar energy and include up to 200 MW of battery storage. A shared overhead 230 kV gen-tie line would connect to Red Bluff Substation. |
| K | Arica Solar Project | Adjacent to north side of Victory Pass project, 5 miles east-northeast of Desert Center | Clearway Energy Group, LLC | Under review by BLM in 2021. | 2,000 | The project on BLM-administered land would generate 265 MW of solar energy and include up to 200 MW of battery storage. A shared overhead 230 kV gen-tie line would connect to Red Bluff Substation. |

Source: Riverside County, 2019.

# 3.2 Aesthetics

Aesthetics, as addressed in the 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 human-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 adverse aesthetic impacts that result from project implementation. All figures referenced in this section are presented in sequence in Appendix B (Maps and Figures).

The term aesthetics (as defined above) is generally considered interchangeable with the term Visual Resources.

Regional landscape generally refers to the arid desert of southeastern California within which the Chuckwalla Valley and surrounding mountains are located. The term *viewshed* is discussed in greater detail in Section 3.2.1 but generally refers to all areas from which some component of the project may be seen. For the project, this generally means the central and northern portions of the Chuckwalla Valley and the surrounding, project-facing mountain slopes and ridges.

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.

## 3.2.1 Environmental Setting

### 3.2.1.1 Approach to Data Collection

Development of the aesthetics setting incorporated both a regional perspective and site-specific, detailed landscape assessments using the Visual Sensitivity–Visual Change (VS-VC) method. The project setting was evaluated from various public roads and vantage points to develop an overall assessment of the existing landscape character, visual quality, and viewing conditions. Then, at representative viewpoints, or Key Observation Points (KOPs), the existing landscape was characterized for visual quality, viewer concern, and viewer exposure. KOP selection was accomplished in consultation with the BLM and was informed by a review of the overall project viewshed as discussed later in this section and illustrated in Figure 3.2-1A.

KOPs are representative, stationary viewing locations selected for the purpose of analyzing and describing existing Visual Resources and for preparing visual simulations and conducting impact assessments. KOPs are generally selected to be representative of the most critical public viewing locations from which a project would be seen. Five KOPs were selected to characterize the local project setting and are shown on Figure 3.2-1B. Each of the factors considered in the evaluation of the existing landscape at each KOP is discussed below, and the individual KOP analyses are presented later in this section.

***Visual Quality*** is a measure of the overall impression or appeal of an area as determined by particular landscape characteristics such as landforms, rockforms, water features, vegetation patterns, and existing built features. The physical appearance and cultural context of a landscape gives it an identity and sense of place. The aesthetic elements of form, line, color, and texture are integral to the understanding of the landscape character attributes of variety, vividness, coherence, uniqueness, harmony, and pattern. These attributes contribute to three visual quality classifications: indistinctive or lacking in scenic features (Low); common or average (Moderate); and distinctive with valued scenic attributes (High). Visual quality is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

***Viewer Concern*** addresses the level of interest or concern of viewers regarding an area's Visual Resources (rated from Low to High) and is closely associated with viewers' expectations for the area. Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features. When viewing the same landscape, different individual may have different responses to that landscape and any proposed visual changes based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person's attachment to, and value for, a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. However, generalizations can be made about a viewer's sensitivity to scenic quality and visual changes. Recreationists, hikers, tourists, and people driving for pleasure are expected to have high concern for scenery, visual quality, and landscape character. People who are commuting daily through the same landscape generally have a moderate concern for scenery, while people working at agricultural or industrial sites generally have a lower concern for scenic quality or changes to existing landscape character.

***Viewer Exposure*** describes the degree to which viewers are exposed to views of the landscape (rated from Low to High). Viewer exposure considers landscape visibility (the ability to see the landscape), distance zones (proximity of viewers to the subject landscape), number of viewers (Low to High), and the duration of view (Brief to Extended). Landscape visibility can be a function of several interconnected considerations including proximity to viewing point, degree of discernible detail, seasonal variations (snow, fog,

smoke, and haze can obscure landscapes), time of day, and/or presence or absence of screening features such as landforms, vegetation, and/or built structures. Even though a landscape may have highly scenic qualities, it may be remote, receiving relatively few visitors, and thus have a lower degree of viewer exposure. Conversely, a subject landscape or project may be situated in relatively close proximity to a major road or highway used by a substantial number of motorists and yet still result in relatively low viewer exposure if the rate of travel speed is high and viewing times are brief or if the landscape is partially screened by vegetation, terrain variation, or other features. Often, it is the subject area's proximity to viewers, or distance zone, that is of particular importance in determining viewer exposure. Landscapes are generally subdivided into three or four distance zones based on relative visibility from travel routes or observation points. Distance zones typically include Foreground, Middleground, and Background. The actual number of zones and distance assigned to each zone is dependent on the existing terrain characteristics and public policy and is often determined on a project-by-project basis.

***Overall Visual Sensitivity*** is a concluding assessment of an existing landscape's susceptibility to an adverse visual outcome (rated from Low to High). A landscape with a high degree of visual sensitivity is able to accommodate only a low degree of adverse visual change without resulting in a substantial visual effect. A landscape with a low degree of visual sensitivity is able to accommodate a greater degree of adverse visual change before exhibiting a substantial visual effect. Overall visual sensitivity is derived from an equally weighted comparison of existing visual quality, viewer concern, and viewer exposure.

#### 3.2.1.2 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 relatively visually intact, though a number of dispersed energy facilities are apparent.

### 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-sight" 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 those of the edges of the solar fields. The exception would be for the more elevated views available from Alligator Rock or portions of JTNP 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 5 miles) due to the relatively close proximity of Interstate 10 (I-10), State Route (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 west; and JTNP to the north and west. Additionally, it should be noted that Chuckwalla Valley and the surrounding slopes and ridgelines have longstanding cultural and spiritual significance to the Colorado River Indian Tribes as ancestral lands.

Potentially affected viewers within the project area include residential viewers in Lake Tamarisk Desert Resort and dispersed rural residences; recreational visitors to ACECs, wilderness areas, and open public lands; and 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 an industrial character would typically be perceived as an adverse visual change.

### 3.2.1.4 Project Landscape Setting and KOP Assessments

The proposed project site is situated just northeast of Desert Center on the north side of I-10 and predominantly east of SR-177 (though the westernmost portion of the project extends between SR-177 and Kaiser Road to the west). The area surrounding the project site is very lightly populated, and the lands making up the site are presently undeveloped,

consisting mainly of desert scrub (largely scattered creosote bushes), lakebed, and dune landscapes that are predominantly intact throughout the Chuckwalla Valley, which ranges in elevation from approximately 609 feet above mean sea level in the northeast of the project site to approximately 862 feet above mean sea level in the southwest of the site adjacent to I-10. 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). 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. 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 cultural modifications in the project area including multiple transmission lines, Red Bluff Substation, and I-10 to the south; the Desert Sunlight and Desert Harvest gen-tie lines with their Corten tubular steel poles to the west and south; the Lake Tamarisk Desert Resort and SR-177 to the west (except for the small portion of the project that extends west of SR-177); the Desert Sunlight and Desert Harvest solar projects to the northwest; the Palen and Genesis solar projects to the east; and scattered residences, built structures, 4-wheel drive tracks, and access roads throughout the area. Overall, the existing scenic quality of the project site appears common to the region, includes cultural modifications that add variety but are discordant and promote disharmony, and would correspond to the BLM VRM Scenic Quality Classification C (low scenic value).

As noted above, five representative KOPs were established to assess the various factors that are considered in the evaluation of a landscape's existing aesthetic or visual resources (see Section 3.2.1.1, Approach to Data Collection). These KOPs are representative of the most critical locations from which the project would be seen and were located based on their usefulness in evaluating existing landscapes and potential impacts on various viewing populations. At each KOP, the existing landscape was characterized and photographed. The Existing View photographs for each KOP are provided in Appendix B (all figures referred to in this section are presented in Appendix B). The following paragraphs describe the landscape setting viewed from each of the five KOPs.

***KOP 1 – Eastbound I-10.*** This viewpoint is representative of proximal or adjacent views of the project from eastbound I-10, which is a County Eligible Scenic Corridor. Figure 3.2-2A presents the existing view to the northeast from KOP 1, which is located approximately 0.9 miles east of the Desert Center/Rice Road (SR-177) overpass. The view presented in Figure 3.2-2A captures the central portion of Chuckwalla Valley and a portion of the project area north of I-10 and east of SR-177, backdropped by the rugged, angular forms of the Coxcomb, 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 vertical, dark rust-colored, tubular Corten-steel poles of the Desert Sunlight and Desert Harvest gen-tie transmission lines that parallel and then converge on I-10 to span the freeway to Red Bluff Substation on the south side of I-10. The landscape of the project site is 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.

While motorists on I-10 heading east would enjoy scenic desert views across the western Chuckwalla Valley, upon approach to the project area motorists' views and sensitivity would be somewhat tempered by the project's viewing context, which would include built structures at Desert Center, the existing Desert Sunlight and Desert Harvest solar facilities to the north of I-10, the gen-tie transmission lines adjacent to the north side of I-10, the adjacent utility poles on the south side of I-10 along with Red Bluff Substation and the Palen solar facilities (under construction) to the east. 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 viewing distance zone, high volumes of travelers on I-10, and 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 more intermediate views of the project 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 located just east of the proposed gen-tie span of I-10 and approximately 3.6 miles west of the Corn Springs Road overpass. The view presented in Figure 3.2-3A encompasses a central portion of Chuckwalla Valley, north and east of Desert Center, and provides an expansive view of the valley landscape along the I-10 corridor. This valley view is backdropped by the rugged, horizontal to angular form of the Eagle Mountains to the west, 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 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 vertical, dark rust-colored, tubular Corten-steel poles of the Desert Sunlight and Desert Harvest (to the west) gen-tie transmission lines and the Palen (to the east) gen-tie transmission line that parallel and then converge on I-10 to span the freeway to Red Bluff Substation on

the south side of I-10. The landscape of the project site is rather non-descript and generally lacking in visual variety, though the adjacent scenery (surrounding mountain ranges) contributes visual interest to the views from I-10 and enhances the broader landscape scenic quality. The overall visual quality is low to moderate and common to the greater Chuckwalla Valley.

While motorists on I-10 heading west would enjoy scenic desert views across the western Chuckwalla Valley, upon approach to the project area motorists' views and sensitivity would be somewhat tempered by the project's viewing context, which would include the discordant features of the Genesis (existing) and Palen (under construction) solar projects to the east; electric transmission lines, utility poles, and Red Bluff Substation on the south side of I-10; built structures at Desert Center; and the existing Desert Sunlight and Desert Harvest solar facilities and associated gen-tie transmission lines to the north side of I-10. 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 viewing distance zone, high volumes of travelers on I-10, and 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 south of I-10. Figure 3.2-4A presents the existing view to the northeast from KOP 3, on the crest of Alligator Rock. The view presented in Figure 3.2-4A overlooks the eastern portion of Desert Center and a central portion of Chuckwalla Valley east of SR-177 and north of I-10. This expansive, panoramic view of the valley is backdropped by the horizontal to angular forms of the Coxcomb, Granite, and Palen 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 tans and pale to golden yellow for grasses with muted greens, tans, and some reddish hues for shrubs. The most prominent built features in this view are the linear, diagonal forms of I-10 (center part of the image) and SR-177 (along the left side of the image) and the geometric shapes of the various built structures in Desert Center. The valley landscape is also punctuated by the dark rust-colored, tubular Corten-steel poles of the Desert Sunlight and Desert Harvest gen-tie transmission lines that parallel I-10 across the center of the image. The landscape of the project site visible from this location is rather non-descript and generally lacking in visual variety, though the panoramic views incorporating adjacent scenery (surrounding mountains) include a higher scenic quality of the broader landscape. The overall visual quality is moderate and common to the greater Chuckwalla Valley when viewed from elevated vantage points.

Visitors to the Alligator Rock ACEC in general, and the crest of Alligator Rock specifically, have enjoyed panoramic desert views across the central Chuckwalla Valley that, from this location, exhibits a relatively natural, undeveloped appearance, with the exception of the Desert Sunlight and Desert Harvest gen-tie lines and the structural clutter that characterizes the immediate Desert Center landscape, which is overlooked from the elevated vantage point of KOP 3. 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) and 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, low number of viewers, and 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 – Northbound SR-177.*** This viewpoint is representative of the project's views from northbound SR-177 (Rice Road). Figure 3.2-5A presents the existing view to the north from KOP 4, approximately 1.2 miles northeast of Desert Center. This view up SR-177 captures a central portion of the Chuckwalla Valley in the immediate vicinity of SR-177. This expansive view of the broad, flat valley floor is backdropped by the horizontal to angular forms of the Coxcomb, Granite, and Palen 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 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. A distant communications tower on the east side of SR-177 is also faintly visible. While the landscape of the project site visible from KOP 4 is rather non-descript and generally lacking in visual variety, 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.

Travelers on SR-177 experience a predominantly natural desert landscape, though visually discordant, dispersed, cultural modifications are apparent as a few scattered rural residences and roadside commercial buildings, wood-pole utility lines, the adjacent communications tower, a few agricultural properties, and the existing Desert Sunlight and Desert Harvest solar projects to the northwest of KOP 4 (beyond the frame of view in this image). As a result, the somewhat tempered viewer concern 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 4, 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 5 – Lake Tamarisk Desert Resort.*** This viewpoint is representative of the project's views from the southern portion of Lake Tamarisk Desert Resort. Figure 3.2-6A presents the existing view to the south-southeast from KOP 5, on the Lake Tamarisk golf course. This view captures a portion of the relatively undeveloped Chuckwalla Valley, back-dropped by the rugged Chuckwalla Mountains. Landform colors range from light tan to lavender and bluish hues at distance. Landform textures appear smooth to granular and coarse. 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. The landscape does host considerable infrastructure including utility lines, the gen-tie lines for the Desert Sunlight and Desert Harvest solar projects, a natural gas pump station, high-voltage electric transmission lines, I-10 with its associated vehicles, and a telecommunications tower. While the landscape of the project site visible from KOP 5 is rather non-descript and generally lacking in visual variety, the adjacent scenery (surrounding mountains) enhances the broader landscape scenic quality. Also, much of the project site's 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.

Visitors to, and residents of, the Lake Tamarisk Desert Resort enjoy panoramic views across the central Chuckwalla Valley that, from this location, exhibits a relatively natural, undeveloped appearance. Viewer concern is rated 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 given the moderate visibility of the project site (which would be partially screened by intervening vegetation), the foreground/middleground viewing distance, low number of viewers, and extended duration of view. For viewers in the vicinity of KOP 5, combining the equally weighted low to moderate visual quality, high viewer concern, and moderate viewer exposure results in an overall rating of moderate for overall visual sensitivity of the visual setting and viewing characteristics.

## 3.2.2 Regulatory Framework

### 3.2.2.1 Federal Law, 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 Oberon Project because it is located on public lands administered by the U.S. Department of Interior, Bureau of Land Management (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 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 result in 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, 1986).

### 3.2.2.2 Local Law, Regulations, and Policies

The project is located entirely on BLM-administered public land so while it is not subject to the County land use plans and ordinances, local plans were reviewed for informational purposes and to address the 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:

- **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.
c) 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:

- **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:

- **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:

- **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

## 3.2.3 Methodology for Analysis

This Aesthetics analysis used the VS-VC System to assess the visual effects of the project on existing landscapes. Under the VS-VC System, overall visual change is determined at each KOP based on an assessment and equal weighting of project-induced visual contrast, project dominance, and view blockage (or view impairment) and an evaluation of a visual simulation of the project. Project-induced visual change could result from aboveground facilities, vegetation removal, landform modification, component size or scale relative to existing landscape characteristics, and the placement of project components relative to existing developed features. The experience of visual change can also be affected by the degree of screening by vegetation, landforms, and/or

structures; distance from the observers; atmospheric conditions; and angle of view. Each of the key factors contributing to visual change is discussed below.

***Visual Contrast*** describes the degree to which a project's visual characteristics or elements (consisting of form, line, color, and texture) differ from the same visual elements established in the existing landscape. The degree of contrast can range from Low to High. The presence of forms, lines, colors, and textures in the landscape similar to those of a project indicate a landscape more capable of accepting those project characteristics than a landscape where those elements are absent.

***Project Dominance*** is a measure of a project's apparent size relative to other visible landscape features and the total field of view. A project's dominance is affected by its relative location in the field of view and the distance between the viewer and the project. The level of dominance can range from Subordinate to Dominant and, in effect, is a measure of the degree to which a project demands the attention of the casual observer.

***View Blockage or Impairment*** describes the extent to which any previously visible landscape features are blocked from view as a result of a project's scale and/or position. Blockage of higher-quality landscape features by lower-quality project features causes adverse visual impacts. This is particularly true with respect to scenic view obstruction, which refers to the degree to which a project would block or intrude upon scenic view corridors, particularly those identified in public policies, such as I-10 that is a County Eligible Scenic Highway. The degree of view blockage can range from None to High.

***Overall Visual Change*** is a concluding assessment as to the degree of change that would be caused by a project. Overall visual change is derived by combining the three equally weighted factors of visual contrast, project dominance, and view blockage, and can range from Low to High. In some cases, however, where view blockage is reduced by a project, overall visual change may be Improved.

Overall visual change is then considered within the context of the determined overall visual sensitivity of the existing landscape and viewing dynamics (as discussed in Section 3.2.1.1), and an impact significance conclusion is made consistent with CEQA requirements. Table 3.2-1 illustrates the general interrelationship between visual sensitivity and visual change and is used as a consistency check between individual KOP evaluations. Actual parameter determinations (e.g., visual contrast, project dominance, and view blockage) are based on analyst experience and site-specific circumstances.

While the interrelationships presented in Table 3.2-1 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 when viewed in the field. 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 method 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 high 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 | Less Than Significant[2] | Less Than Significant | Less Than Significant |
| Low to Moderate | No impact | Less Than Significant | Less Than Significant | Less Than Significant | Less Than Significant with Mitigation Incorporated [3] |
| Moderate | Less Than Significant | Less Than Significant | Less Than Significant | Less Than Significant with Mitigation Incorporated | Less Than Significant with Mitigation Incorporated |
| Moderate to High | Less Than Significant | Less Than Significant | Less Than Significant with Mitigation Incorporated | Less Than Significant with Mitigation Incorporated | Potentially Significant Impact[4] |
| High | Less Than Significant | Less Than Significant with Mitigation Incorporated | Less Than Significant with Mitigation Incorporated | Potentially Significant Impact[4] | Potentially Significant Impact |

1 - No Impact – Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.
2 - Less Than Significant – Impacts are perceived as negative but do not exceed environmental thresholds.
3 - Less Than Significant with Mitigation Incorporated – Impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances but are Less Than Significant with effective mitigation incorporated.
4 - Potentially Significant Impact – Impacts with feasible mitigation may be reduced to levels that are not significant or avoided altogether. Without mitigation, significant impacts would exceed environmental thresholds.

## 3.2.4 CEQA Significance Criteria

As contained in Appendix G of the CEQA Guidelines, impacts to aesthetics are considered significant if the project would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

- In non-urbanized area, 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 point); in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

An additional criterion (not contained in the CEQA Guidelines) that is considered in the determination of a significant visual impact is:

- Project construction or the presence of project components would result in an inconsistency with local regulations, plans, and standards applicable to the protection of aesthetics/visual resources.

## 3.2.5 Proposed Project Impact Analysis

***Impact AES-1. Would the project have a substantial adverse effect on a scenic vista?***

***NO IMPACT.*** A scenic vista is generally considered a specific viewpoint or viewing location (often an elevated overlook) that provides expansive views of a highly valued landscape for the benefit of the general public. Scenic vistas are frequently officially designated by public agencies and are often signed and accessible. Although there are expansive views of the project area and surrounding landscape from the I-10 and SR-177 travel corridors and other local roads, nearby residences, and other recreational destinations (e.g., Desert Lily Sanctuary and Alligator Rock ACECs), there are no Riverside County designated or community recognized scenic vistas in the proposed project area. Therefore, the project would not result in an aesthetic impact under this criterion.

***Impact AES-2. Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

***NO IMPACT.*** There are no State Designated Scenic Highways in the project area. Therefore, the project would not result in an aesthetic impact under this criterion. Impacts to views from I-10, which is a County Eligible Scenic Highway, are addressed in the discussion of Impact AES-3 for KOPs 1 and 2.

***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 majority of the project's impacts fall within the Impact AES-3 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 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.

## Project Construction

***DURING CONSTRUCTION, LESS THAN SIGNIFICANT WITH MITIGATION.*** Construction activities could cause short-term direct and indirect aesthetic impacts from the visible presence of equipment, materials, vehicles, and workforce at 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 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, installation of equipment and facilities, 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 activities would be temporary in nature, they would not result in a substantial long-term visual effect. 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 activities 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 could 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 could result in a significant aesthetic/visual resources impact under CEQA 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 could result in a significant aesthetic/visual resources impact under CEQA 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. Therefore, the resulting visual effect would be less than significant, and no mitigation is proposed.

***Summary of Mitigation Measures for Construction under Impact AES-3***

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:

**MM BIO-5 Vegetation Resources Management Plan.** *See full text in Section 3.4, 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:

**MM AQ-1 Fugitive Dust Control Plan.** *See full text in Section 3.3, 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-1 Night Lighting Management Plan.** *See full text in Section 3.2.7.*

### Project Operation and Maintenance (O&M)

As described in Section 3.2.1.4 and depicted in Figure 3.2-1B, five 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 land-scape. 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*

***DURING OPERATION, SIGNIFICANT AND UNAVOIDABLE.*** 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 depicts the introduction of the solar arrays into the valley landscape. As shown in the simulation, the approximately 0.35-mile distant solar arrays (closest along left side of image) would present as a visually noticeable built feature introduced into a predominantly natural-appearing, rural desert landscape and would be centrally located in the field of view from KOP 1. The open landscape would enable extended view durations of the solar fields for travelers on I-10 crossing Chuckwalla Valley. Portions of the solar arrays would be visible as a continuous, linear, horizontal, medium- to dark-gray to bluish-black (depending on panel orientation and time of day) areal mass on the valley floor partially screened from I-10 views by intervening vegetation and the existing steel-pole gen-tie lines of the Desert Sunlight and Desert Harvest solar projects farther to the northwest.

The proposed substation (barely discernible) and one gen-tie structure are shown at the right edge of the simulation. These facilities would not present as visually significant at this viewing distance and from this viewing location given the intervening existing structures and the partial screening (of the substation) that would occur from the solar arrays. However, if the optional substation and BESS location in the southeastern portion of the site (as shown in Figure 2-1) is selected, these facilities would have no visibility from KOP 1.

In the context of the existing landscape, the industrial forms of the solar facilities within the foreground would exhibit high visual contrast primarily arising from the horizontal geometric form, dark color, and industrial character of the arrays. As a result, the project would constitute a foreground visually co-dominant feature in the landscape. The project would attract the attention of the casual observer, and view blockage of higher value landscape features (e.g., valley floor and vegetation) would be moderate to high. Combining the equally weighted 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 in the context of the existing landscape's moderate to high visual sensitivity, results in a significant aesthetics impact under the Impact AES-3 impact criterion. Implementation of Mitigation Measures AES-2 (Surface Treatment of Project Structures and Buildings) and AES-3 (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 change would remain significant and unavoidable.

### *KOP 2 – Westbound I-10*

***DURING OPERATION, SIGNIFICANT AND UNAVOIDABLE.*** Figure 3.2-3A presents the existing view from KOP 2 on westbound I-10, just east of the proposed gen-tie span of I-10 and

approximately 3.6 miles west of the Corn Springs Road overpass. As shown in the KOP 2 visual simulation presented in Figure 3.2-3B, the Corten-steel pole gen-tie line would be a visually dominant feature added to the landscape in this foreground view as it converges on, turns to parallel, and then span I-10 to connect to Red Bluff Substation on the south side of I-10. From this vantage point, the gen-tie line would partially block or impair views of the background Eagle Mountains. The gen-tie line's structural contrast relative to form, line, and color would be moderate to strong, which is somewhat tempered by the presence of the existing Desert Sunlight and Desert Harvest gen-tie lines also visible in this frame of view.

The other noticeable project feature would be the eastern portion of the solar arrays. The proposed substation in the central project area would be barely discernible as a complex cluster of light- to medium-gray vertical, steel structures (when looking down and slightly to the left of I-10). The substation would be partially screened by intervening vegetation. However, if the optional substation and BESS location in the southeastern portion of the site (as shown in Figure 2-1) is selected, these facilities would have slightly greater visibility from KOP 2 but would not change the overall level of visual contrast or impact significance.

The approximately 0.45-mile distant (at the closest point to KOP 2) solar arrays would be visible as a linear, horizontal, medium- to dark-gray or bluish-black areal mass along the valley floor but are substantially screened from I-10 views at this location by intervening vegetation. In the context of the existing landscape, the overall visual contrast associated with the visually discordant solar and gen-tie structural features and industrial character would be moderate to high. These foreground/middleground introduced facilities would appear co-dominant relative to the other landscape features and would attract the attention of the casual observer. View blockage of higher value landscape features (e.g., valley floor, vegetation, and background mountains) 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 in the context of the existing landscape's moderate to high visual sensitivity, results in a significant aesthetics impact under the Impact AES-3 impact criterion. Implementation of Mitigation Measures AES-2 (Surface Treatment of Project Structures and Buildings) and AES-3 (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 change would remain significant and unavoidable.

### *KOP 3 – Alligator Rock ACEC*

***DURING OPERATION, SIGNIFICANT AND UNAVOIDABLE.*** Figure 3.2-4A presents the existing view from KOP 3 on the crest of Alligator Rock, approximately 0.5 miles southwest of Desert Center. As shown in the KOP 3 visual simulation presented in Figure 3.2-4B, the approximately 1.2- to 4-mile distant solar arrays would present as a visually dominant,

dark to light-colored (depending on panel orientation and time of day) areal mass, extending across the floor of Chuckwalla Valley east and west of SR-177 and north of I-10. Inset within this darker mass would be the prominently white, linear area of the BESS adjacent to the cluster of gray, vertical, structural elements comprising the substation. The dark rust-colored vertical poles of the gen-tie would also be noticeable. The superior (looking down) view afforded by this elevated vantage point provides a view "into" the interior of the fields rather than limiting the view to the more typical, at-grade and edge-on view of the arrays. The resulting view would capture a greater, more expansive extent of the dark-colored solar fields, as well as the BESS, substation, and gen-tie. In the context of the existing landscape, the industrial appearance and dark color of the solar arrays and white color of the BESS would exhibit strong form, line, and color contrast relative to the predominantly natural appearance of the existing landscape and the lighter earth tones of the valley's soils, rock, and vegetation, and overall visual contrast would be high. However, if the optional substation and BESS location in the southeastern portion of the site (as shown in Figure 2-1) is selected, the BESS, substation, and gen-tie would be minimally visible from KOP 3. The project would present as a co-dominant to dominant visual feature in the foreground/middleground landscape. View blockage of higher value landscape features (e.g., valley floor and vegetation) would be moderate to high. Combining the equally weighted high visual contrast, co-dominant to dominant project dominance, and moderate to high view blockage results in a moderate to high rating for overall visual change, which in the context of the existing landscape's moderate to high visual sensitivity, results in a significant aesthetics impact under the Impact AES-3 impact criterion. Implementation of Mitigation Measures AES-2 (Surface Treatment of Project Structures and Buildings) and AES-3 (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 change would remain significant and unavoidable.

### *KOP 4 – Northbound SR-177*

***DURING OPERATION, SIGNIFICANT AND UNAVOIDABLE.*** Figure 3.2-5A presents the existing view of the central portion of Chuckwalla Valley from KOP 4 on northbound SR-177 (Rice Road), approximately 1.2 miles northeast of Desert Center. This viewpoint is representative of the foreground views of the project area located immediately adjacent to both sides of SR-177. The view illustrated in Figure 3.2-5B presents a visual simulation that depicts the introduction of the extensive solar arrays along both sides of SR-177. As shown in the simulation, the solar facilities would be introduced into a predominantly natural-appearing, rural desert landscape. The arrays would be prominently visible as linear, horizontal, medium- to dark-gray to bluish-black (depending on panel orientation and time of day) geometric forms on the valley floor partially screened from SR-177 views by intervening vegetation. The close proximity of the project to SR-177 would enable extended view durations of the solar fields for travelers on SR-177. In the context

of the existing landscape, the industrial forms of the solar facilities would exhibit high visual contrast primarily arising from the horizontal geometric form, dark-color, and industrial character of the arrays. As a result, the project would constitute an immediate foreground, visually co-dominant to dominant feature in the landscape. The project would attract the attention of the casual observer, and view blockage of higher value landscape features (e.g., valley floor, vegetation, and mountains) would be high. Combining the equally weighted high visual contrast, co-dominant to dominant project dominance, and high view blockage results in a high rating for overall visual change, which in the context of the existing landscape's moderate to high visual sensitivity, results in a significant aesthetics impact under the Impact AES-3 impact criterion. Implementation of Mitigation Measures AES-2 (Surface Treatment of Project Structures and Buildings) and MM AES-3 (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 change would remain significant and unavoidable.

***KOP 5 – Lake Tamarisk Desert Resort***

***DURING OPERATION, LESS THAN SIGNIFICANT.*** Figure 3.2-6A presents the existing view to the south-southeast from KOP 5, on the Lake Tamarisk golf course along the southern perimeter of the resort. This view captures a portion of the relatively undeveloped Chuckwalla Valley, backdropped by the rugged Chuckwalla Mountains. As shown in the KOP 5 visual simulation presented in Figure 3.2-6B, the project arrays that would be visible west of SR-177 and north of I-10 would appear as a low, light-blue to dark-gray (depending on sun position and viewing angle) horizontal feature along the valley floor, partially screened from view by intervening vegetation. The viewing distance to the arrays would range from approximately 0.65 to 2 miles. The relatively open landscape would enable extended view durations of the arrays from the Resort. In the context of the existing landscape, the industrial forms of the solar facilities within the foreground/ middleground would exhibit moderate visual contrast, primarily arising from the somewhat noticeable horizontal line of the arrays and the moderate color contrast of the structures with the background landforms. As a result, the project would constitute a foreground/ middleground, visually subordinate feature in the landscape. While the project would be partially visible from the Resort, it would not attract the attention of the casual observer, and view blockage of higher value landscape features (e.g., valley floor and vegetation) would be low. Combining the equally weighted moderate visual contrast, subordinate project dominance, and low view blockage results in a low to moderate rating for overall visual change, which in the context of the existing landscape's moderate visual sensitivity, results in a less-than-significant aesthetics impact under the Impact AES-3 impact criterion. However, implementation of Mitigation Measures AES-2 (Surface Treatment of Project Structures and Buildings), AES-3 (Project Design), and AES-4

(Retention of Roadside Vegetation) are recommended as they would reduce the visual contrast associated with visually discordant structural features and industrial character.

***Summary of Mitigation Measures for O&M under Impact AES-3***

The project's visible contrast associated with visually discordant structural features and industrial character could be reduced through the implementation of:

**MM AES-2 Surface Treatment of Project Structures and Buildings.** *See full text in Section 3.2.7.*

**MM AES-3 Project Design.** *See full text in Section 3.2.7.*

**MM AES-4 Retention of Roadside Vegetation.** *See full text in Section 3.2.7*.

However, the O&M aesthetics impacts would remain significant and unavoidable even with implementation of mitigation when viewed from all KOPs except for KOP 5 in the Lake Tamarisk Desert Resort. The aesthetics impact apparent from KOP 5 would be less than significant without implementation of mitigation.

***Impact AES-4. 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*

***DURING OPERATION, 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 Mitigation Measure AES-1, 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 (LPS) 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 approximately 4.5 miles to the west and 6.5 miles to the 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 at an access gate at the north end of Chuckwalla Valley. Although some dark sky viewing locations in the Pinto Basin are screened from direct line-of-site by 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. Despite the presence of these existing 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, Mitigation Measure AES-1 (Night Lighting Management Plan) 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 Mitigation Measure AES-1 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 Mitigation

Measure AES-1 (Night Lighting Management Plan), the night lighting impact is considered significant but mitigable under the Impact AES-4 impact criterion.

### *Daytime Glare*

***DURING OPERATION, LESS THAN SIGNIFICANT WITH MITIGATION.*** Daytime glare from project solar panels could adversely affect travelers on I-10 and SR-177, a low number of residents at Desert Center and Lake Tamarisk, and users of nearby designated wilderness and ACECs. However, 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 the Impact AES-4 impact criterion.

Any glare that results from project facilities (other than the solar panels) and the high-voltage gen-tie line would be reduced by applying Mitigation Measure AES-2 (Surface Treatment of Project Structures and Buildings). This would require that the gen-tie facilities be finished with non-specular and non-reflective material and that the insulators to be non-reflective and non-refractive. Building and structure paints and finishes would be selected to blend with the landscape. These measures would prevent glare or reduce glare from structural surfaces to minimal levels that would not be noticeable or distracting to potential viewers.

***Impact AES-5. Would project construction or the presence of project components result in an inconsistency with local regulations, plans, and standards applicable to the protection of visual resources?***

As presented in Section 3.2.2, Regulatory Framework, the project would be subject to federal regulatory plans, policies, and standards applicable to the protection of aesthetics. Local regulatory plans, policies, and standards were reviewed for informational purposes and to address Appendix G of the CEQA Guidelines. 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 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 (IP Oberon, 2021, Appendix P). |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| **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:<br>a. Compliance with the design standards of the appropriate area plan land use category.<br>b. Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations<br>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 include facilities that would require night lighting with the potential to impact surrounding areas. However, with implementation of Mitigation Measure AES-1, night lighting impacts would be mitigated to a level that would be Less Than Significant.<br>Although the project would result in the visible disturbance of large land areas along the Chuckwalla Valley floor, there are no unique natural features or unique 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 solar generation and electric transmission facilities in the immediate project area. |
| 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 regards to control of night lighting and scenic highways as discussed below. |
| 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. | **Partially Consistent.** The project is not within an area with important scenic values, which would be consistent with Policy LU 9.1.<br>However, the project would be visible within Chuckwalla Valley and from the surrounding slopes and ridgelines, which, as ancestral lands, have great cultural sensitivity to the Colorado River Indian Tribes. Any large-scale landscape alteration visible from these sensitive areas would disturb the sanctity of the outdoor environment, degrade the cultural values, disrupt the visual access to ancestral lands, and constitute a significant and unavoidable impact, which would not be consistent with the intent of Policy LU 9.1. |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| 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 as discussed below. 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. |
| 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, exhibiting limited variation in form, line, color palette, and texture that is common to the broader Chuckwalla Valley. The adjacent landscape includes an existing solar project and electric transmission facilities. |
| 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 are consistent with the adjacent (to the east) Palen Solar Project (under construction), the existing Desert Sunlight and Desert Harvest solar projects to the northwest, and the existing gen-tie and high voltage transmission lines and substations in the immediate vicinity of I-10. |
| 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. | **Not Consistent.** At its closest point, the solar facilities would be approximately 455 feet from the I-10 right-of-way, and the associated gen-tie line would parallel, converge on, and then span I-10. However, this inconsistency is ***not considered significant*** 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 pass through the project site and also span I-10. |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| 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 | **Not Consistent.** The project's gen-tie line, connecting the project to Red Bluff Substation on the south side of I-10 would be an overhead line, which would be inconsistent with Policy LU 14.5. However, this inconsistency is ***not considered significant*** 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 pass through the project site and also span I-10. |
| 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. | **Partially Consistent.** Given the level nature of the project site, any necessary grading would be consistent with the existing natural contours. However, the solar facilities would exhibit a manufactured appearance when viewed from certain locations. This inconsistency is ***not considered significant*****,** however, because the project features would be visually consistent with other existing solar generation and electric transmission facilities in the immediate project area. |
| LU 21.3 | Ensure that development does not adversely impact the open space and rural character of the surrounding area. | **Not Consistent.** Although the project would be located in an area that contains existing solar facilities of similar design and is planned to receive more solar facilities, the project would still exhibit an industrial, manufactured appearance and cause adverse visual impacts to the existing open space and rural character of the surrounding area when viewed from certain locations. However, this inconsistency is ***not considered significant*** 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 solar generation and electric transmission facilities in the immediate project area. |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| 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. | **Partially Consistent.** Given the level nature of the project site, any necessary grading would be consistent with the existing natural contours. However, with project buildout, the solar facilities would exhibit a manufactured appearance when viewed from certain locations. This inconsistency is ***not considered significant*****,** however, because the project features would be visually consistent with other existing solar generation and electric transmission facilities in the immediate project area. |
| LU 26.3 | Ensure that development does not adversely impact the open space and rural character of the surrounding area. | **Not Consistent.** Although the project would be located in an area that contains existing solar facilities of similar design and is planned to receive more solar facilities, the project would still exhibit an industrial, manufactured appearance and cause adverse visual impacts to the existing open space and rural character of the surrounding area when viewed from certain locations. However, this inconsistency is ***not considered significant*** 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 solar generation and electric transmission facilities in the immediate project area. |
| **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 solar generation and electric transmission facilities in the immediate project area. |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| 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. | **Not Consistent.** The project's gen-tie line, connecting the project to Red Bluff Substation on the south side of I-10 would be an overhead line, and remaining utilities would not be screened from public view, which would be inconsistent with Policy C 25.2. However, this inconsistency is ***not considered significant*** because the visual characteristics of the project would be consistent with the numerous overhead gen-tie, distribution, and bulk transmission lines in the immediate project area, some of which pass through the project site. |
| **Multi-Purpose Open Space Element** | | |
| OS 21.1 | Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County | **Consistent.** The low-profile characteristic of the project's solar fields would not obstruct skylines, view corridors, or outstanding scenic vistas. The taller gen-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 area, some of which pass through the project site. |
| 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 solar generation and electric transmission facilities in the immediate project area. |
| 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 solar generation and electric transmission facilities in the immediate project area. |

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

| Plans/ Policies/ Standards | Description | Consistency Analysis |
|---|---|---|
| **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. | **Not Consistent.** Although the project would be located in an area that contains existing solar facilities of similar design and is planned to receive more solar facilities, the project would still 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. However, this inconsistency is ***not considered significant*** 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 solar generation and electric transmission facilities in the immediate project area. |
| 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-2, 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 area. |

Effective implementation of Mitigation Measures AES-1 (Night Lighting Management Plan), and MM AES-2 (Surface Treatment of Project Structures and Buildings), as presented in Section 3.2.7, would mitigate the project's visible contrast associated with night lighting and glare during construction and operation and would help to ensure the

Oberon Project's consistency with Riverside County General Plan Land Use Element Policy LU 4.1 and Desert Center Area Plan Policy DCAP 4.1.

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 Mitigation Measures AES-1 (Night Lighting Management Plan) and MM AES-2 (Surface Treatment of Project Structures and Buildings).

The project's inconsistences with Riverside County General Plan Land Use Element (LU) Policies 14.4, 14.5, 21.1, 21.3, 26.1, and 26.3; Circulation Element (C) Policy 25.2; and DCAP Policy DCAP 2.3 are not considered significant given the absence of scenic resources on the project site, the project's consistency with the applicable BLM Visual Resource 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 area.

## 3.2.6 Cumulative Impacts

### Geographic Scope

Impacts resulting from construction, operation, and decommissioning of the project would result in a cumulative effect on visual resources when combined with other past, present, or reasonably foreseeable future actions. 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 (first phase online), east of the project site. The area of indirect effect extends along I-10 from the intersection with Eagle Mountain Road, approximately 3 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 3 miles south of the existing Genesis Solar Energy Project. Also visible from this location are the existing Devers–Palo Verde No. 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.

Existing and probable future actions 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:

**Past and Present Projects in the Project Area**

- Blythe Energy Project Transmission Line
- Desert Harvest Solar Project
- Desert Renewable Energy Conservation Plan
- Desert Sunlight Solar Project
- Devers–Colorado River 500 kV Line
- Devers–Palo Verde No. 1 500 kV Line
- Genesis Solar Energy Project
- Palen Solar Project
- SCE Red Bluff Substation
- West-wide Section 368 Energy Corridors

**Probable Future Projects in the Project Area**

- Arica Solar Project
- Athos Renewable Energy Project
- Desert Southwest Transmission Line
- Eagle Mountain Pumped Storage Project
- Easley Solar and Green Hydrogen Project
- Victory Pass Solar Project

These actions include ten existing (past and present) local energy projects and six probable future local 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 SR-177 as well as residents and dispersed recreational users in the surrounding areas.

### 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 (the I-10 highway and overpasses, transmission lines; substations; pipelines; solar projects; 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 relatively unimpaired, isolated desert landscape. The cumulative scenario includes many large solar projects and transmission lines whose scale and pervasiveness would have adverse cumulative effects. If all the projects were 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 existing or proposed projects is or would be diminished somewhat by favorable topographic relationships and vegetative screening. For other viewing opportunities, some existing or proposed projects appear or would appear reduced in visual prominence due to their viewing distances and low angle of view. In still other cases, existing or proposed projects blend or would blend 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 Desert Sunlight and Desert Harvest solar projects as well as the Palen Solar and Athos projects

under construction and the probable future Arica and Victory Pass 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 extended viewing distances ranging from seven to 25 miles.

As a result, the proposed project, in combination with the 15 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.

Effective implementation of Mitigation Measures AES-1 (Night Lighting Management Plan), MM AES-2 (Surface Treatment of Project Structures and Buildings), MM AES-3 (Project Design), and MM BIO-5 (Vegetation Resources Management Plan) would reduce the severity of the project's contribution to the cumulative visual effects, though not to levels that would be less than significant.

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.

## 3.2.7 Mitigation Measures

**MM AQ-1** **Fugitive Dust Control Plan.** *See full text in Section 3.3, Air Quality.*

**MM BIO-5** **Vegetation Resources Management Plan.** *See full text in Section 3.4, Biological Resources.*

**MM AES-1** **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 any required Federal Aviation Administration (FAA) aircraft

safety lighting; and (d) illumination of the project and its immediate area is minimized.

The project owner shall 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 light-emitting diode (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 and wildlife of that area. If LED light bulbs are used, they will 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 will be prevented. Prior to construction, the Project owner shall submit to the Colorado River Basin RWQCB (or its designated representative), BLM, and NPS JTNP for review a Night Lighting Management Plan that specifies the following:

A. Location and direction of light fixtures shall take into account the lighting mitigation requirements;

B. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

C. Light fixtures that are visible from beyond the project boundary shall 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 shall be of minimum necessary brightness consistent with operational safety and security;

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

F. Low-pressure sodium (LPS) or amber LED lighting will be emphasized, and white lighting (metal halide) is: (a) only used when necessitated by specific work tasks; (b) not used for dusk-to-dawn lighting; and (c) not less than 3500 Kelvin color temperature;

G. Provides specifications and a map of all lamp locations, orientations, and intensities, including security, roadway, and task lighting;

H. A specification of 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. Specify use of motion sensors and other controls, especially for security lighting;

L. Specification of the surface treatment that will be employed to minimize glare and skyglow;

M. Documentation that the necessary coordination with the NPS Night Sky Program Manager has occurred; and

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

**MM AES-2** **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; and (b) their colors and finishes do not create excessive glare from surface brightness. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

Following consultation with the BLM Visual Resources specialist, and other representatives as deemed necessary, the project owner shall submit for RWQCB (or its designated representative) and BLM review, a specific Surface Treatment Plan that will satisfy these requirements. The consultation would 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 will be fielded 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 the BLM. Subsequent modifications to the treatment plan are prohibited without the 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-3** **Project Design.** The project owner will use 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. To the extent feasible, design strategies to address these fundamentals will be based on the following factors:

- *Vegetation Manipulation:* Retain as much of the existing vegetation as possible. 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.
- *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.
- *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.
- *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.

# 3.3 Air Quality

This section evaluates the emissions of air pollutants and the air quality impacts resulting from implementation of the proposed project. The analysis in this section: presents an overview of existing conditions that influence air quality; describes the applicable regulations; identifies the criteria used for determining the significance of environmental impacts; and describes the potential air quality impacts of the proposed project.

Comments received during the Scoping Period included recommendations for preparing the evaluation of air quality and health risk impacts from the local air quality management district, the U.S. EPA, and NPS. Comments recommend a phased approach to site preparation and vegetation removal to prevent excess dust, and a detailed discussion of a baseline for air quality conditions should be included along with BLM's coordination with the air quality management district and the NPS to prevent excess emissions. They recommend incorporation of Tier 4 standards for equipment, limited idling, and PM10 monitoring. A commenter expressed concerns about highly erodible surface soils and the potential effect on air quality, and the project should include an air quality plan for monitoring. These concerns are addressed in the analysis below.

## 3.3.1 Environmental Setting

The proposed project would be located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD) in the Mojave Desert Air Basin (MDAB). West of the site is the SCAQMD-managed portion of the Coachella Valley (Salton Sea Air Basin). East of the site is the boundary of the jurisdiction of the neighboring the Mojave Desert Air Quality Management District, which oversees the remainder of the Mojave Desert Air Basin, including the easternmost portion of Riverside County.

### Criteria Air Pollutants and Attainment Status

Air quality is determined by measuring ambient concentrations of criteria air pollutants. Criteria pollutants are those pollutants for which acceptable levels of exposure can be determined and for which health-based standards have been set: ozone, 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., a vehicle tailpipe), but it is formed in the atmosphere by chemical and photochemical reactions. ROG, including volatile organic compounds (VOC), are regulated as precursors to ozone formation.

The ARB (Air Resources Board) 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 ambient 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 (National Ambient Air Quality Standards).

Monitored levels of the pollutants are compared to the current NAAQS and California Ambient Air Quality Standards (CAAQS) to determine degree of existing air quality degradation. The ambient air quality standards currently in effect in California are shown in Table 3.3-1.

**Table 3.3-1. National and California Ambient Air Quality Standards**

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

Notes: ppm=parts per million; µg/$m^3$= micrograms per cubic meter; "—" =no standard
Source: ARB (https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards), May 2016.

**Attainment Status and Air Quality Plans.** The U.S. EPA, California ARB, and the local air district classify an area as attainment, unclassified, or nonattainment. 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 3.3-2 summarizes attainment status for the criteria pollutants in the Mojave Desert Air Basin portion of Riverside County with both the federal and state standards.

**Table 3.3-2. 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 |
| $NO_2$ | Attainment | Attainment |
| CO | Attainment | Attainment |
| $SO_2$ | Attainment | Attainment |

Source: South Coast Air Quality Management District 2018.

**Ozone.** Ozone is not directly emitted from stationary or mobile sources but is formed as the result of chemical reactions in the atmosphere between directly emitted NOx and VOCs in the presence of sunlight. High ozone concentrations can aggravate respiratory and cardiovascular diseases, irritate

eyes, impair cardiopulmonary function, and cause damage to vegetation. Pollutant transport from the Los Angeles area of the South Coast Air Basin is one source of the pollution across Riverside County.

**Particulate Matter (PM10) and Fine Particulate Matter (PM2.5).** PM10 can be emitted directly or it can be formed many miles downwind from emission sources when various precursor pollutants interact in the atmosphere. PM2.5 is derived mainly either from the combustion of materials or from precursor gases (SOx, NOx, and VOC) through complex reactions in the atmosphere. PM2.5 consists mostly of sulfates, nitrates, ammonium, elemental carbon, and a small portion of organic and inorganic compounds. Particulate matter can aggravate respiratory diseases, result in reduced lung function, increase and cause chest discomfort, and cause reduced visibility. In the Salton Sea and Mojave Desert Air Basins, most ambient particulate matter is due to fugitive dust, such as vehicle travel on unpaved roads, agricultural operations, or wind-blown dust.

**Carbon Monoxide (CO).** The highest concentrations of CO occur when low wind speeds and a stable atmosphere trap the pollution emitted at or near ground level. These conditions occur frequently in the wintertime late in the afternoon, persist during the night and may extend one or two hours after sunrise. CO reduces tolerance from exercise, can cause impairment of mental function, impairment of fetal development, aggravate some heart diseases (angina), and cause death at high levels of exposure. In the project area, CO concentrations are well below the state and federal ambient air quality standards.

**Nitrogen Dioxide.** Approximately 90 percent of the NOx emitted from combustion sources is nitric oxide (NO), while the balance is $NO_2$. NO is oxidized in the atmosphere to $NO_2$, but some level of photochemical activity is needed for this conversion. The highest concentrations of $NO_2$ typically occur during the fall. The winter atmospheric conditions can trap emissions near the ground level, but lacking substantial photochemical activity (sunlight), $NO_2$ levels are relatively low. In the summer, the conversion rates of NO to $NO_2$ are high, but the relatively high temperatures and windy conditions disperse pollutants, preventing the accumulation of $NO_2$. $NO_2$ can aggravate respiratory diseases, reduce visibility, reduce plant growth, and form acid rain. The $NO_2$ concentrations in the project area are well below the state and federal ambient air quality standards.

**Sulfur Dioxide.** Sulfur dioxide is typically emitted as a result of the combustion of a fuel containing sulfur. Overall $SO_2$ emissions are limited due to the limited number of major stationary sources and the regulatory limits on motor vehicle fuel sulfur content. $SO_2$ can irritate the upper respiratory tract and be injurious to lung tissue causing reduced lung function, including asthma and emphysema. $SO_2$ can cause plant leaves to be yellow, and be destructive to metals, textiles, leather, finishes, and coatings. $SO_2$ can also limit visibility. The $SO_2$ concentrations in the project area are well below the state and federal ambient air quality standards.

### 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. Birth defects, neurological damage, cancer, and death are some of the effects of TACs. There are numerous types of TACs with a range of toxicities that varies greatly in the health risk they pose, as some may be many times more hazardous than another at the same level of exposure. These contaminants do not have ambient air quality standards but are regulated by the local air districts using a risk-based approach.

### Air Quality Sensitive Receptor Land Uses

Land uses that are sensitive to air pollution are: residences, schools, daycare centers, playgrounds, and medical facilities. Nearby sensitive land uses include scattered residences, including at least one mobile home park in Desert Center. The Lake Tamarisk community would be about 0.1 miles north of the proposed project site boundary, and the nearest school is the Eagle Mountain School, over 8 miles north of the project site.

The proposed project facilities would occupy approximately 2,700 acres within an overall site of 5,000 acres. The nearest occupied residences are within a mobile home park located at 43551 Ragsdale Road, in Desert Center. These receptors would be approximately 500 feet (150 meters) from the nearest proposed construction within the site. Other Desert Center area residences are along SR-177 (Rice Road), at Black Binder Road, approximately 1,400 feet from the nearest proposed construction. Homes in the Lake Tamarisk community would be over 2,000 feet from the nearest proposed construction.

## 3.3.2 Regulatory Framework

### Federal Law, 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 (40 CFR Part 93, Subpart B, et seq.) requires 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 proposed 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 JTNP Class I area is 5 miles (8 kilometers) away from the nearest boundary of the proposed 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 2016 (CIRA, 2016; CIRA, 2020). 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).

### State Law, 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 in order 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 statewide 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 Cal. Code Regs, 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 Cal. Code Regs. 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 Cal. Code Regs. section 93116).

### Local Law, Regulations, and Policies

**County of Riverside, General Plan.** Riverside County adopted the Air Quality Element of the County General Plan in 2015. 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 proposed project, to facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations (*Policy AQ 20.19*).

**South Coast Air Quality Management District.** The proposed 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.

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.

The SCAQMD has a number of rules presented in Table 3.3-3 relevant to controlling emissions from project-related activities.

**Table 3.3-3. 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 | 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 aboveground 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. |

**SCAQMD Rule 402 and 403**. Rule 402 (Nuisance) requires dust suppression techniques to prevent particles from becoming a nuisance off site, and 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 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.

## 3.3.3 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 2016.3.2) software developed by the California Air Pollution

Control Officers Association (CAPCOA). This is the most recent version of the CalEEMod software, and it relies upon mobile source emission factors from the Air Resources Board (ARB) OFFROAD inventory and EMFAC2014 models. Where project-specific design features are not yet defined, default and typical settings from CalEEMod are used. Default emission factors used in this analysis appear in the CalEEMod User's Guide Appendix D (October 2017). The Oberon Renewable Energy Project Air Quality/Greenhouse Gases Technical Report provides details on the construction activity assumptions, emission factors, and resulting quantities of emissions output by CalEEMod (IP Oberon, 2021).

### 3.3.4 CEQA Significance Criteria

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 CEQA review are:

- Nitrogen Oxides (NOx): 100 lb/day
- VOC: 75 lb/day
- Inhalable Particulate Matter (PM10): 150 lb/day
- Fine Particulate Matter (PM2.5): 55 lb/day
- Carbon Monoxide (CO): 550 lb/day
- Sulfur Oxides (SOx): 150 lb/day

For projects in the SCAQMD's Salton Sea and Mojave Desert Air Basins, the mass daily thresholds for operation are the same as the construction thresholds (SCAQMD, 2019).

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 5 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 3.3-4 shows the LSTs recommended by SCAQMD for the Desert Center area (East Riverside County).

**Table 3.3-4. SCAQMD Localized Significance Emissions Thresholds**

| | | Construction (lb/day) | | | Operation (lb/day) | | |
|---|---|---|---|---|---|---|---|
| **Pollutant** | **Site Area** | **100 meters** | **200 meters** | **500 meters** | **100 meters** | **200 meters** | **500 meters** |
| Nitrogen Oxides (NOx) | 5 acres | 425 | 547 | 875 | 425 | 547 | 875 |
| PM10 | 5 acres | 67 | 112 | 248 | 16 | 27 | 60 |
| PM2.5 | 5 acres | 19 | 37 | 128 | 5 | 9 | 31 |
| Carbon Monoxide (CO) | 5 acres | 5,331 | 10,178 | 31,115 | 5,331 | 10,178 | 31,115 |

Note: East Riverside County is SCAQMD "Source Receptor Area" zone 31.
Source: SCAQMD 2009.

## 3.3.5 Proposed Project Impact Analysis

### *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, would comply with the applicable rules, regulations, and programs. Strategies and control measures identified within the 2016 AQMP apply to project activities where promulgated through SCAQMD's rules and regulations.

All construction and operational activities would comply with SCAQMD's Rule 402 and 403, which prevent nuisance and regulate fugitive dust emissions. The proposed 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.

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 proposed project would employ up to 10 full-time workers to be on the site for regularly providing ongoing maintenance, 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 conflict with or obstruct implementation of the applicable air quality plan, and this impact would not be 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?*

***DURING CONSTRUCTION, LESS THAN SIGNIFICANT WITH MITIGATION.*** The proposed project site is in an area designated as non-attainment for state-level ozone and PM10 standards. Emissions during the construction phase would include criteria air pollutants that could exceed quantitative thresholds for ozone precursors or PM10 would represent a cumulatively considerable net increase of nonattainment pollutant. Emissions exceeding the quantitative thresholds could contribute to existing or projected violations of the ambient air quality standards.

Construction 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 (this includes ozone precursors VOC or ROG and NOx, CO, and particulate matter [PM10 and PM2.5]) and fugitive dust/particulate matter from ground-disturbing activities and travel on unpaved surfaces and on paved roads.

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), and 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. For traffic that would occur primarily over the region-serving transportation network, these motor vehicle emissions would not be localized at the site but would contribute to the net emissions increase within the Mojave Desert Air Basin.

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 with 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 an approximately 15- to 20-month period and may be phased. The targeted schedule for construction spans 2022 and 2023.

This analysis considers construction of each site to follow a sequence of four types of activities, as follows:

- Site preparation, mobilization, and grading.
- Solar PV array assembly and installation.
- Electrical construction including inverters, battery storage, and substation.
- Gen-tie construction.

Table 3.3-5 summarizes the annual emissions within each of the calendar years of anticipated construction, without potential mitigation, assuming construction commences in early 2022.

**Table 3.3-5. Oberon Project Construction, Annual Emissions without Mitigation**

| | Annual Emissions, per calendar year (ton/year) | | | | | |
|---|---|---|---|---|---|---|
| **Calendar Year** | **VOC** | **NOx** | **CO** | **SOx** | **PM10** | **PM2.5** |
| 2022 | 2.54 | 18.44 | 20.36 | 0.07 | 15.98 | 3.51 |
| 2023 | 0.89 | 4.22 | 7.99 | 0.03 | 4.47 | 0.93 |
| **Maximum Annual Emissions, without Mitigation** | **2.54** | **18.44** | **20.36** | **0.07** | **15.98** | **3.51** |

Source: Attachment 1, AQ/GHG Emissions Inventory; Attachment 2, CalEEMod Output.
Source: IP Oberon, 2021, Appendix R.

This evaluation 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."

Mitigation that includes dust control (MM AQ-1) and off-road equipment emissions controls (MM AQ-2) would substantially reduce the construction emissions of NOx and PM10. Mitigation for dust control (MM AQ-1) would require use of soil stabilizers or watering exposed areas (2 times per day, or as frequently as necessary to minimize fugitive dust generation) subject to inspection and field monitoring, according to the performance standards in SCAQMD's Rule 402 and 403, in lieu of installing real-time PM10 monitoring equipment. With the mitigation, on-site activities would need to take every reasonable precaution to prevent airborne fugitive dust plumes from leaving the project site and to prevent visible particulate matter from being deposited upon public roadways. Mitigation would also require phasing of grading and earthwork, including vegetation removal. 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.

Mitigation for off-road equipment (MM AQ-2) specifies use of equipment that complies with Tier 4 engine emissions standards for NOx and PM10 reduction. 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 3.3-6 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 3.3-6. Oberon Project Construction, Mitigated Annual Emissions**

| | Annual Emissions, per calendar year (ton/year) | | | | | |
|---|---|---|---|---|---|---|
| **Calendar Year** | **VOC** | **NOx** | **CO** | **SOx** | **PM10** | **PM2.5** |
| 2022 | 1.49 | 6.60 | 22.79 | 0.07 | 6.46 | 1.71 |
| 2023 | 0.62 | 1.60 | 8.30 | 0.03 | 2.36 | 0.58 |
| **Maximum Annual Emissions, Mitigated** | **1.49** | **6.60** | **22.79** | **0.07** | **6.46** | **1.71** |

Source: Attachment 1, AQ/GHG Emissions Inventory; Attachment 2, CalEEMod Output.
Source: IP Oberon, 2021, Appendix R.

Table 3.3-6 shows that the highest rate of emissions would occur during the first anticipated calendar year (2022) during construction.

Because construction activity can vary from day to day within a given calendar year, SCAQMD recommends quantifying daily peak rates of construction emissions. Prior to considering mitigation, Table 3.3-7 summarizes the maximum daily emissions rates anticipated within the different calendar years of construction.

**Table 3.3-7. Oberon Project Construction, Daily Emissions without Mitigation**

| | Maximum Daily Emissions, per calendar year (lb/day) | | | | | |
|---|---|---|---|---|---|---|
| **Calendar Year** | **VOC** | **NOx** | **CO** | **SOx** | **PM10** | **PM2.5** |
| 2022 | 32.40 | 210.17 | 246.12 | 0.94 | 208.25 | 36.51 |
| 2023 | 15.50 | 71.17 | 128.71 | 0.40 | 70.76 | 15.04 |
| **Maximum Daily Emissions, without Mitigation** | **32.40** | **210.17** | **246.12** | **0.94** | **208.25** | **36.51** |
| **SCAQMD Daily Thresholds for CEQA Purposes** | **75** | **100** | **550** | **150** | **150** | **55** |

Source: Attachment 1, AQ/GHG Emissions Inventory; Attachment 2, CalEEMod Output.
Source: IP Oberon, 2021, Appendix R.

As seen in Table 3.3-7, maximum daily 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 3.3-8 summarizes the daily emissions with mitigation in place 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 3.3-8. Oberon Project Construction, Mitigated Daily Emissions**

| | Maximum Daily Emissions, per calendar year (lb/day) | | | | | |
|---|---|---|---|---|---|---|
| **Calendar Year** | **VOC** | **NOx** | **CO** | **SOx** | **PM10** | **PM2.5** |
| 2022 | 21.03 | 83.53 | 278.39 | 0.94 | 81.16 | 18.55 |
| 2023 | 10.76 | 25.89 | 134.06 | 0.40 | 37.52 | 9.28 |
| **Maximum Daily Emissions, Mitigated** | **21.03** | **83.53** | **278.39** | **0.94** | **81.16** | **18.55** |
| **SCAQMD Daily Thresholds for CEQA Purposes** | **75** | **100** | **550** | **150** | **150** | **55** |

Source: Attachment 1, AQ/GHG Emissions Inventory; Attachment 2, CalEEMod Output.
Source: IP Oberon, 2021, Appendix R.

With implementation of mitigation for dust control practices (MM AQ-1) and for off-road equipment engine standards (MM AQ-2), Table 3.3-8 shows that the maximum daily emissions 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.

***DURING OPERATION, LESS THAN SIGNIFICANT.*** Operations-related emissions would be caused by upkeep, maintenance, inspections, security and panel washing. These activities would involve up to 10 full-time workers. The proposed 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 3.3-9 summarizes the estimated daily emissions during project operation.

**Table 3.3-9. Oberon Project Operations, Daily Emissions**

| | Maximum Daily Emissions, per calendar year (lb/day) | | | | | |
|---|---|---|---|---|---|---|
| **Source Category** | **VOC** | **NOx** | **CO** | **SOx** | **PM10** | **PM2.5** |
| Area Sources | 1.44 | 0.14 | 15.56 | 0.00 | 0.06 | 0.06 |
| Mobile Sources | 0.68 | 4.29 | 16.51 | 0.08 | 6.66 | 1.81 |
| **Total Daily Emissions** | **2.12** | **4.43** | **32.08** | **0.08** | **6.72** | **1.87** |
| **SCAQMD Daily Thresholds for CEQA Purposes** | **75** | **100** | **550** | **150** | **150** | **55** |

Source: IP Oberon, 2021, Appendix R (Attachment 2, CalEEMod Output).

Emissions during O&M would be minor due to the limited number of workers, and O&M emissions would not exceed the SCAQMD thresholds. With minimal direct emissions during operation, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant, and this impact of air pollutant emissions would be less than significant. No operational-phase mitigation would be required.

### *Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?*

***DURING CONSTRUCTION, LESS THAN SIGNIFICANT WITH MITIGATION.*** This criterion assesses whether the proposed 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, DPM and other toxic air contaminants, which would cause increased health risk and hazards near the site.

**Criteria Air Pollutants.** The SCAQMD recommends using Localized Significance Thresholds for determining near-field impacts as a result of criteria air pollutant emissions from a small development site (up to 5 acres). In contrast, the proposed project facilities would occupy approximately 2,700 acres within an overall site of 5,000 acres. Accordingly, the LSTs do not directly apply; however, this discussion uses the LSTs as a proxy for describing near-field impacts.

The mass of increased criteria air pollutant emissions during construction would lead to incremental changes in downwind concentrations of the criteria air pollutants. Emissions rates that are less than the mass-based LST would not be likely to cause exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Construction-related emissions sources would be spread across the work areas within the site and off site, and construction-phase emissions would cease after an approximately 15- to 20-month duration of work. 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 potential near-field impacts caused by on-site construction. Emissions from off-site sources, including on-road vehicles and vehicles on the regional roadways, could be excluded from evaluation of near-field impacts. The mitigation would reduce the mass of criteria pollutant emissions in the regional context, which would also minimize the adverse health effects of incremental criteria pollutant concentrations.

Maximum daily construction emissions with mitigation (shown in Table 3.3-8) would not exceed the recommended LSTs for NOx, CO, or PM2.5 for receptors located 100 meters or more from the site boundaries. Because the controls in the mitigation focus on the types of sources that occur on site, the portion of mitigated PM10 emissions attributable to on-site sources would not exceed the LST for PM10 for receptors located 100 meters from the site. (See Oberon Renewable Energy Project Air Quality/Greenhouse Gases Technical Report: Attachment 1 for emissions inventory results, and Attachment 2 for

CalEEMod Output. [IP Oberon, 2021]) Because on-site construction emissions of criteria air pollutants would be below the LSTs, project construction would not be likely to locally exceed the ambient air quality standards.

The nearest sensitive receptors would be more than 330 feet (100 meters) away from project construction activities, and the Lake Tamarisk community would be more than 2,000 feet (610 meters) from project construction activities. With mitigation to reduce construction dust (MM AQ-1) and reduce engine exhaust emissions (MM AQ-2), construction 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 represents a 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 the start of project operation. 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 an area of approximately 2,700 acres, rather than as a steady rate of emissions from a single location. Concentrations of mobile source DPM emissions are greatly reduced by distance, such that a separation of 1,000 feet normally allows sensitive land uses to avoid high levels of DPM concentrations (CARB, 2005).

The nearest proposed construction sources of DPM would be approximately 500 feet away from occupied residences, 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).

**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 5 miles (8 km) northeast of the nearest project parcel. Ambient air quality impacts of the proposed 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 site. 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.

***DURING OPERATION, LESS THAN SIGNIFICANT.*** The closest residence or inhabitable dwelling to the proposed project site would be approximately 500 feet away from on-site activities. Therefore, there would be no potential to expose sensitive receptors to substantial pollutant concentrations, and this impact would not be significant.

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

***DURING CONSTRUCTION, NO IMPACT.*** During construction, there would be no other emissions or odors that would adversely affect a substantial number of people. The closest residential use to the proposed project site would be approximately 500 feet away from on-site activities. The proposed project site is relatively remote, and there is not a substantial number of people near the site. Therefore, there would be no impact.

***DURING OPERATION, NO IMPACT.*** There would be no potential emissions that lead to odors, that would adversely affect a substantial number of people. The closest residence or inhabitable dwelling to the proposed project site would be approximately 500 feet away from on-site activities. Therefore, there would be no impact.

## 3.3.6 Cumulative Impacts

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.

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

significant impact to air quality. The incremental contribution of the proposed solar facility 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) identified in the discussion of Impact AQ-2. Because construction-related criteria air pollutant emissions would be mitigated and would entirely cease after construction, within an approximately 15- to 20-month duration of work, 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.

## 3.3.7 Mitigation Measures

**MM AQ-1** **Fugitive Dust Control Plan.** The Applicant 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 development of laydown and staging areas, site grading, vegetation management, and installing all project facilities through post-construction cleanup. The Applicant shall take every reasonable precaution to prevent all airborne fugitive dust plumes from leaving the project site and to prevent visible particulate matter from being deposited upon public roadways. The plan is 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 Air Resources Board–approved soil stabilizers and shall not increase any other environmental impacts, including loss of vegetation, adverse odors, or emissions of ozone precursor reactive organic gas (ROG) or volatile organic compound (VOC).
- For long-term site operations, maintenance, and decommissioning, the project owner shall establish a Site Operations Dust Control Plan, which includes all applicable fugitive dust control measures identified for operations activities. The Site Operations Dust Control Plan shall include the use of durable non-toxic soil stabilizers on all regularly used unpaved roads, shall restrict vehicular access to established unpaved travel paths within the project boundaries, and shall include the long-term inspection and maintenance procedures that will be undertaken to ensure that the unpaved roads remain stabilized.

- 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 initiating construction. Delivery, laydown, and staging areas for construction or O&M supplies shall be paved or treated 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 construction 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.
- 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.
- 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 Applicant, 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 as part of any 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.

# 3.4 Biological Resources

This section describes the biological resources of the proposed project site and vicinity, including vegetation and habitat, common plants and wildlife, and special-status plants and wildlife. 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 the significance of these potential impacts, and an analysis of potential impacts. Where impacts may be significant according to the criteria identified, this section identified mitigation measures to reduce those impacts to less than significant.

## 3.4.1 Environmental Setting

### Regional Setting

This description of the biological resources of the proposed Oberon Renewable Energy Project site is based on the *Biological Resources Technical Report, Oberon Renewable Energy Project, Riverside County, California* (BRTR) prepared by Ironwood Consulting Inc. (Ironwood) (IP Oberon, 2021, Appendix F).

The project is located entirely on federal land administered by BLM (Figure 2-1, Project Area). The boundaries of the project's disturbance areas were designed to minimize impacts to desert dry wash woodland to achieve the intent of desert tortoise and other wildlife protection as provided in the DRECP LUPA, which amended the BLM California Desert Conservation Area Plan, as amended.[1]

The proposed project site is in the Chuckwalla Valley near the community of Desert Center in the Colorado Desert, in unincorporated Riverside County, California. The proposed project site is located within three 7.5-Minute U.S. Geological Survey topographic quadrangles: Victory Pass, Desert Center, and Corn Springs. The southern portion of the project site is within designated critical habitat for desert tortoise (Figure 3.4-1, Project Location). The elevation of the surrounding landscape ranges from less than 400 feet above mean sea level (amsl) at Ford Dry Lake to over 3,000 feet amsl in the mountains that enclose the Chuckwalla Valley. The topography of the proposed project site itself ranges from approximately 758 feet amsl in the northwest to 782 feet in the southeast.

Anthropogenic features and land use in the vicinity include agriculture, residences, renewable energy, energy transmission, historical military operations, and recreational development and use.

The project site is located within the CDCA planning area. The solar facility is not located within any ACECs (Areas of Critical Environmental Concern), but several

[1] The Desert Renewable Energy and Conservation Plan amendment to the CDCA Plan includes conservation and management actions (CMAs) that require avoidance of some special plant species and certain types of habitats.

ACECs are located within approximately 5 miles, including Chuckwalla to the west and adjacent to the south across the I-10 freeway, Alligator Rock adjacent to the south, Corn Springs to the south, Desert Lily Preserve to the north, Palen Ford to the north and east, and Palen Dry Lake to the east. Approximately 500 feet of the shared gen-tie line would be located within the Chuckwalla ACEC south of the I-10 within the existing utility corridor. Joshua Tree National Park is located approximately 4 miles west of the westernmost portion of the project site and approximately 5 miles northeast from the northeastern corner of the project site.

The project site is within the Chuckwalla Valley ecoregion subsection of the DRECP area. The DRECP identifies the federal lands in and around the project site in the LUPA and Final Environmental Impact Statement (FEIS) as a Development Focus Area (DFA), as approved by a ROD signed by BLM on September 14, 2016.

Ironwood biologists performed full coverage wildlife surveys on the proposed project site in fall of 2019 and spring of 2020 (described in detail in IP Oberon, 2021, Appendix F). The wildlife survey area is larger than the proposed project's boundaries to include a buffer and because the project boundaries were revised to meet the DRECP Conservation and Management Actions (CMAs). Ironwood has completed additional surveys of the gen-tie alignment, access road, and alternatives. In addition, Ironwood has conducted surveys for other solar projects in the vicinity including Arica, Victory Pass, Athos, and Palen solar projects and included data from this work into the information used for the BRTR.

### 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 Sections 3.4.5 through 3.4.9. Where additional details of habitat suitability are necessary, they are provided in the discussion of special-status wildlife species below.

The majority of vegetation on the project site is creosote bush scrub. There are two primary natural vegetation communities (creosote bush scrub and desert dry wash woodland) as well as one distinct natural habitat type (desert pavement). One vegetation community (desert dry wash woodland) is identified by BLM (BLM, 2002) and CDFW (2020) as sensitive due to the association with alluvial processes, which makes it likely to be subject to CDFW's jurisdiction under section 1600 of the California Fish

and Game Code. Vegetation communities are described in the paragraphs below and mapped on Figure 3.4-2 (Vegetation Communities) in EIR Appendix B. See the BRTR (IP Oberon, 2021, Appendix F) for detailed descriptions of vegetation communities.

Vegetation communities found within the project site include:

**Sonoran Creosote Bush Scrub.** Sonoran creosote bush scrub occurs on well-drained, secondary soils of slopes, fans, and valleys and is the dominant creosote bush scrub habitat of the Colorado Desert. Within the project site, it primarily occurs on sandy soils with a shallow clay pan and is found on much of the undisturbed portions of the project site, integrating with desert dry wash woodland along desert washes.

**Desert Dry Wash Woodland (DDWW).** The desert dry wash woodland on the site is Blue Palo Verde–Ironwood Woodland. It is a sensitive vegetation community, as identified in the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan and DRECP, and has a State rarity rank of S4 (CDFW, 2020). Desert dry wash woodland is a xeric riparian community characteristic of desert washes and is likely to be regulated by CDFW as jurisdictional State waters. The DRECP includes it as one of the microphyll woodland communities. It 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 of ironwood, blue palo verde, and smoke tree. This habitat 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. It is found throughout the project site, along the various ephemeral drainages. The terms DDWW and microphyll woodland are used interchangeably throughout this EIR.

**Desert Pavement.** Desert pavement is primarily descriptive of soil and substrate conditions, rather than vegetation. The ground surface is sandy and gravelly mixed alluvium with various rocks and gravel. The shrub layer of creosote bush is extremely sparse. The herb layer, though also sparse, is slightly greater (seasonally) and more diverse. Desert pavement is often interwoven between areas of creosote bush scrub and desert dry wash woodland where it occurs on the project site.

### Jurisdictional Waters

Ironwood delineated jurisdictional waters on the proposed project site, using desktop GIS analysis and field investigations during spring 2020 (Ironwood, 2021; see POD Appendix G in IP Oberon, 2021). The delineation methodology was based upon agency guidance documents cited in the delineation report. In the field, transects were typically performed perpendicular to flow patterns to ensure field verification of all potentially jurisdictional waterways. Jurisdictional acreages were calculated using GIS. Jurisdictional areas are shown in Figure 3.4-3 (Drainages).

**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 a closed surface hydrology basin that drains to Ford Dry Lake, and are not connected to any interstate waters or traditional navigable waters, such as the Colorado River, and do not meet the criteria described for waters of the U.S. No territorial seas or navigable waters, their tributaries, lakes/pounds or wetlands were found within the project site.

On April 1, 2021, USACE issued a jurisdictional determination agreeing that the project site does not contain water(s) of the United States pursuant to 33 CFR Part 325.9 (IP Oberon, 2021, Appendix G). Due to this determination, regulations and permitting under the Clean Water Act are not applicable.

**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.

State jurisdictional streambeds and adjacent riparian habitat within the proposed project site includes Unvegetated Ephemeral Dry Wash and Desert Dry Wash Woodland. 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. 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.

### Special-status Plants

Ironwood conducted focused special-status plant surveys in the fall of 2019 and spring of 2020 on all portions of the proposed project site. The field methods were consistent with protocols recommended by USFWS, CDFW, California Native Plant Society (CNPS), and BLM. The BRTR provides a compilation of special-status plants with the potential to occur within the project vicinity, and evaluates the 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 (IP Oberon, 2021, Appendix F).

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
- Considered special-status species in local or regional plans, policies, or regulations, such as the NECO Plan/EIS

All special-status plant species that are anticipated to have a moderate to high potential to occur on the project site, or were observed during 2019 and 2020 field surveys, are described in the BRTR (IP Oberon, 2021, Appendix F). Special-status plants that were observed within the project site or that have high potential to occur are discussed further in the paragraphs below. For complete lists and discussion of all special-status plants analyzed for the project, please refer to the BRTR (IP Oberon, 2021, Appendix F).

No listed threatened or endangered plant species were observed or have the potential to occur on the project site or in the vicinity. One BLM Sensitive Plant, Creosote bush ring, was identified within project site.

The following special-status plant species have a high potential to occur or were observed on the project site during surveys (Figure 3.4-4, Special-status Plant Observations).

**Creosote bush ring (*Larrea tridentata*); BLM S.** Creosote bush rings are considered clonal colonies; all are genetically identical individuals that formed from the same single parent plant. When a creosote plant dies, it sends up new shoots at its perimeter, and

clones will grow from its roots. These clones will form a ring around the parent plant, and continue to grow and die outward, forming new clones from the roots. Creosote bush rings can live for a very long time, the oldest estimated to be 11,700 years old.

They are considered rare and "sensitive" by federal and state agencies, including BLM, but they do not have any formal protections in place. Creosote bush rings were identified in 2 locations within the project site; one location had two rings adjacent to one another. The rings measured under 5 m in diameter, averaging approximately 4 to 4.5 m.

**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. There are several records of occurrences within Riverside County, near or within Desert Center, including Desert Sunlight Solar Farm just north of the project and Athos Renewable Energy Project (CCH, 2020).

Emory's crucifixion thorn was observed in eight locations, primarily in the western portion of the project area in desert dry wash woodland, and additional suitable habitat is located throughout the project site along the washes. 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 is typically found in sandy wash regions, but can also be found in disturbed areas, including former agricultural lands. It is a late-season bloomer (May to August), and its large and distinct seed pods can be detected year-round. It was observed in multiple locations throughout the project site.

**Spiny abrojo (*Condalia globose* var. *pubescens*); CRPR 4.2.** Spiny abrojo is a perennial shrub that occurs in desert scrub, with the closest records within the Chuckwalla bench, south of the Chuckwalla mountains, often in or near washes or roads (CCH, 2020). It has limited distribution, but is not very threatened in California, and can also be found in Arizona and Mexico. It was observed at one location near the southern boundary of the project site.

### Special-status Wildlife

Ironwood conducted full-coverage wildlife surveys in the fall of 2019 and spring and fall of 2020 on all portions of the proposed project site. Surveys focused on identifying individuals or sign of special-status species including desert tortoise, burrowing owl, elf owl, Gila woodpecker, and all other wildlife species. In addition to focused surveys for specific animals, the surveys were designed to characterize habitat suitability for all special-status wildlife, including presence or absence unique habitat features such as potential breeding pools for Couch's spadefoot toad or suitable roosting sites for special-status bats.

The surveys were completed during USFWS-recommended desert tortoise activity seasons to allow for full desert tortoise surveys consistent with agency-recommended guidelines. The surveys identified all burrows and all evidence of wildlife use, including use by desert tortoise, burrowing owl, and desert kit fox. The field methods constitute partial completion of CDFW-recommended burrowing owl survey methods.

During all wildlife surveys, biologists recorded all wildlife species observed, regardless of status. All special-status wildlife that are anticipated to have a moderate to high potential to occur on the project site, or were observed during 2019 and 2020 field surveys, are listed and described in the BRTR (IP Oberon, 2021, Appendix F). Species present or with high potential to occur are reviewed further below (Figures 3.4-5 through 3.4-9). For a detailed discussion of all special-status wildlife analyzed for the project, including their ranges and habitat requirements, please refer to the BRTR (IP Oberon, 2021, Appendix F).

### *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. Couch's spadefoot toad was not observed during surveys, but eight areas were identified as potential breeding habitat where water may accumulate after rainfall. However, sufficient rainfall in warmer temperatures has yet to occur making it difficult to determine whether the identified areas hold enough water for breeding or any occupancy of the species. Additional site visits performed during rain events since have shown ponding for about a day before drying out.

**Mojave fringe-toed lizard (*Uma scoparia*); SSC, BLMS.** A species distribution model of Mojave fringe-toed lizards from the DRECP is included on BRTR Figure 7 (Ironwood, 2021). Neither Mojave fringe-toed lizards nor their habitat were modeled or observed on the site, and thus, the BRTR concluded a low probability of occurrence. A comment letter submitted on the Draft EIR reported an observation of Mojave fringe-toed lizard on the project site, on "gravel and desert pavement" substrate (as opposed to the sandfields, dunes, sandy washes, and scattered sand accumulations on leeward sides of shrubs, where the species normally occurs). The siting cannot be verified by the RWQCB or BLM, and habitat suitability for Mojave fringe-toed lizard is marginal at best. Therefore, very few (if any) individuals can be expected within the project site.

**Desert tortoise (*Gopherus agassizii*); ST, FT.** The southern portion of the project site ~~is located within~~overlaps with 1,524 acres of designated critical habitat for the desert tortoise, in the Chuckwalla Critical Habitat Unit (USFWS, 2011) (Figure 3.4-1 [Project Location] and Figure 3.4-6 [Desert Tortoise Conservation Areas (TCAs) and Linkages]). Acres of impact to critical habitat are presented in Table 3.4-1.

Critical habitat within the Chuckwalla Desert Tortoise CHU overlaps the project site along the southern boundary of the site, north of Interstate 10. While the project site overlaps critical habitat, which is encompassed under Tortoise Conservation Areas (TCAs), it is not within the Chuckwalla Area of Critical Environmental Concern (ACEC), as identified in the DRECP LUPA. Due to its location north of the freeway, this critical habitat land is partially isolated from the remainder of the CHU by the I-10 freeway. In the Biological Opinion for the DRECP LUPA, the USFWS notes that critical habitat was mapped along section lines, rather than natural habitat features or dispersal barriers (e.g., I-10 freeway), and that critical habitat boundaries in the final rule do not necessarily indicate a discrete change in habitat conditions (USFWS, 2016). Its long-term function and value as critical habitat are compromised by its proximity to existing development and its location within a DRECP-designated DFA.

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).

Predicted desert tortoise occupancy values of 0.3 or above are appropriate for identifying suitable habitat in this low desert region (Nussear, 2009). On the project site, ~~T~~the predicted occupancy values increase from the northernmost (0–0.1) to the southernmost (0.6–0.7) portion of project site near the desert tortoise conservation areas and critical habitat (Figure 3.4-5, Noteworthy Amphibian and Reptile Observations). These predicted occupancy values do not account for habitat degradation resulting from existing anthropogenic features, which would further reduce the occurrence probability in disturbed areas.

Desert tortoise sign observed during field surveys were observed in areas with occupancy values of 0.5 or higher. Most sign was concentrated within the southeast portion of the project site. There were 6 live observations of desert tortoises, 7 areas with desert tortoise tracks (Class 1), 16 confirmed or potential desert tortoise burrows (Class 1 through 4), 4 of which were active Class 1 burrows. Thirteen (13) locations of desert tortoise remains (“carcasses”) were identified. Most of these remains were very old (Class 5) disarticulated bones or scutes. One Class 3 carcass was found but may have been a different species of tortoise due to its uncharacteristic shape.

### *Birds*

**Gila woodpecker (*Melanerpes uropygialis*): CE, BLMS.** Potentially suitable habitat for Gila woodpecker (CE, BLMS) is located within the project area in desert washes in

palo verde or ironwood trees large enough for cavity nests. Two tree cavities were observed during surveys, but no Gila woodpeckers were observed.

**Golden eagle (*Aquila chrysaetos*): CFP, WL, BCC, BLMS.** 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 does not provide suitable golden eagle nesting habitat but does provide suitable foraging habitat. 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).

No focused golden eagle surveys were conducted specifically for this project, though one golden eagle was observed flying over the project site. Golden eagle surveys and raptor/raven surveys have been conducted on a multitude of projects within 10 miles of the project vicinity since 2010 (Figure 3.4-8, Golden Eagle Survey Results 2010-2015).

**Western burrowing owl (*Athene cunicularia hypugaea*); SSC, BCC, BLMS.** 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. Three burrows were observed within the project site. Two of the burrows had a live individual and whitewash was observed at the third burrow.

**Costa's hummingbird (*Calypte costae*); BBC.** In the project region, Costa's hummingbird is commonly seen foraging in desert wash habitat. Multiple individuals were detected during field surveys, but locations were not mapped due to frequency of occurrence. No nests were detected.

**California horned lark (*Eremophila alpestris actia*); WL.** Horned lark nesting and foraging habitats are common within the project area, and multiple individuals were detected within the project site during field surveys. Locations of observations were not mapped due to frequency of occurrence. No nests were detected.

**Prairie falcon (*Falco mexicanus*); WL, BCC.** Prairie falcon nesting and foraging habitats are similar to those of the golden eagle (above), although their primary prey differ (ground squirrels and other small mammals, birds, and lizards). The project site provides suitable foraging habitat for this species, but not suitable nesting habitat. A total of four observations of prairie falcon in flight within the project site.

**Loggerhead shrike (*Lanius ludovicianus*); SSC (nesting), BCC.** Loggerhead shrikes are common year-round residents throughout much of southern California, especially in the interior desert regions. They initiate their breeding season in February and may continue with raising a second brood as late as July. The entire project site contains suitable foraging and nesting habitat for loggerhead shrike. Suitable foraging and nesting habitat for loggerhead shrike is found throughout the project site. Over 25 observations of live individuals were documented during 2019-2020 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. Native habitat areas within the project site contain suitable foraging and potential nesting habitat and there were several incidental observations during field surveys and avian counts.

**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 and nesting habitat for Le Conte's thrasher is located on the project site, primarily within desert dry wash woodland and the Sonoran creosote bush scrub. One individual was observed during field surveys on the project site.

**Riparian birds.** Four federally listed riparian birds (western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and Ridgway's rail) are known from the larger project region. There is no suitable nesting habitat for these four species on or near the project site. Three of the species exhibit migratory or movement behavior through the California desert. Western yellow-billed cuckoo, least Bell's vireo, or Ridgway's rail could at times fly over the site and could make use of the site for feeding or resting during brief migratory stopovers. Recent studies indicate that southwestern willow flycatchers do not migrate over the area of the desert where the project is proposed (BLM, 2017).

**Special-status seasonal migrant birds.** The following special-status bird species maybe 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.

- **Short-eared owl (*Asio flammeus*); SSC.** Potential foraging habitat during winter or migratory seasons, no potential nesting.
- **Ferruginous hawk (*Buteo regalis*); WL, BCC.** Potential foraging habitat during winter or migratory seasons, no potential nesting.
- **Swainson's hawk (*Buteo swainsoni*); ST, BBC.** Potential foraging habitat during migratory season, no potential nesting. One individual was incidentally observed flying over the project site during avian counts, but the location of the observation was not recorded.
- **Vaux's swift (*Chaetura vauxi*); SSC.** Potential stopover foraging occurrence during migration; no potential nesting.

- **Mountain plover (*Charadrius montanus*); SSC.** Potential foraging habitat during winter or migratory seasons, no potential nesting.
- **Northern harrier (*Circus cyaneus*); SSC.** Potential foraging habitat during winter or migratory seasons, no potential nesting. One individual was incidentally observed flying over the project site during avian counts, but the location of the observation was not recorded.
- **Sandhill crane (Grus canadensis); SSC.** No suitable foraging or nesting habitat, but potentially will stopover during migration. One individual observed during field surveys.
- **Long-billed curlew (Numenius americanus); BCC, WL.** Potential stopover foraging occurrence, no potential nesting.
- **Sonora yellow warbler (*Setophaga petechia sonorana*); SSC, BCC.** Potential stopover foraging occurrence during migration; no potential nesting.
- **Yellow-breasted chat (*Icteria virens*); SSC.** Potential stopover foraging occurrence during migration; no potential nesting.

***Mammals***

**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 Desert. During hot summers burro deer concentrate along the Colorado River, natural springs, or near anthropogenic water sources such as the Coachella Canal or agricultural areas where water developments have been installed and where microphyll woodland is dense and provides good forage and cover. Burro deer scat and tracks were observed throughout the project site.

**American badger (*Taxidea taxus*); SSC.** Suitable habitat exists for American badgers throughout the project site. There are several canid burrows and complexes observed that could be used by the species although no badgers were observed and none of the burrows showed definitive badger sign.

**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. Its prey includes small rodents, primarily kangaroo rats, rabbits, lizards, insects, and in some cases, immature desert tortoises. Burrow complexes that have multiple entrances provide shelter, escape, cover, and reproduction, but desert kit foxes also utilize single burrows for temporary shelter. Population numbers are likely to change over time since kit fox distribution is dynamic and populations change under natural conditions due to prey availability and other environmental factors such as the presence of coyotes that prey on kit fox pups.

During field surveys, one live desert kit fox and one carcass was observed. In addition, active and inactive desert kit fox burrows (single entrance/exit), burrow complexes (interconnected multi-entry collection of burrows), and scat were observed throughout the project (Figure 3.4-9, Noteworthy Mammal Observations). A total of thirty-four complexes (twenty-two of which showed active sign) and fifty-nine burrows (twenty-one of which showed active sign). These numbers will likely change over time since kit fox distribution is dynamic and change under natural conditions due to prey availability and other environmental factors.

**Special status bats.** Seven special-status bat species may forage on or near the project site. While any of these species may fly over the site to foraging or roosting sites, there is only limited roosting potential on the project site in the dry wash woodland habitat and in nearby areas such as freeway underpasses. Suitable bat roosts (e.g., rock ledges, cliffs, large tree hollows, mine shafts) occur within 5 to 10 miles from the project in the mountain ranges surrounding the Chuckwalla Valley.

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. Other special status bat species known from the region typically inhabit rocky sites and would not be expected to use the project site for roosting. One inactive roost was observed in an Ironwood tree cavity with guano staining (Figure 3.4-9, Noteworthy Mammal Observations). For special-status bats of the vicinity, potential foraging or roosting on the project site is evaluated below. Additional description of the species and their habitats may be found in the BRTR (IP Oberon, 2021, Appendix F).

- **Pallid bat (*Antrozous pallidus*): SSC, BLMS.** Potential for foraging habitat within the dry wash woodland, but there is no suitable roosting habitat. Acoustic bat surveys for Palen Solar Power Project (about 3 miles east of the project site) detected pallid bat within the project vicinity.
- **Townsend's big-eared bat (*Corynorhinus townsendii*): SSC, BLMS.** Some roosting potential in desert dry wash woodland. Foraging habitat in the areas of desert dry wash woodland and artificial water sources fish farm adjacent to the project.
- **Western mastiff bat (*Eumops perotis californicus*): SSC, BLMS.** Potential for foraging on the project site, but no roosting habitat. Western mastiff bat was detected within the vicinity on acoustic bat surveys for Palen Solar Power Project.
- **Western yellow bat (*Lasiurus xanthinus*): SSC.** Potential for foraging and roosting habitat exists within the project site in areas where desert dry wash woodland exists. Western yellow bat was detected within the vicinity during acoustic bat surveys for the Palen Solar Power Project.

- **California leaf-nosed bat (*Macrotus californicus*): SSC, BLMS.** Potential for foraging but not expected to roost due to absence of suitable caves and mines.
- **Big free-tailed bat (*Nyctinomops macrotis*): SSC.** Potential for roosting and foraging within desert dry wash woodland habitat. 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 is present, but no roosting habitat.

### 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 the long-term demographic and genetic effects of occasional animal movement among mountain ranges and other large habitat areas. 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 Interstate 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 east of Desert Center. ~~They are~~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 north within 5 miles and to the west within 12 miles. Anthropogenic uses in the project's vicinity that present barriers to movement include the I-10 freeway to the south, the Desert Center Airport, other roads and fences, and several other active and proposed solar project facilities that surround the project site.

Potential landscape-level habitat linkages and wildlife movement corridors are identified in the DRECP LUPA (BLM, 2016; Section III.7.8). As noted in the DRECP FEIS (BLM, 2015), the location of linkages is based on several studies including the California Desert Connectivity Project, the California Essential Habitat Connectivity Project, the South Coast Missing Linkages Project, and A Linkage Design for the Joshua Tree–Twentynine Palms Connection.

Within the Cadiz Valley and Chocolate Mountains ecoregion subarea, where the project area is located, landscape-level habitat linkages cover approximately 905,000 acres as noted in the DRECP FEIS Section III.7.8. These linkage areas are primarily located along the desert valleys, providing connectivity between isolated mountain ranges within the ecoregion subarea. The project is located within the Palen McCoy Mountains–Chocolate Mountains linkage (see DRECP FEIS, Figure III.7-26). Approximately 1,044 acres of the eastern portion of the project application area overlaps with the multiple-species linkage area identified in the DRECP LUPA (Figure 3.4-10, Wildlife Connectivity) (BLM, 2016). Desert tortoise is known to use this linkage area in the southeastern portion of the project. Impact acreages to the multiple-species linkage are presented in Table 3.4-1.

The California Desert Connectivity Project identified a Desert Linkage Network to maintain habitat for movement between landscape blocks. The landscape blocks (i.e., large, relatively natural habitat areas that support native diversity) identified in the project vicinity are the Palen–McCoy Mountains to the northeast and the Chocolate Mountains to the southwest. Broad habitat linkages connect these landscape blocks.

~~The DRECP identifies a wide multi-species linkage area that overlaps with the southeastern and northern portions of the project area (Figure 3.4-10, Wildlife Connectivity). Desert tortoise is known to use this linkage area in the southeastern portion of the project.~~

The California Essential Habitat Connectivity (CEHC) Project identified areas surrounding the project site as Natural Landscape Blocks, including the Coxcomb Mountains to the north, the Eagle Mountains to the west, Palen Mountains to the east, and Chuckwalla Mountains to the south. The CEHC identifies the project site and surrounding areas as Essential Connectivity Areas.

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. 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 that provide connectivity and safe movement corridors between habitat to the north and south of the I-10. Seven of these crossings, ranging in from 10 feet to 75 feet wide, are located adjacent to the project site to the south. An additional 10 crossings are located within 5 miles.

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, transmission lines have only minimal effects on wildlife movement.

## 3.4.2 Regulatory Framework

This section identifies and summarizes the key federal, state, and local laws and regulations applicable to biological resources.

### 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. The MBTA prohibitions are inapplicable to "incidental take" (USDI, 2021; 86 FR 1134).

**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 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 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 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), the California Energy Commission (CEC), and the California Department of Fish and Wildlife (CDFW). The BLM ROD for the DRECP was issued in September 2016.

### 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 project 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 regulation of 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.

### Local Laws, Regulations, and Policies

Because the project is entirely on BLM land, it is not required to meet local regulations. However, the following policies outlined in the Riverside County General Plan (2015) address biological resources and were reviewed for CEQA purposes:

**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[2]).
- **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

[2] Referring to the relevant Action Items (AI) contained in the Implementation Program found in Appendix K of the Riverside County General Plan.

through implementing related Riverside County policies. (The project site is not within an MSHCP area).

## 3.4.3 Methodology for Analysis

The impact assessment presented in this EIR identifies and discloses 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).

Several meetings were held among the Applicant, wildlife agencies, and BLM biologists to discuss potential impacts and applicable regulations. In addition, written and oral comments regarding the project's potential impacts to biological resources (Appendix A, Scoping Report) were reviewed to inform the analysis. The impact analysis is based on the biological resources on the project's site, described in Section 3.4.1 (Environmental Setting) and in the BRTR (IP Oberon, 2021, Appendix F), and on the Description of the Project (Chapter 2). Each potential impact is evaluated to determine if it would be significant and, if so, if mitigation would reduce its impact to less than significant. Mitigation measures are designed to avoid, minimize, or mitigate project impacts to biological resources, and specify details such as performance standards and reporting requirements to ensure mitigation will effectively reduce the impacts.

Additional protection for biological resources is specified by the DRECP as CMAs. The CMAs outline limitations on development and generally require avoidance or management of certain resources. While CMAs are requirements on BLM-administered lands per the DRECP, the mitigation measures (MMs) (see EIR Section 3.4.7) specify further detail such as performance standards and reporting requirements to ensure mitigation will effectively reduce the impacts.

Applicable CMAs and a description ~~confirmation~~ of the proposed project's conformance are identified in the POD (IP Oberon, 2021, Appendix C). ~~The boundaries of the project were specifically designed to meet the CMAs through avoidance of desert dry wash woodland (LUPA-BIO-RIPWET-1).~~ Solar projects in a DFA that comply with CMAs specified in the DRECP LUPA do not require a land use plan amendment for development. Consistent with the DFA definition, the project area has been designated under FLPMA as suitable for renewable energy development and energy accessory uses.

The DRECP CMAs are applied to mitigate project related impacts on specific resources. Several of these CMAs contain exemptions to required setbacks or avoidance measures using terms such as "to the maximum extent practicable" or "except for minor

incursions." BLM will evaluate DRECP CMAs compliance outside of the CEQA process to determine whether not strictly adhering to the setback requirements, as well as direct impacts to microphyll woodland, could be considered in conformance with the land use plan by BLM, provided certain criteria are met to maintain the intent of resource protection under the CMAs. BLM is considering through the NEPA process whether a project-specific plan amendment to the CDCA, as amended, would be required for the proposed project for the following CMAs:

- CMA LUPA-BIO-RIPWET1 (Riparian and Wetland Vegetation Type CMA) requires that developers avoid a variety of riparian and wetland vegetation types and related features "to the maximum extent practicable,"~~,~~ allowing only minor incursions. LUPA-BIO-RIPWET-1 further requires a 200-foot setback from microphyll woodland to avoid and minimize adverse effects.
- CMA LUPA-BIO-3 (Resources Setback Standards) establishes the measurement guidelines for setbacks from sensitive resources, including riparian vegetation (i.e., microphyll woodlands) (it does not require avoidance to the maximum extent practicable, except for allowable minor incursions).
- CMA LUPA-BIO-SVF-6 (Microphyll Woodlands). requires that impacts to microphyll woodland be avoided, except for minor incursions.
- CMA LUPA-BIO-IFS-4 (Desert Tortoise Exclusion Fencing) requires desert tortoise exclusion fencing around the perimeter of the activity footprint, in areas where protocol surveys are required, in accordance with USFWS protocol.

In addition to the CMAs and MMs, the Applicant must obtain multiple permits and approvals for the project, and authorizations issued by regulatory agencies (such as RWQCB, CDFW, BLM, and USFWS) would likely include conditions of approval for the same species and resources analyzed in this EIR. Those additional conditions may be more or less stringent than the measures required to minimize, avoid, and mitigate impacts identified in this EIR. If the project is approved, it would be required to implement all conditions of authorizations, and where multiple authorizations address the same resource, the most stringent avoidance and minimization measures would be required in addition to the less stringent measures.

The following discussion of impacts to biological resources is organized to:

- Describe each potential impact to biological resources according to a series of significance criteria identified herein;
- Identify which CMAs, if any, would serve to mitigate the impact and if they would reduce the impact to less than significant levels;
- If needed, identify additional mitigation measures that would further reduce the impact; and

- Provide a conclusion stating whether each potential impact would be less than significant without need for mitigation, mitigated to less than significant through implementation of mitigation measures identified; or potentially significant even with available mitigation.

## 3.4.4 CEQA Significance Criteria

The following thresholds are used to determine whether the proposed project or alternatives would result in a significant impact pursuant to CEQA. These thresholds of significance are based on Appendix G of the CEQA Guidelines. A biological resources impact is considered significant if the project or alternative 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 CDFW or the USFWS (see Impact BIO-1).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS (see Impact BIO-2).
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, and coastal areas) or any state-protected jurisdictional areas not subject to regulation under Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means (see Impact BIO-3).
- 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 (see Impact BIO-4).
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (see Impact BIO-5).

The following additional significance criteria are used in the analysis. A project could have potentially significant impact to Biological Resources if it would:

- Substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species (see Impacts BIO-1 regarding endangered, rare, or threatened species, and BIO-2 regarding natural communities).
- 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 (§§ 17.11 or 17.12) (these citations refer to the CESA and ESA, respectively; see Impact BIO-1).

The following CEQA significance criterion from Appendix G was not included in the analysis:

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

The project 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. The project site and surrounding public lands are managed by BLM under the DRECP, a federal land management plan not included among the types of plans identified in this criterion. The BLM is responsible for environmental review, including DRECP compliance, under NEPA.

## 3.4.5 Proposed Project Impact Analysis

Issues raised during scoping related to Biological Resources include:

- Support for siting the project on previously disturbed lands
- Recommendation for fencing with large enough openings to let small animals pass through
- Potential effects to threatened or endangered species, such as desert tortoise, Yuma Ridgway's rail, southwestern willow flycatcher, and yellow-billed cuckoo.
- Potential effects to other special-status wildlife, including golden eagle and burrowing owl
- Recommendations for protocol wildlife surveys to assess potential impacts and support wildlife agencies' review of the potential effects.
- Recommendations for coordination among the County, Applicant, BLM, USFWS, and CDFW to discuss jurisdiction
- Potential "lake effect" that may attract birds, leading to collisions with the facilities
- Effects to the displaced wildlife (including snakes), loss of habitat, and barriers to movement routes
- Cumulative effects multiple projects on wildlife corridors

Acreages of impacts to sensitive resources in the proposed solar facility footprint are outlined in Table 3.4-1. Impacts to desert dry wash woodland and desert tortoise critical habitat are described in Impact BIO-1. Impacts to the multi-species linkage are described in Impact BIO-4. A description of the alternatives and associated impacts listed in Table 3.4-1 are included in EIR Chapter 4 (Alternatives).

**Table 3.4-1. Impacts to Sensitive Habitats within the Project Fenceline by Alternative**

| Sensitive Habitat Type (acres) | Alternative 2: Proposed Action | | Alternative 3: LUPA Compliant Alternative | | Alternative 4: Resource Avoidance Alternative | |
|---|---|---|---|---|---|---|
| | Impacted | Protected | Impacted | Protected | Impacted | Protected |
| Desert Dry Wash Woodland | 89 - direct[b] 223 - indirect (buffer) | 1,211 | 0 [a] | 1,300 | 0[a] | 1,300 |
| Multi-Species Linkage Corridor | 332 | 712 | 345 | 699 | 0 | 1,044 |
| Desert Tortoise Critical Habitat | 589[c] | 936 | 543 | 982 | 0 | 1,525 |

a - Impact acreage does not include disturbance outside of the solar and BESS facility fenceline, which is estimated to be approximately 14 acres.
b - Adding the Caltrans ROW would increase microphyll direct impacts by up to 5 acres.
c - Adding the Caltrans ROW would increase critical habitat impacts by up to 40 acres.

***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?***

***LESS THAN SIGNIFICANT WITH MITIGATION.***

~~Special-status Plants~~

Potential effects to special-status plants and animals 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 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 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.

Vegetation, including the native vegetation and habitat, would be removed or cut. Soils throughout the solar fields would be affected by some form of ground disturbance. Effects to soils and vegetation, in turn, would affect special-status plants and animals that may be present, by removing nesting and foraging habitat, compacting soils, and collapsing burrows. Additionally, construction activities could directly affect these plants and animals.

Altered hydrology (e.g., stormwater ponding behind berms, or increased stormwater runoff which may cause erosion) from site preparation could directly or indirectly affect special-status plant or wildlife habitats. Construction activities could accumulate dust on special-status plants that could diminish gas exchange or photosynthesis.

Construction activities would cause most mobile vertebrate wildlife to leave or attempt to leave the site. Animals dispersing from the site could be at increased risk of predation and possible vehicle collisions as they flush from cover during site clearing. After leaving their home territories, displaced animals may be unable to find suitable food or cover in new, unfamiliar areas. Displacement effects would apply to common wildlife species and to special-status species.

Construction could cause mortality of small mammals and reptiles, including special-status species, which may be crushed by construction equipment. In most cases, adult birds would fly away from the disturbance, but bird nests (including eggs or nestlings, if present) would be lost. Burrowing owls, if present during construction, would tend to shelter inside burrows where they could be vulnerable to crushing. Land use conversion could exclude special-status reptiles, birds, and mammals from portions of their territories. Facilities could present hazards to wildlife, including special-status wildlife. For example, vertical structures can be collision hazards for birds or bats in flight; trenches can be pitfall hazards for terrestrial wildlife; and construction materials such as open pipes or tubing can attract birds or terrestrial species, which can become trapped inside.

Noise and lighting during construction could affect wildlife in adjacent habitats by disrupting foraging, breeding, sheltering, and other activities; or may cause animals to avoid otherwise suitable habitat surrounding the site. Lighting during construction may affect nocturnal wildlife species, by causing alterations to 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 special-status wildlife, either as direct hazards (vehicle strikes) or as attractants such as food or water that may put animals in harm's way. 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).

Potential direct and indirect impact to special-status plants and animals are outlined below, for the solar facilities and the shared gen-tie line configurations. These direct and indirect ~~adverse~~ impacts to special-status species and their habitat ~~could be substantial~~would be significant. ~~but~~ Impacts can be avoided, minimized, and mitigated with implementation of ~~can be reduced through~~ mitigation measures specified in Section 3.4.7, Mitigation Measures and as detailed below for vegetation and habitat, special-status plants, and special-status wildlife. Compliance with and meeting the intent of applicable CMAs, as outlined in the DRECP LUPA, would further minimize

impacts. With mitigation, impacts to special-status plants and wildlife would be less than significant.

**Vegetation and Habitat.** The project would permanently impact native habitats as shown in Table ~~3.4-1~~3.4-2 by removing or substantially altering the soils and vegetation. Impacts to desert dry wash woodland, a sensitive community, are detailed in Impact BIO-2. Permanent impacts to natural habitats would include vegetation removal and soil disturbance in creosote bush scrub, desert dry wash woodland, and desert pavement. During construction, the project would temporarily affect surrounding habitat by introducing noise, lighting, dust, and similar disturbances, possibly affecting wildlife behavior. The temporary impacts cannot be quantified because noise and disturbance will be intermittent, occurring at various parts of the project areas at various times during construction, and each species or individual animal would react differently to the various disturbances. All affected habitats may support certain special-status plants or animals (described further below). The principal indirect impact to native habitat is the potential introduction of invasive weeds which could degrade plant and wildlife habitat on the site and beyond the site boundaries if the weeds spread. While chemical control with herbicides may be necessary to control the spread of non-native invasive species following construction, their use may pose risks to native vegetation and wildlife. Without mitigation, the loss of natural habitat on the project site would significantly affect special-status wildlife on the site or in the vicinity.

**Table ~~3.4-1~~3.4-2. Construction Impacts to Vegetation Communities**

| Cover Type | Fenced Solar Array (acres) | Gen-tie ROW (acres) | Collector Lines and Roads (acres) | Total (acres) |
|---|---|---|---|---|
| Dry Desert Wash Woodland* | ~~56.5~~73.1 | ~~14.5~~1.8 | ~~10.1~~13.9 | ~~89~~81.2 |
| Desert Pavement | ~~56.7~~43.7 | ~~8.7~~0.6 | ~~2.3~~12.4 | ~~57~~67.8 |
| Sonoran Creosote Bush Scrub | ~~2,536.7~~2,295.9 | ~~62.4~~11.04 | ~~11.7~~55.2 | ~~2,363~~2,610.8 |
| Urban | — | ~~1.05~~2.2 | — | ~~1.05~~2 |
| **Grand Total** | ~~2,413~~2,649.9 | ~~16~~86.7 | ~~24.1~~82 | ~~2,511~~2,760.8 |

* Adding Caltrans ROW area could increase microphyll direct impacts by up to 5 acres.

Impacts would be avoided, minimized, and mitigated by implementing mitigation measures (MMs), listed below.

MM BIO-1 (Biological Monitoring) would require monitoring and reporting 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 require avoidance and minimization of 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 adverse effects to habitat. MM BIO-4 (Integrated Weed Management Plan) would require an IWMP to prevent introductions or infestations of invasive weeds, and control or eradicate any infestations that may occur. MM BIO-5 (Vegetation Resources Management Plan) would require revegetation of temporarily disturbed areas to minimize dust and erosion, to minimize their effects to habitat.

MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts~~Compensation for Natural Habitat Impacts~~), MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), and CMA LUPA-BIO-COMP-1 require permanent protection of comparable off-site habitat to offset the project's impacts to native habitat and designated critical habitat. IP Oberon, LLC and Wildlands compiled a comprehensive mitigation package. The proposed compensation lands within the Wildlands mitigation package are much higher quality habitat than the designated critical habitat on the Oberon site (IP Oberon, 2021, Appendix AA).

The conditions found within the onsite and compensation sites critical habitat areas were compared using the USFWS Physical and Biological Features (PBFs) of critical habitat. PBFs are specific elements of physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species. The desert tortoise PBF criteria are used by USFWS to place lands within critical habitat designation. The DRECP BO (BLM, 2016) discusses three PBFs in the context of the Chuckwalla CHU and determines that they are not measurably affected by development in the overlap part of the CHU. The BO notes the fragmentation effect of the freeway on CH and that boundaries were drawn along section lines (rather than habitat features). The BO concludes: "[b]ecause of the nature of the habitat in this area and the fact that the Bureau will require the maintenance of wildlife corridors in this area, the minor overlap of portions of the East Riverside DFA and the Chuckwalla CHU would not have a measurable effect on the ability of the CHU to support viable populations or to provide for movement, dispersal, and gene flow. The maximum acreage of overlap is approximately 4,498 acres; however, because the [BLM] (2015c, page II.3-169, CMA LUPA-BIO-13) will maintain substantial wildlife corridors in this region, the actual amount of disturbance to Chuckwalla CHU would be substantially less." (Note that the Oberon Project design supports general wildlife movement through the area, consistent with CMA LUPA-BIO-13.)

The designated critical habitat portion of the Oberon Project area is adjacent to the I-10 freeway and contains existing energy transmission lines. Much of the area surrounding the project site, including portions of the designated critical habitat, is degraded and contains anthropogenic features and land uses, such as agriculture, residential, renewable energy, transmission lines, historic military operations, recreational development/limited dispersed camping, BLM designated Off-Highway Vehicle (OHV)

open routes, and the I-10 freeway. It also contains a high cover of non-native invasive plants due to disturbance and roadways.

The designated critical habitat portion of the proposed Wildlands Mitigation Sites are partially located within the Chemehuevi ACEC, Mojave Trails National Monument, and Piute Mountains Wilderness Area and partially located within the Chuckwalla ACEC on the Chuckwalla Bench and Smoke Tree Valley. Much of the area surrounding the Mitigation Sites are BLM administered lands that have enhanced protections via ACEC and Wilderness Area designations. Additionally, there are many privately owned conservation lands adjacent and proximal to the Mitigation Sites that have similar habitat management goals. The remote nature of the Mitigation Sites enhances the very low anthropogenic impacts such as trash, OHV use, evidence of dispersed camping, or invasive species.

Further, the mitigation package would compensate impacts to desert dry wash woodland, its buffer, and critical habitat at a ratio of 5:1, which would result in a large amount of this higher quality habitat being preserved off site.

MMs BIO-1 through BIO-6b would minimize adverse impacts to native vegetation and offset the permanent loss through higher quality off-site habitat compensation.

Implementation of the IWMP specified in MM BIO-4 would control invasive weeds through mechanical or chemical methods. Herbicides can pose risks to terrestrial and aquatic vegetation. Most aquatic herbicides, and several terrestrial herbicides, are non-selective and could adversely impact non-target vegetation. Accidental spills and herbicide drift from treatment areas could be particularly damaging to non-target vegetation. Herbicides may also pose risks to terrestrial or aquatic animal species. Herbicides that persist on site could adversely affect animals that feed on target plants or are exposed to the herbicides (e.g., by digging or rolling in treated soil). Accidental spills and herbicide drift from treatment areas could reach non-target vegetation or habitat on public or private lands near treatment areas. MM BIO-4 requires that the 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. Any herbicide use would need to comply with existing BLM plans and permits including the *Vegetation Treatments Using Herbicides* (2007) and *Vegetation Treatment Using Aminopyralid, Fluroxypyr, and Rimsulfuron* (2016b) including requiring a Pesticide Use Permit approved by the BLM and adhere to the BLM design features included in the EIS.

**Special-status Plants.** The project would not affect state or federally listed threatened or endangered plants. Four special-status plants were observed on the project site. Creosote bush ring (BLM S) was observed in two locations within the project site

(Figure 3.4-4, Special-status Plant Observations), but because there are less than 5 meters in diameter, DRECP CMA LUPA-BIO-SVF-3 would not apply.

Emory's crucifixion thorn (CRPR 2B.2) was also observed in ~~eight~~ three locations in the project application area, primarily in the western portion of the project area; however, ~~some~~ one of these occurrences would be avoided with avoidance of desert dry wash woodland. Additional suitable habitat is located along washes in the project area.

Two Emory's crucifixion thorn would be removed during construction. While suitable habitat (DDWW) would be impacted, additional habitat is present in wash areas that would be avoided and impacts to suitable habitat in the project area would be minimized. Without mitigation, the project's impacts to Emory's crucifixion thorn could be locally significant.

Because the crucifixion thorn strands were not large (less than 100 individuals), they do not require avoidance per CMA LUPA-BIO-SVF-7. However, implementation of MM BIO-7 (Emory's Crucifixion Thorn Mitigation) would mitigate impacts by one or more of several approaches, including off-site compensation and/or horticultural propagation and off-site introduction, in coordination with California Botanic Garden. The salvage measure includes contracting a qualified institution to replant salvaged plants or cuttings off site.

Desert unicorn-plant and spiny abrojo were observed; 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.

~~Without mitigation, the project's impacts to Emory's crucifixion thorn could be locally significant. MM BIO-7 (Emory's Crucifixion Thorn Mitigation) would mitigate this potential impact by horticultural propagation and off-site introduction. Because salvage is a feasible mitigation strategy for Emory's crucifixion thorn and has been implemented for a nearby project, the measure includes contracting a qualified institution to translocate them off site.~~

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.

**Special-status Wildlife.** Impacts to special-status wildlife are discussed in detail below. Without mitigation, impacts to special-status wildlife would be significant, as described for each species. ~~and are minimized and avoided by implementation of~~ MM BIO-8 ~~,~~ ~~which~~ identifies numerous requirements to avoid, minimize, and mitigate ~~or avoid~~ 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 Oberon site would be surveyed during construction and operations 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-8 and other wildlife mitigation measures described for each species, impacts to special-status wildlife would be less than significant.

Required permits prior to project construction include an Incidental Take Permit (ITP) from CDFW for desert tortoise and consultation with USFWS under Section 7 of the Endangered Species Act that would conclude with USFWS issuance of a Biological Opinion.

The BLM initiated formal consultation with the USFWS for impacts to federally listed species. The project may affect and is likely to adversely affect desert tortoise, and may affect but is not likely to adversely affect critical habitat for desert tortoise. Also, the project may affect, but is not likely to adversely affect the western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, or Ridgway's rail.

The Biological Opinion (BO) issued for the DRECP LUPA concludes that implementation it not likely to jeopardize desert tortoise and is not likely to adversely modify its critical habitat (USFWS, 2016).

### Amphibians and Reptiles

**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 during surveys, but eight areas were identified as potential breeding habitat where water may accumulate after rainfall. Additional site visits performed during rain events since have shown ponding for about a day before drying out.

While suitable breeding habitat has not yet been detected at the project site, 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 previously discussed would minimize adverse impacts to native vegetation and habitat and offset the permanent habitat loss through off-site habitat compensation. MM BIO-8 (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.

**Mojave fringe-toed lizard.** Based on a comment submitted on the Draft EIR, one or more Mojave fringe-toed lizards may occur on the project site, although habitat on the site is poorly suitable. The project could impact these individuals (if present during construction) as described for desert kit fox and American badger. The project would not cause substantial loss of dune, sandfield, sandy desert wash, or sand transport corridors; impacts to Mojave fringe-toed lizard, if any, could be loss of a few isolated individuals if they inhabit the project site.

**Desert tortoise.** Desert tortoises and their sign (burrows, pallets, scat, and tracks) have been observed primarily in the eastern portion of the project site in desert dry wash woodland, with carcasses observed in the western portion, as presented in Section 3.4.1 (Environmental Setting).

~~Predicted desert tortoise occupancy values of 0.3 or above are appropriate for identifying suitable habitat in this low desert region (Nussear, 2009). Occupancy values for the Oberon Solar facility range from 0–0.1 in the northern portion of the site to 0.6–0.7 in the southern portion of the site.~~

The 2021 5-year review for desert tortoise (USFWS, 2017) describes the BO (USFWS, 2016) issued for the DRECP LUPA. USFWS acknowledged that approximately 11,290 acres of modeled desert tortoise habitat within the DFAs would eventually be developed for renewable energy. USFWS also notes that the DRECP LUPA increased the amount of land managed for conservation by approximately 2.5 million acres (USFWS, 2017). USFWS concluded that the DRECP LUPA was not likely to jeopardize the continued existence of the desert tortoise, and would benefit its recovery (USFWS, 2016; 2017).

Since the completion of the 2021 5-year review (USFWS, 2021), the USFWS has issued biological opinions related to renewable energy development. While USFWS notes that the development of large solar facilities has reduced the amount of habitat available to desert tortoises, these biological opinions concluded that proposed solar plants were not likely to jeopardize the continued existence of the desert tortoise because they were primarily located outside of critical habitat and areas of critical environmental concern that contain most of the land base required for recovery of the species and because the actions included numerous measures intended to protect desert tortoise consistent with the recommendations in the desert tortoise recovery plan.

If a desert tortoise is found on the project site during construction or O&M, it 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.

If the Substation and BESS Area Option is implemented near the southeastern edge of the site, impacts to desert tortoise may be relatively greater due to construction of exclusion fencing in that area during O&M and the proximity to occupied desert dry wash woodland.

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, which is ongoing. ~~If project activities cause injury or mortality to a desert tortoise, this would be a significant adverse impact.~~

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 under wildlife movement~~in Impact BIO-4 regarding wildlife movement.

Without implementation of DRECP CMAs and the mitigation measures, the proposed project could cause significant impacts including mortality or injury to desert tortoises present in the project area during construction, O&M, and decommissioning activities.

As allowed in DRECP CMA LUPA-BIO-IFS-4, the BLM and USFWS would need to grant an exemption or variance to conduct desert tortoise clearance surveys in a limited area (300 acres plus buffer) outside of the desert tortoise activity period, as described in Section 2.2.2.2. As a result of early surveys outside the active season, some tortoises may not be detected and may be subsequently directly killed or injured during construction activities. Survey methods including transects and camera monitoring of the early fencing area, in coordination with USFWS, would minimize impacts.~~If the Substation and BESS Area Option is implemented near the eastern edge of the site, impacts to desert tortoise may be relatively greater due to construction of exclusion fencing in that area during O&M and the proximity to occupied desert dry wash woodland.~~

MMs BIO-1 to BIO-6b, previously discussed, would minimize adverse impacts to native vegetation and desert tortoise habitat and offset the permanent habitat loss through off-site habitat compensation. Desert dry wash woodland habitats in areas where desert tortoise sign was primarily found would be avoided. MM BIO-8 (Wildlife Protection) would minimize mortality and injury to desert tortoise and other wildlife.

~~MM BIO-9 (Desert Tortoise Protection) would minimize impacts to and avoid lethal take of desert tortoise during construction and O&M. MM BIO-9 requires pre-construction clearance surveys and monitoring, exclusion, or translocation of desert tortoises from active work areas, vehicle inspections to prevent any potential fatality or injury of desert tortoise, and implementation of a Raven Management Plan.~~Direct and indirect impacts to desert tortoises would be minimized through implementation of MM BIO-9 (Desert Tortoise Protection), which is consistent with CMA LUPA-BIO-IFS-4 and -5 and requires a USFWS Authorized Biologist during construction to conduct or direct pre-construction clearance surveys for each work area, 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 will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with the project's Lead Biologist. 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. Impacts to desert tortoise habitat and movement would be minimized with use of desert tortoise passage fencing during O&M.

No desert tortoise would be handled or relocated without authorization from USFWS and CDFW. An incidental take authorization from CDFW would be obtained prior to construction to address any potential take of desert tortoise, including authorization to handle or translocate desert tortoise. Desert tortoises would be handled or translocated according to a Desert Tortoise Relocation Plan, pending approval by both agencies. As discussed in Section 2.2.2.2, performing surveys and installing cameras in the active season just prior to the proposed early fencing activity would ensure that desert tortoises are identified during the early fencing installation and clearance surveys.

Due to potential take of desert tortoise (including handling a tortoise to move it out of harm's way) and due to a project constraint~~,~~ that requires an early desert tortoise fencing and exclusion schedule, the BLM has initiated formal consultation with USFWS under the federal ESA Section 7 and the Applicant has applied to the CDFW for incidental take authorization under CESA Section 2081 which requires review under CEQA.

With implementation of mitigation, impacts to desert tortoise would be less than significant.

**Desert tortoise critical habitat.** The southern portion of the Oberon Project site partially overlaps the Chuckwalla Desert Tortoise CHU. The project would impact nearly 590

acres of the Chuckwalla CHU, as shown in Table 3.4-1. Without mitigation, impacts to critical habitat, as described under Vegetation and Habitat, would be significant.

The DRECP FEIS described that some desert tortoise critical habitat would be impacted if renewable energy were constructed in the DFAs, assuming up to 8,000 acres of disturbance to desert tortoise critical habitat (BLM, 2015, Section IV.7.3.2.1). ~~Approximately 817 acres of critical habitat (including 46.6 acres of dry desert wash woodland) would be impacted.~~

The BO concludes, "because of the nature of the habitat in this area, the minor overlap of portions of the East Riverside DFA and the Chuckwalla CHU would not have a measurable effect on the ability of the critical habitat to support viable populations or to provide for movement, dispersal, and gene flow."

~~This overlap area is not within the Chuckwalla ACEC (Figure 3.4-1, Project Location) and is not within a Tortoise Conservation Area as identified in the DRECP.~~ ~~T~~As described in the DRECP BO (USFWS, 2016), the critical habitat boundaries within the proposed solar field follow section lines rather than natural habitat features or dispersal barriers (e.g., the I-10 freeway). Due to its location north of the freeway, this critical habitat land is partially isolated from the remainder of the CHU by the I-10 f~~F~~reeway. Its long-term function as critical habitat is compromised by its proximity to existing development. ~~A~~and its location within a DRECP designated Development Focus Area. ~~further compromises its future habitat value.~~

MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts), MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), and CMA LUPA-BIO-COMP-1 require offset of project impacts to vegetation with permanent protection of comparable off-site habitat. Critical habitat would be mitigated at a ratio of 5:1, per CMA requirements, to offset direct impacts to critical habitat. The proposed compensation lands within the Wildlands mitigation package are much higher quality habitat than the designated critical habitat on the Oberon site.

MM BIO-6b provides flexibility to ensure that implementation of mitigation achieves the goal of desert tortoise protection. The options in the measure include protecting desert tortoise in the immediate area and improving habitat with exclusion fencing, protecting habitat in an offsite location with acquisition and protection of compensation lands, or a combination of the two. By implementing exclusion fencing, potential desert tortoise densities in the area would be increased. The habitat's value would be improved by reducing the risk of vehicle strikes on the I-10 freeway. As a trade-off, acres of acquisition and protection of high-quality off-site compensation lands would be reduced as implementation of fencing is increased.

Either strategy or a combination of the two, in coordination with USFWS, would minimize and mitigate impacts to desert tortoise critical habitat to less than significant.

## Birds

**Native Birds.** Native birds are protected under the California Fish and Game Code and federal MBTA (see Section 3.4.2, 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 impact 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.

If the Substation and BESS Area Option is implemented near the eastern edge of the site, impacts to birds due to collision and electrocution may be relatively smaller due to the shorter length of the gen-tie line. If the 34.5 kV medium voltage collector lines are installed overhead, as opposed to underground, collision and electrocution impacts may be relatively greater in those areas.

Impacts to native birds, including special-status birds, would be significant. Impacts to riparian birds would be avoided and minimized with implementation of mitigation measures. Implementation of MMs BIO-1 through BIO-6b, 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-1 through BIO-6, previously described, would minimize adverse impacts to native vegetation and offset the permanent habitat loss through off-site habitat compensation. Additionally,~~ MM BIO-8 (Wildlife Protection) would help to minimize project impacts to nesting 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-10 requires a Bird and Bat Conservation Strategy (BBCS) that will 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 ~~these~~ hazards, ~~including nesting bird surveys and monitoring, avoidance of nesting season,~~ and documentation of bird and bat mortality during O&M. The project would also comply with CMA LUPA-BIO-17 which requires a BBCS. ~~Together these measures would effectively minimize adverse~~ With mitigation, impacts to native birds would be less than significant.

*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 has not been verified.~~ This effect may be the cause of water associated and water obligate species mortalities, including Yuma Ridgway's rail which has been found at another solar facility.

Solar structures found in large solar generation facilities mimic water bodies (i.e., "lake effect") and create solar flux that potentially could result in collision. The highest anticipated collision risk is in the Cadiz Valley and Chocolate Mountain area where the project is located (BLM, 2015, Section IV.7.3.2.1).

~~While bird fatalities may be expected to occur due to collisions with project facilities and equipment, the risk of significant impact to avian populations is minimal.~~ 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, 2020). Five sensitive species that could occur at the Oberon Project site have been detected as fatalities in the arrays at desert sites including loggerhead shrike (four), yellow-breasted chat (two), long-eared owl (one), yellow warbler (one), and yellow-headed blackbird (one). No large mortality events have been documented at PV solar facilities.

*Electrocution.* 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. 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). Ongoing studies at the neighboring Arica Solar Project and Victory Pass Solar Project are compiling an assessment of the potential direct and indirect impacts to birds and bats.

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.

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 for the project, which consists of low height PV arrays. 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 (2012). ~~MM BIO-11 (Gen-tie Lines) requires mechanisms to visually warn birds be placed on gen-tie lines at regular intervals to prevent birds from colliding with the lines (APLIC, 2006). 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).~~

~~Impacts would be minimized or offset by MM BIO-1 through BIO-12, previously described.~~

MM BIO-10 (Bird and Bat Conservation Strategy) would require the Applicant to prepare a BBCS to monitor the death and injury of birds. Resulting data would be used to inform an adaptive management program to mitigate or minimize and substantial project-related avian impacts. This measure would avoid or mitigate adverse impacts to nesting birds and manage O&M activities to minimize potential bird collisions.

MM BIO-11 (Gen-tie Lines) would require mechanisms 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 birds near the proposed gen-tie routes.

With implementation of mitigation, impacts to native birds would be less than significant.

**Listed Birds.** There is no suitable nesting habitat on or near the project site for the four federally listed bird species known from the vicinity (western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and Ridgway's rail); therefore, there would be no direct or indirect effects to nests, nest success, or nesting habitat. Three of the species, western yellow-billed cuckoo, least Bell's vireo, and Ridgway's rail, exhibit migratory or movement behavior through the California desert and may use the site for foraging and resting during migratory stopovers.

Significant impacts to riparian birds would be avoided and minimized with implementation of mitigation measures, as previously described. Implementation of MMs BIO-1 through BIO-6b would minimize and offset adverse impacts to native vegetation, thereby minimizing impacts to bird and bat habitat. MM BIO-8 (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-10 requires a BBCS that will identify potential hazards to birds and bats, implement a NBMP, and include monitoring, avoidance of nesting seasons, and documentation of bird and bat mortality during O&M.

**Swainson's Hawk.** The project site provides potential migration season foraging habitat for Swainson's hawk and one Swainson's hawk was incidentally observed during surveys. The site is outside the nesting range. Loss of foraging habitat would be mitigated and offset through MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), which require compensation for permanent impacts to native vegetation and habitat. Impacts due to potential collision and electrocution are discussed below under Protected Birds and Bats, and would be minimized with implementation of MM BIO-10 and MM BIO-11 (Gen-tie Lines).

**Gila Woodpecker.** Desert wash woodlands on the solar facility site may provide suitable nesting and foraging habitat for Gila woodpecker. Although no Gila woodpecker observations were made during surveys, there is a low probability that they may nest in desert wash woodland habitat on or near the project site.

Mitigation measures would be implemented to minimize impacts to desert dry wash woodland habitat and special-status birds, as described previously for Riparian Birds.

**Burrowing owl.** Burrowing owls, 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-6, listed above, would minimize adverse impacts to native vegetation and offset the permanent habitat loss through off-site habitat compensation. MMs BIO-8 (Wildlife Protection), BIO-10 (Bird and Bat Conservation Strategy), and BIO-12 (Burrowing Owl Avoidance and Relocation) would prevent or minimize potential

injury to burrowing owl by identifying occupied burrows and safely excluding the 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.

Foraging habitat loss may affect golden eagles during nesting, winter, or migratory seasons. Impacts to golden eagle foraging habitat would be offset through MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), which would require protection of off-site compensation lands to mitigate impacts to vegetation and habitat, including golden eagle foraging habitat. Additionally, MM BIO-10 (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, operations monitoring and, if necessary, 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. Several migratory raptors, including ferruginous hawk, northern harrier, Swainson's hawk (previously described), and short-eared owl, spend winters in the southern California deserts or, (for Swainson's hawk) migrate through the region between breeding habitat to the north and wintering habitat farther south. 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. Impacts to raptor foraging habitat would be offset through MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), which require compensation for permanent impacts to native vegetation and habitat.

**Special-Status Passerine Birds.** The desert vegetation and adjacent mountains provide foraging, cover, or breeding habitat for resident and migratory special-status birds. Potential impacts to these species would be the same as those described for other nesting or migratory birds. These impacts can be mitigated through MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts), which require

compensation for impacts to native habitats, and BIO-10 (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.

### Mammals

**Desert kit fox and American badger.** Active and inactive desert kit fox burrows were observed on the project site. Suitable habitat for American badgers is located throughout the project site and canid burrows that could be used by them are present; however, no badgers or definitive sign were observed.

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-6b, listed above, would minimize adverse impacts to native vegetation and offset the permanent habitat loss through off-site habitat compensation. MM BIO-8 (Wildlife Protection) and MM BIO-13 (Desert Kit Fox and American Badger Relocation) would prevent or minimize potential injury and mortality to desert kit fox and American badger. MM BIO-8 identifies practices and requirements to prevent or minimize wildlife injury and mortality, and MM BIO-12 specifies details for 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. 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. ~~n~~No special measures are necessary to exclude them from work areas. MMs BIO-1 through BIO-6b, listed above, would minimize adverse impacts to native vegetation, including burro deer habitat, and offset the permanent habitat loss through off-site habitat compensation. Potential impacts to burro deer movement are addressed under Impact BIO-4, below. With implementation of mitigation measures, impacts would be less than significant.

**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 ~~adversely~~ have a significant impact 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. ~~, which would be mostly avoided~~.

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. 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. It is anticipated very few bat fatalities will 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-6b would minimize adverse impacts to native vegetation and habitat and offset the permanent habitat loss through off-site habitat compensation. MM BIO-8 (Wildlife Protection) includes a condition to inspect structures prior to demolition and remove wildlife or allow wildlife to escape. MM BIO-10 (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 special-status bats, and to offset habitat loss.

With implementation of mitigation measures, impacts would be less than significant.

***Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife 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.

Impacts to desert dry wash woodland would include the removal of vegetation and loss of habitat for plant and wildlife species. Ground disturbance undermines the stability of soil and biotic crusts, leading to greater potential for erosion; affects soil density and water infiltration, cutting off water supplies to plant roots; and promotes invasion by exotic plant species. These factors contribute to habitat quality for native wildlife and plant species, and disturbance can affect the ability of an area to support these species.

The project would directly impact less than 100 acres of desert dry wash woodland habitat as shown in Table 3.4-1. Unimpacted desert dry wash woodland in the project area (approximately 1,200 acres) would have a surrounding buffer of an average of 134

feet and a minimum setback of 50 feet from microphyll woodlands. Approximately 10% of the project boundaries are sited at least 200 feet away from microphyll woodlands.

Approximately 223 acres of the 200-foot desert dry wash woodland buffer would be impacted from development and installation of roads and voltage lines. The project would result in direct impacts to the buffer including vegetation removal and installation of fencing and panels. Temporary indirect impacts to buffer habitat may include increased noise, dust, light, and activity during construction. Impacts within the buffer may indirectly impact adjacent desert dry wash woodland by reducing the buffer width such that impacts of construction would be in closer proximity to sensitive habitat. Long-term O&M, such as fence and panel maintenance, would be required in some buffer areas.

~~Construction of the solar facilities would mostly avoid desert dry wash woodland~~The proposed impacts would not comply ~~in accordance~~ with CMA LUPA-BIO-RIPWET-1, which requires avoidance of desert dry wash woodland with a 200-foot setback, except for minor incursions; CMA LUPA-BIO-3, which requires avoidance to the maximum extent practicable, except for allowable minor incursions; and CMA LUPA-BIO-SVF-6, which requires that impacts to microphyll woodland be avoided, except for minor incursions. ~~The project would impact approximately 81.2 acres of desert dry wash woodland habitat (Table 3.4-1).~~ Without mitigation, impacts to desert dry wash woodland would be significant.

As part of the NEPA process outside of CEQA, BLM has determined that compliance with the CMAs to the maximum extent feasible coupled with project-specific mitigation measures and the Applicant's proposed mitigation package would avoid, minimize, mitigate, and compensate direct and indirect impacts to desert dry wash woodland and an alternate buffer width ranging from 50 feet to over 200 feet.

Direct impacts to desert dry wash woodland would be mitigated at a ratio of 5:1, as required by the DRECP. Direct impacts to the buffer area, constituting indirect impacts to desert dry wash woodland, would be voluntarily mitigated by the Applicant at a ratio greater than 5:1.

The following proposed alternate methods and mitigation strategies would meet the purpose and objectives of the DRECP CMAs and "protect the function and value of the resource."

- **Efficient Design within a DFA.** The project has been proposed in a DFA targeted for renewable energy development and it has been strategically designed to avoid the largest, most intact areas of microphyll woodland and other vegetation types. The proposed project represents a land-efficient design (efficient solar PV layout at 5.4 acres per megawatt, in comparison to the industry standard, at 7 acres per megawatt).

- **Effective Avoidance of Contiguous DDWW Habitat.** The project design avoids large contiguous swaths of DDWW that maximize opportunities for critical north-south wildlife movement through the project site and through the underpasses under Interstate 10 (Figure 2-6, Fencing Plan), and that preserve most occurrences of desert tortoise and other sensitive wildlife sign (see BRTR Ironwood, 2021).
- **Setbacks from Highest Quality Habitat Areas**. Development areas were designed to be set back from microphyll woodland habitats that provide important hydrologic functions within the application area. The areas avoided by the project have significant increases in surface flows compared to the areas of direct impacts (POD Appendix CC in IP Oberon, 2021). In coordination with RWQCB, BLM, and the resource agencies, the Applicant refined the development footprint to avoid desert dry wash woodland areas with a minimum 50-foot and average of 134-foot (rather than 200-foot) buffer between such areas and the nearest solar panels. While the proposed buffer averages less than 200 feet, which was identified for the DRECP based on a large-scale analysis, site specific buffer areas that were delineated at 50 feet were determined to have lower habitat quality, whereas areas delineated with over 200-foot buffers had higher quality and function.
- **Maintenance of Resource Function**. Per CMA LUPA-BIO-SVF-6, the purpose of the buffer is to maintain the function and value of the identified resource features. The role of the proposed buffer in reducing indirect impacts to adjacent DDWW habitat during temporary construction would be retained. Implementation of mitigation measures related to revegetation (MM BIO-5) and reducing dust (MM AQ-1), invasive weeds (MM BIO-4), noise and vibration, night lighting, and trash (MM BIO-8) would support the functions of the buffer where the 200-foot setback is not achieved. After construction, impacts and activity in the buffer related to long-term O&M maintenance of solar panels would be minimal.
- **Development of Isolated Habitat Areas**. After the DDWW buffer was delineated for the Project, neighboring DDWW avoidance areas were combined to maintain the larger swaths of higher quality DDWW. Less than 100 acres of remaining DDWW “islands” were added to the solar panel development footprint (see Table 3.4-3 for impact acreages), as their function would be compromised by “edge effect” of being surrounded by the solar facility and being isolated from other habitat areas in the project footprint.
- **Ensuring Wildlife Movement**. Installation of wildlife friendly fencing (Figure 2-6, Proposed Fencing Plan) would allow movement of small terrestrial wildlife throughout those portions of the project area during operation. Temporary desert tortoise exclusion fencing would be modified or reconfigured after construction, when the vegetation has substantially reestablished within the array areas in accordance with the Revegetation Plan. Wildlife friendly fencing would contribute to maintaining the function of DDWW linkage habitats and the long-term viability of populations of small terrestrial wildlife.
- **Protection of Habitat from Unauthorized Recreation Use**. Where wildlife friendly fencing is proposed, cattle fencing would be installed across undeveloped open desert dry wash woodland segments along BLM Open Route DC379 to discourage

off-highway vehicle (OHV) use in high value DDWW habitat areas, which would improve habitat in those areas.

- **Concentration of Development**. The proposed project concentrates development on 2,700 acres of land (including less than 100 acres of DDWW) at a 47 percent ground-coverage ratio, while avoiding 1,200 acres of microphyll woodlands and an additional 1,100 acres of desert pavement and creosote bush scrub vegetation.
- **Valuable Compensatory Mitigation Lands Permanently Protected**. MM BIO-6a requires off-site compensation for desert dry wash woodland at a ratio of 5:1. The project's proposed compensatory habitat package includes approximately 6,200 acres of off-site habitat, including at least 445 acres of microphyll woodland habitat to mitigate for the approximately 89 acres directly impacted and 1,115 acres of microphyll woodland habitat to mitigate for 223 acres indirectly impacted. Using aerial photo interpretation with field spot verification, Wildlands has preliminarily concluded that up to 1,245 acres of microphyll woodlands are present on the mitigation properties, which is enough to fully mitigate the project's direct and indirect impacts at a ratio of at least 5:1. Using the DRECP planning layer for microphyll woodlands, as many as 2,600 acres of microphyll woodlands may occur on the mitigation properties, enough to mitigate the project's direct and indirect impacts at a greater than 15:1 ratio. The microphyll woodland on the project site contains a high percent cover of invasive (non-native) plants, namely Sahara mustard, throughout, which is primarily due to disturbed lands and roadways across and surrounding the project area. However, the remote nature of the mitigation properties has prevented many anthropogenic impacts from occurring, such as trash disposal, OHV use, dispersed camping, or presence of invasive plant species. Compensation lands would be permanently protected under a durable, perpetual conservation easement, including adoption of a long-term management plan and establishment of a non-wasting endowment.

Mitigation measures would be implemented to further minimize and avoid impacts to desert dry wash woodland and its buffer. Impacts would be minimized by MM BIO-1 through MM BIO-6b, described under Impact BIO-1. MM BIO-1 to MM BIO-4 require pre-construction surveys and marking of sensitive resources, revegetation and invasives management plans, and construction crew training, which would reduce direct and indirect impacts to vegetation. Notably, MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts) identify the compensation ratio for desert dry wash woodland habitat and buffer is 5:1, due to its regional significance, productivity, and importance to wildlife. This is consistent with CMA LUPA-BIO-COMP-1.

Impacts to dry washes and desert dry wash woodland are subject to authorization by the CDFW under the California Fish and Game Code. Because dry desert washes and channels on the project site are located within a closed surface hydrology basin that drains to Palen Dry Lake, no Clean Water Act permitting requirement is expected.

Avoidance of approximately 1,200 acres of desert dry wash woodland in the project area and preservation of more than 1,245 acres of off-site desert dry wash woodland habitat would reduce and offset impacts to desert dry wash woodland.

The proposed project has been strategically sited, designed, and mitigated, in coordination with the USFWS, to provide "alternative methods to meet the purpose and objectives of the CMAs," per the DRECP LUPA. DDWW was avoided to the maximum extent practicable, impacts to DDWW habitat would be minimized with implementation of mitigation measures, and direct loss of DDWW would be compensated offsite at a ratio of at least 5:1. With mitigation, impacts would be less than significant.

~~Impacts to desert dry wash woodland would be minimized by MM BIO-1 through MM BIO-6, described under Impact BIO-1. Notably, MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts) identify the compensation ratio for desert dry wash woodland habitat is 5:1, due to its regional significance, productivity, and importance to wildlife. This is consistent with CMA LUPA-BIO-COMP-1.~~ Together, this series of mitigation measures would minimize adverse impacts to desert dry wash woodland and offset the permanent loss through off-site habitat compensation.

***Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

***LESS THAN SIGNIFICANT WITH MITIGATION.*** No wetlands would be affected by the proposed project, and the project site is not subject to federal regulation due to its location within the Ford Dry Lake watershed, which is an intrastate basin not identified as jurisdictional waters of the U.S. (Section 3.4.1, Environmental Setting, Jurisdictional Waters).

Construction would impact desert dry wash woodland as outlined in Table 4.3-1. ~~avoid m~~Approximately 1,200 acres ~~uch~~ of the desert dry wash woodland on the project site ~~with the exception of "minor incursion"~~would be avoided; however, state-regulated jurisdictional waters found along the ephemeral washes would still be impacted. Impacts to State jurisdictional streambeds would require the Applicant to obtain a Lake and Streambed Alteration Agreement (LSAA) from the CDFW.

**Table ~~3.4-2~~3.4-3. Impacts to Jurisdictional Waters of the State**

| | Fenced Solar Array (acres) | Gen-tie (acres) | Total (acres) |
|---|---|---|---|
| **Colorado River Basin RWQCB Jurisdictional Waters** | | | |
| Unvegetated Ephemeral Dry Wash (OHWM width) | ~~53~~45.0 | ~~1.6~~0.2 | ~~54.6~~45.2 |
| **CDFW Jurisdictional Waters** | | | |
| Unvegetated Ephemeral Dry Wash (bank to bank) | ~~63~~54.5 | ~~1.9~~0.2 | ~~64.9~~54.7 |
| ~~Desert Dry Wash Woodland~~ | ~~57~~ | ~~14.5~~ | ~~71.5~~ |

State jurisdictional waters on the proposed solar facility site include native desert dry wash woodland habitat, addressed in detail under Impact BIO-2, and unvegetated ephemeral washes crossing creosote bush scrub. Active channels within the lower alluvial fan, where the project is situated, showed sign 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. Two wetland areas were identified in the project area, both of which are created by adjacent agricultural activities using artificial water sources and berms.

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 possible. ~~The project does not include diversion channels, detention basins, or other substantial alterations to the existing surface hydrology~~. Water and sediment would be conveyed downslope, across the site, by sheet flow or within channels after site preparation and construction. However, surface flow patterns, velocities, and sediment loads may be altered throughout the site by solar panel foundations, access roads, and other features. Potential significant impacts to the unvegetated washes could include increased siltation, fluvial transport of silts or pollutants off site via the ephemeral channels, or altered flows causing downstream erosion or eliminating natural transport of sands and water to downstream habitat areas.

These impacts would be offset by MM BIO-1 through BIO-6b described under Impact BIO-1, and by MM BIO-14 (Streambed and Watershed Protection). ~~It~~MM BIO-14 would require a series of Best Management Practices (BMPs) to prevent or minimize ~~adverse~~ significant effects to streambed function. BMPs include measures such that 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. ~~and off-site habitats and~~Impacts would require that the Applicant obtain a ~~Lake and Streambed Authorization Agreement~~LSAA from the CDFW prior to initiating construction in jurisdictional waters of

the State. With implementation of mitigation measures and compliance with requirements of the LSAA, impacts would be less than significant.

***Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

***LESS THAN SIGNIFICANT WITH MITIGATION***. Development within the linkage area would reduce the available wildlife movement habitat for many species, including desert tortoise and burro deer. Construction activities could temporarily discourage wildlife from approaching the project site due to noise and disturbance. 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.

Wildlife movement in the vicinity of the proposed project is already compromised by the surrounding existing solar projects and the I-10 freeway to the south. The proposed solar facilities would further interrupt potential wildlife movement routes through the area.

The southeastern portion of the project site ~~is within~~overlaps with the western parcel of a DRECP ~~a~~ multiple-species linkage area ~~identified in the DRECP~~ (BLM, 2016a). Acres of impacts to the multiple-species linkage area are outlined in Table 3.4-1. Consistent with the DRECP FEIS Section IV.7.3.2.1, the project is located in a DFA that overlaps with a portion of the desert linkage network (BLM, 2015). Section IV.7.3.2.1 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.~~The proposed development footprint mostly avoids this area, leaving portions of the multiple-species linkage area within the project boundaries open to wildlife movement.~~ ~~This~~

Within the development footprint, the project would have a long-term impact on approximately 332 acres of the westernmost portion of the multiple-species linkage. The proposed project would avoid development on approximately 712 acres of the biological linkage within the project area, including primarily DDWW habitat leading to freeway underpasses to maintain north/south connectivity under the I-10.

The multi-species linkage area also overlaps the adjacent Athos, Arica, and Victory Pass Solar Projects. The Athos Project solar site is located on private lands administered by Riverside County, not subject to the DRECP CMAs, and is now under construction. The proposed Arica and Victory Pass Projects would be located on BLM lands and are currently under environmental review. Like the Victory Pass Project, the Oberon Project is subject to DRECP CMAs.

CMA LUPA-BIO-13 requires projects along the edges of the biological linkages to maximize the retention of microphyllous woodlands, in order to maintain the function of the connectivity area. As shown in Table 3.4-1 and Figure 3.4-10, the proposed

development footprint would leave portions of the multiple-species linkage area open to wildlife movement, specifically desert dry wash woodland habitats.

~~and therefore would avoid or minimize development in desert dry wash woodland vegetation and leave a portion of the multiple-species linkage area open to wildlife movement. Development within the linkage area would reduce the available wildlife movement habitat for many species, including desert tortoise and burro deer.~~ Without mitigation, impacts to wildlife movement would be significant.

Due to implementation of the project features described below, the wildlife linkage corridor would continue to allow wildlife passage for many species across or around the Oberon Project.

- **North-South Connectivity Corridors.** The avoidance of 1,200 acres of microphyll woodland maintains approximately 50 percent of the wildlife linkage that overlaps the project area. The project design preserves the connectivity of the larger, more functional woodlands in part to protect north-south movement of wildlife through the woodland areas to the I-10 freeway underpasses (Figure 3.4-10, EIR Appendix B), which is consistent with the preserving the value of the desert dry wash woodland resource. Additionally, project disturbance areas will be flagged prior to construction, and the project will use existing roads and shared infrastructure where feasible.
- **Setback from Interstate 10 Underpasses**. As described in EIR Section 3.4.1 and shown on Figure 12 in the BRTR (Ironwood, 2021), seven box culvert underpass crossings (ranging from 10 feet wide to 75 feet wide), large enough to pass large mammals including burro deer, are located along I-10 adjacent to the project site to the south. An additional 10 crossings are located within 5 miles. These crossings provide connectivity and safe movement corridors between habitat to the north and south of I-10, providing an opportunity for dispersal and gene flow between wildlife populations, including within the wildlife linkage.

  The USFWS identifies conservation of the smaller-scale habitat accessibility within the I-10 corridor between Cactus City and Desert Center as essential, including conservation of culverts beneath I-10 and loss of desert tortoise habitat connections to these crossings. The USFWS targets compensation land acquisition for connectivity along the I-10 corridor between Cactus City and Desert Center.

  The project would be set back 300 feet from I-10 to preserve the Section 368 utility corridor. This would also support wildlife movement north and south of the freeway and between the I-10 underpass crossings north of I-10, where the value of linkage habitat for some terrestrial wildlife species is dependent on its width.
- **Wildlife Friendly Fencing**. As described in the POD and EIR Section 2.2.3.3, approximately 3 years post-construction when vegetation is determined to be substantially reestablished within the array areas in accordance with the project Revegetation Plan (Appendix M in POD, IP Oberon, 2021), the Applicant has

proposed to remove desert tortoise exclusion fencing over approximately 920 acres of the development footprint, as shown in Figure 2-6 (Appendix B). This wildlife friendly fencing is generally proposed in the eastern half of the project area, where the project overlaps with the multi-species linkage, and in locations where habitat values are higher and sensitive wildlife sign has been observed. The remaining approximately 1,500 acres of the development footprint would be fenced with exclusion fencing.

In wildlife friendly fencing areas, 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. It is anticipated that reptiles, birds, small and medium sized mammals including desert kit fox would easily pass through the fence gap, but that larger animals, including mule deer, and desert bighorn sheep would be excluded by the presence of the security fence. Operations and maintenance (O&M) safety practices would be developed in consultation with BLM and USFWS to maximize long-term safety of desert tortoises and other wildlife present at the site.

Wildlife friendly fencing would provide movement opportunities between revegetated habitats in the development footprint and the adjacent undeveloped DDWW, maintaining a level of habitat functionality and minimizing fragmentation for small terrestrial wildlife in the multi-species linkage corridor.

- **Night Lighting.** With implementation of Mitigation Measure MM VIS-1 (see EIR Section 3.2.7, 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.

Project design elements would avoid and minimize impacts in the multi-species linkage corridor, as described. The project would not threaten the long-term viability and function of the corridor (per CMA LUPA-BIO-IFS-1).

~~The proposed project would include wildlife friendly fencing design for a portion of the project fenceline around desert dry wash woodland, where a gap along the bottom of the fence would allow small wildlife, including desert tortoise and desert kit fox, to pass through. Revegetated areas within the wildlife friendly fenceline would provide some marginal habitat to support movement within and through the site.~~

~~The project site is located adjacent to the I-10 freeway and development of the site may impede wildlife movement in the vicinity of the five nearby I10 freeway underpass crossings. Open space areas between the project site and the freeway would be valuable for terrestrial wildlife to access the underpass crossings.~~

~~The USFWS identifies conservation of the smaller-scale habitat accessibility within the I-10 corridor between Cactus City and Desert Center as essential, including conservation of culverts and bridges beneath I-10 and loss of desert tortoise habitat~~

~~connections to these crossings. The USFWS targets compensation land acquisition for connectivity along the I-10 corridor between Cactus City and Desert Center.~~

MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts) and MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts) would require acquisition and management of comparable off-site vegetation and habitat in perpetuity to offset the permanent loss of natural vegetation and habitat on the project site~~ and incorporates the USFWS focus area between Desert Center and Cactus City to the extent feasible. This measure would offset the proposed project's impacts to wildlife movement habitat~~.

Note that much of the multi-species linkage corridor overlaps with desert tortoise critical habitat and/or DDWW. Direct impacts to these and other habitats in the linkage, would be compensated by IP Oberon, LLC, in a comprehensive mitigation package of approximately 6,200 acres compiled and managed by Wildlands, Inc. (IP Oberon, 2021, Appendix AA). While the compensation lands would not be in the immediate vicinity of the wildlife corridor on the Oberon site, preservation of offsite habitat would be located in the same designated desert tortoise CHU in accordance with CMA LUPA-BIO-COMP-1, which is reiterated in MM BIO-6b (Compensation for Desert Tortoise Habitat Impacts) (full text in EIR Section 3.4.7).

Wildlife "nursery sites" such as bird nests or suitable breeding habit for other species may be found throughout the project site. MM BIO-1 through MM BIO-6b would minimize and offset habitat impacts for common wildlife and special-status species, and MM BIO-8 through BIO-13 would prevent or offset adverse effects 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.

Gen-tie construction activities could dissuade wildlife from approaching construction areas due to noise and disturbance. This effect would be temporary (limited to construction phase). Once completed, the gen-tie lines, including the portions within the multiple-species linkage area, 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, including special-status species as well as common birds that are protected under state and federal laws, as discussed in Impact BIO-1. MM BIO-10 (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 O&M monitoring for bird mortality and implementation of an adaptive management framework if mortality thresholds are exceeded. MM BIO-11 (Gen-tie Lines) would require mechanisms 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 gen-tie routes.

Construction of towers and fencing would provide increased perching opportunities for predatory birds including raptors and ravens. MM BIO-9 includes preparing and implementing a Raven Management Plan that would manage raven subsidies and attractants. MM BIO-11 requires the gen-tie structures be designed to discourage use by raptors for perching or nesting.

With implementation of the aforementioned mitigation measures, impacts would be less than significant.

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

***LESS THAN SIGNIFICANT WITH MITIGATION***. Because the project is entirely on federal land, it is not subject to local policies and ordinances. However, to comply with CEQA and for informational purposes, the policies were reviewed and considered. Riverside County policies and ordinances applicable to biological resources are identified in Section 4.4.1 (Regulatory Framework, Local). These policies direct permanent preservation of important open space lands, compliance with the Multipurpose Open Space Element of the General Plan, protection of environmental resources, cooperation with resource agencies for the voluntary protection or restoration of significant habitats, and preservation of multi-species habitat resources. The project, including the MMs identified in this EIR, are consistent with the County's overall conservation objectives.

The solar facilities and gen-tie lines would impact biological resources protected by the General Plan provisions, including special-status plants and animals, sensitive habitats, and waters of the State, as described under Impacts BIO-1 through BIO-4. Without mitigation, these impacts could result in significant impacts to biological resources. MM BIO-1 through BIO-14 would assure consistency with local policies.

## 3.4.6 Cumulative Impacts

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. Cumulative effects for biological resources apply to 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-14, identified in Section 3.4.7 to mitigate the project's impacts to biological resources, would be implemented, as well as compliance with the DRECP LUPA to the maximum extent feasible and the project's offsite compensation package.

Cumulative impacts of the projects identified in the cumulative scenario to biological resources, as described below by resource type, would be cumulatively significant. With avoidance through project design and implementation of mitigation measures and the DRECP CMAs, the project contribution to cumulative impacts would not be considerable.

**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. 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. The loss of natural habitats that would result from the project would be offset by protecting compensation lands off site and by the areas conserved under the DRECP LUPA. Under the DRECP, ACECs and California Desert National Conservation Lands, were protected as part of the overall goal of the DRECP to "advance federal and state natural resource conservation goals" (BLM, 2016a). Sonoran desert scrub, a widespread and common habitat type, would be offset at a 1:1 ratio, while desert dry wash woodland, a sensitive community, and its buffer would be offset at a 5:1 ratio (MM BIO-6a, MM BIO-6b).

**Sensitive Habitat and Jurisdictional Waters of the State.** The proposed project would ~~affect~~ impact desert dry wash ~~woodland~~woodland and its buffer. It would also ~~affect~~ impact unvegetated ephemeral dry wash, which meets criteria as jurisdictional waters of the State. Many of the cumulative projects would have qualitatively similar impacts to desert dry wash woodland and unvegetated ephemeral dry wash due to the nature of the area and the large washes that cross it, resulting in a significant cumulative impact. The effects of the proposed project would contribute incrementally to the cumulative impacts to sensitive habitat and jurisdictional waters of the State.

~~, but t~~This incremental contribution would not be considerable ~~because~~ as the project has been designed to avoid, minimize, and offset impacts to sensitive habitat. Dry wash woodland habitat that supports connectivity through the I-10 underpasses would be avoided. Direct impacts to desert dry wash woodland would be offset at a ratio of 5:1 (MM BIO-6a). Direct and indirect impacts during construction would be minimized by implementing MM BIO-1 to MM BIO-5.

~~by avoiding most of the desert dry wash woodland, per the DRECP~~Implementation of CMAs~~, and because~~ and ~~mitigation measures~~MMs identified under Impact BIO-~~4~~ 2 ~~and BIO-5~~ would reduce the impacts so that residual effects would be minimal.

**Special-status plants.** The proposed project could affect special status plants, identified in Section 4.4.3, under Impact BIO-1. No threatened or endangered plants were identified on the site. Individual Emory's crucifixion-thorn would be affected in ~~seven~~ two locations, and several additional more widespread special-status plants could be affected. The past, present, and future projects would have similar or greater impacts to special-status plants which would result 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 mitigation identified for impacts to Emory's crucifixion thorn. ~~, and because m~~Mitigation measures identified under Impact BIO-1 would ~~reduce~~ avoid, minimize, and offset the impacts so that residual effects would be minimal.

**Desert tortoise.** Suitable habitat is present throughout the southern portion of the project area, including USFWS-designated critical habitat, and desert tortoises and sign were observed in desert dry wash woodland on the project site. Most of the past, present, and foreseeable future projects in the vicinity would impact desert tortoise habitat and many of them could directly affect desert tortoises. 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-1 and Impact BIO-4 and implementation of CMAs under the DRECP would prevent lethal take of desert tortoise and avoid, minimize, and offset impacts to its habitat. The project's contribution to cumulative impacts to desert tortoise and its critical habitat would not be considerable

~~These measures would reduce the impacts so that residual effects to desert tortoise would be minimal and the incremental contribution of the proposed project to the cumulative impacts to desert tortoise would not be considerable because no lethal take would occur, and habitat loss would be offset.~~

**Native birds, including special-status passerine birds.** Migratory birds are expected to occur throughout the area during construction and O&M. Land use conversion for the project and any 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 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, O&M phase mortality monitoring, and mitigation applied through adaptive management, depending on monitoring results, as described in MM BIO-10 (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, and native habitat loss would be offset.

Regarding potential collision from the solar facilities or gen-tie line or lake effect mortality, MM BIO-10 (Bird and Bat Conservation Strategy), would require monitoring of bird kills and implementation of adaptive management. MM BIO-11 (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 several 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 impact to habitat loss and mortality to 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, native habitat loss would be offset, 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.** No special-status raptors (except burrowing owl, above) are expected to nest on the solar facility site. However, 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 due to habitat loss. The incremental contribution of the proposed facilities to the cumulative impacts to special-status raptors, including habitat and collision morality, would not be considerable because native habitat loss would be offset and potential collision would be mitigated as described above for native birds.

**Desert kit fox and American badger.** Active desert kit fox burrows and potential 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 for both species and prevent or minimize wildlife injury and mortality and require pre-construction surveys 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 offset.

**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 projects and loss of the habitat and access to water sources could result in a significant cumulative impact. Mitigation measures identified under Impact BIO-1 and BIO-4 would offset habitat loss and wildlife movement habitat in 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 in the north/south corridors that connect to the I-10 underpasses. ~~movement habitat loss would be offset.~~

**Special-status bats.** Construction of the project could adversely impact special-status bats through the elimination of desert shrubland foraging habitat or (less likely) loss of roost sites in desert dry wash woodland habitat on the site, although the bulk of the desert dry wash woodland is 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 eliminate desert shrubland foraging habitat and result in the loss of roost sites, a significant cumulative impact to special-status bats. These projects would implement measures similar to those identified for the proposed project, including offset of 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, including habitat loss and collision morality, would not be considerable because desert dry wash woodland corridors would persist on the project site, native habitat loss would be offset, 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 the multi-species linkage area as identified in the DRECP, which links the Palen–McCoy Mountains to the northeast and the Chocolate Mountains to the southwest. Past, present, and foreseeable projects are ~~described~~ listed in Tables 3.1-1 and 3.1-2 and include the existing SCE Red Bluff Substation to the south, the 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, and Easley Solar and Green

Hydrogen Projects 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 ~~inhibited~~ significant. Portions of the multi-species linkage and desert dry wash woodland on the site would be avoided, leaving several narrow corridors that connect to the I-10 underpass crossings. An additional portion of the linkage ~~between~~ overlapping both the Victory Pass and Oberon Solar Projects would remain undeveloped. ~~Further, while the project site overlaps with the multi-species linkage area, the site is within a DFA, as presented in the DRECP LUPA.~~ Undeveloped lands would remain in the ACECs ~~that surround the project site~~located north and south of the project site, which in combination with avoidance of desert dry wash woodland corridors on BLM lands under the DRECP, would allow for limited wildlife movement through and around the project and would retain access to the I-10 crossings. ~~Therefore, c~~The project's contribution to cumulative impacts to wildlife movement would ~~be less than significant~~not be considerable.

**Local policies and ordinances.** All ~~existing~~ cumulative projects ~~underwent~~ are subject to environmental review and ~~were~~ approv~~al~~~~ed~~ by federal, State, or local agencies. During that review, the agencies review~~ed~~ the applicable polices and ensur~~eed~~ ~~th~~at each ~~e~~ project~~s~~ complie~~ds~~ with applicable policies and ordinances, and imposes conditions as appropriate to ensure compliance. Therefore, there is no significant cumulative conflict with local policies and ordinances. The proposed Oberon project does not conflict with local policies or ordinances and thus has no contribution to any cumulative conflict. ~~or required a land use plan amendment or conditional use permit. The BLM is reviewing the proposed project to ensure they are consistent with the applicable BLM policies, including the DRECP LUPA.~~ Cumulative impacts to policies and ordinances would be less than significant.

## 3.4.7 Mitigation Measures

The impact analysis in this EIR assumes implementation of all the MMs as described in the Impact Analysis. MMs will be incorporated into the Mitigation Monitoring and Reporting Program developed for this project, and implementation will be monitored.

The following MMs were developed to fully offset and minimize impacts to Biological Resources due to implementation of the proposed project.

**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 would be monitored to ensure compliance with all mitigation measures for biological resources.

The biological monitoring team would consist of:

- Lead Biologist: The Applicant shall assign a Lead Biologist, approved by BLM, CDFW, and USFWS as the primary point of contact for the BLM and resource agencies regarding biological resources mitigation and compliance.
- Biological Monitor: Biological monitors will be overseen by the Lead Biologist and will perform any required surveys, ground disturbance and construction monitoring, wildlife monitoring, inspections, marking sensitive resource buffers, and revegetation monitoring during project activities. Biological monitors would include trained desert tortoise monitors (MM BIO-9) and nest monitors (MM BIO-10).
- Authorized Desert Tortoise Biologist: For desert tortoise protection measures (MM BIO-9), the Applicant will 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 for approval prior to onset of ground-disturbing activities. The Biological Monitoring Team will have demonstrated expertise with the biological resources within the project region. The Biological Monitoring Team will 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 will 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 will include, but will 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 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, 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, 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 will prepare and implement a Worker Environmental Awareness Program (WEAP). The Applicant will 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 will be available in English and Spanish. The Applicant will 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 will 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 will 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 detailed description of the desert tortoise, including color photographs
    - The distribution and general behavior of the desert tortoise
    - Sensitivity of the species to human activities
    - The protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation
    - The protective measures being implemented to conserve the desert tortoise during construction activities
    - 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 will remain in place for the duration of construction. Spoils will be stockpiled in disturbed areas. All disturbances, vehicles, and equipment will be confined to the fenced/flagged areas.

Construction activities will 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 will be handled, and spills or leaks will be promptly corrected and cleaned up according to applicable requirements. Vehicles will be properly maintained to prevent spills or leaks. Hazardous materials, including motor oil, fuel, antifreeze, hydraulic fluid, grease, will not be allowed to enter drainage channels.

**Low-Impact Site Preparation.** Native vegetation will 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~~t~~ fire clearance requirements) within the perimeter fenceline of the solar facilities and under solar arrays. Vegetation height and density will be managed as needed for O&M and fire safety, but vegetation management will otherwise focus on maintaining habitat and soil conditions.

**MM BIO-4** **Integrated Weed Management Plan.** The Applicant will 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* (2007) and *Vegetation Treatment Using Aminopyralid, Fluroxypyr, and Rimsulfuron (2016b)* including requiring a Pesticide Use Permit approved by the BLM and adhere to the BLM design features included in the EIS. RWQCB (or its designated representative), CDFW, and the BLM must approve the plan. The IWMP will 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 will identify herbicides that may be used for control or eradication, and avoid herbicide use in or around any environmentally sensitive areas. The IWMP will also include a reporting schedule, to be implemented by the Lead Biologist.

**MM BIO-5** **Vegetation Resources Management Plan.** The Applicant will prepare and implement a Vegetation Resources Management Plan (VRMP), to be reviewed and approved by RWQCB (or its designated representative), CDFW, and BLM. The VRMP will 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 will 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 will 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 will 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 will 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*. In conformance with CMA LUPA-BIO-VEG-5, LUPA-BIO-VEG-7, and BLM policy, the Applicant will 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 will 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 will 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 will address disposal of mown material, and incorporate all

applicable components of the Integrated Weed Management Plan, including any proposed herbicide usage.

**MM BIO-6a** **Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts.** The Applicant will acquire and protect, in perpetuity, compensation habitat to offset loss of desert dry wash woodland and desert pavement. The acreages will be based upon final calculation of impacted acreage. Acreages will be adjusted as appropriate for other alternatives or future modifications during implementation. Consistent with CMA LUPA-BIO-COMP-1, compensation will be provided for impacts to the following resources, at the specified ratios (expressed as acres of compensation to acres impacted):

- Desert dry wash woodland: 5:1 (i.e., up to ~~406~~445 acres of compensation for approximately ~~81.2~~89 acres of impact)
- Desert pavement: 1:1 (i.e., up to 24 acres of compensation for 24 acres of impact outside desert tortoise critical habitat, see MM BIO-6b)

Criteria for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of compensation lands will include all the following: Provide habitat value that is comparable to the habitat impacted, taking into consideration soils, vegetation, topography, human-related disturbance, invasive species, wildlife movement opportunity, proximity to other protected lands, management feasibility, and other habitat values. The primary focus area for acquiring parcels will be within the Colorado Desert Recovery Unit. Mitigation may be “nested” or “layered,” to the extent that it meets habitat requirements for multiple species that will or may be impacted by the Project.

Consistent with mitigation timing described in CMA LUPA-BIO-COMP-1, compensation activities must be initiated or completed within 12 months from the time the resource impact occurs. A 6-month extension may be authorized, subject to approval by the authorizing officer, dependent on the resources impacted and compensation due diligence of the project developer. Prior to initiation of construction activities, the Applicant or an approved third party will submit to the BLM, CDFW, and USFWS for review and approval a Compensation Plan identifying the proposed compensation option(s), including ~~The Applicant shall provide funding or bonding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands prior to construction activities on native habitat. Within 18 months of completing construction, the Applicant or an approved third party will prepare a Compensation Plan, identifying~~ the proposed compensation lands, ~~and specifying~~ the land ownership, conservation easement terms, long-term management, and responsibility for funding or

endowment. The Plan shall include a schedule for initiating and completing compensation within the timeframe agreed upon with BLM. The Compensation Plan will be submitted for review and approval to the BLM, CDFW, and USFWS.~~The Compensation Plan will be submitted for review and approval to the BLM.~~

**MM BIO-6b** **Compensation for Desert Tortoise Habitat Impacts.** The Applicant will provide compensation to offset loss of desert tortoise habitat. The acreages will be based upon final calculation of impacted acreage and will be adjusted as appropriate for other alternatives or future modifications during implementation. Consistent with CMA LUPA-BIO-COMP-1, compensation will be provided for impacts to the following resources, at the ratios specified in the table below (expressed as acres of compensation to acres impacted):

| | **Oberon Project (acres)** |
|---|---|
| **IMPACT** | |
| Sonoran creosote bush scrub impact (outside DT CH) | ~~2,520~~1,798 |
| Desert pavement impact (outside DT CH) (see MM BIO-6a) | 24 |
| ~~Dry desert~~Desert dry wash woodland (direct) (see MM BIO-6a) | ~~81~~89 |
| Desert dry wash woodland (indirect) (buffer) | 223 |
| Desert tortoise critical habitat impact (not including dry desert wash woodland impacts) (see MM BIO-~~6a~~6b) | 277~~771.7~~ |
| **COMPENSATION** | |
| Sonoran creosote bush scrub compensation (1:1) | ~~2,520~~1,798 |
| Desert pavement compensation (1:1) (see MM BIO-6a) | 24 |
| Dry desert wash woodland (direct) (5:1) (see MM BIO-6a) | ~~405.9~~445 |
| Desert dry wash woodland (indirect) (5:1) (buffer) | 1,115 |
| Desert tortoise critical habitat compensation (5:1) (not including dry desert wash woodland) (see MM BIO-~~6a~~6b) | ~~3,858.4~~1,385 |
| **COMPENSATION TOTAL** | **4,767~~6,808.03~~** |

Consistent with CMA LUPA-BIO-COMP-1, compensation acreage requirements may be fulfilled through non-acquisition (i.e., restoration and enhancement), land acquisition (i.e., preservation), or a combination of these options, with BLM approval/authorization. The Applicant will compensate for impacts at the above-specified ratios using one of the options described below or a combination of these options, as agreed to in coordination with BLM, CDFW and USFWS.

Consistent with mitigation timing described in CMA LUPA-BIO-COMP-1, compensation activities must be initiated or completed within 12 months from the time the resource impact occurs. A 6-month extension may be

authorized, subject to approval by the authorizing officer, dependent on the resources impacted and compensation due diligence of the project developer. Within 3 months of initiating construction, the Applicant or an approved third party will prepare a Compensation Plan identifying the proposed compensation option(s), ~~Consistent with mitigation timing described in CMA LUPA-COMP-1, compensation must be initiated within 12 months from the time the resource impact occurs (e.g., habitat removal). Therefore, within 3 months of initiating construction, the Applicant or an approved third party will prepare a Compensation Plan identifying the proposed compensation option(s),~~including locations of fencing and habitat restoration and/or lands to be acquired, and specifying the land ownership, conservation easement terms, long-term management, and responsibility for funding or endowment for the option selected. The Plan shall include a schedule for initiating and completing compensation within the timeframe agreed upon with BLM. The Compensation Plan will be submitted for review and approval to the BLM, CDFW, and USFWS.

***Option I: Desert Tortoise Exclusion Fencing to Mitigate Road-Effect Zones.*** The interagency Desert Tortoise Management Oversight Group (MOG), made up of agencies including the BLM, USFWS, and CDFW, have identified the implementation of desert tortoise exclusion fencing along roadways as a preferred compensation method near priority areas. USFWS has identified priority desert tortoise exclusion fencing areas along I-10 near the project to support the protection and recovery of desert tortoise populations. The project would directly impact ~~up to 81acres of desert~~ dry ~~desert~~ wash woodland, Sonoran creosote bush scrub, desert pavement, and ~~772 acres of~~ desert tortoise critical habitat (including these habitat types). ~~and up to 2,544 acres of Sonoran creosote bush scrub and desert pavement~~ The project would indirectly impact desert dry wash woodland by impacting the buffer area.~~, resulting in a need for up to 6,808 acres of compensation habitat~~ Bbased on the acres and ratios listed above, the project would compensate at least 4,767 acres of preserved habitat. Approximately 6,200 acres of habitat compensation is proposed in the mitigation package.

~~.~~Several studies have demonstrated that roads are a “form of habitat loss for many wildlife populations because their effects often extend far beyond the roads themselves, giving rise to reduced wildlife abundance in road-effect zones.”[3] Estimates of the sizes of these “road-effect zones” for desert tortoises range from 500 meters from an interstate highway,[4] to 400

[3] Peaden et al., 2015. Delimiting road-effect zones for threatened species: implications for mitigation fencing. Wildlife Research, 42(8): 650-659, https://doi.org/10.1071/WR15082.

[4] Ibid.

to 800 meters from the edge of the highway,[5] to 1.6 kilometers (approximately 1 mile) from the edge of the highway.[6]

Based on these studies, the BLM has determined that in order to provide compensation equivalent to the ~~6,808 acres of~~ habitat acreage required per the above ratios, the Applicant would need to construct up to 6 miles of exclusion fencing on both sides of the I-10 corridor, (for a total of up to 12 miles of fencing) (total to be adjusted for final design). Habitat restoration within the "road-effect zone" for this length of fencing also would be required.

Option I would consist of the following specific requirements:

1. Construct up to 6 miles of desert tortoise exclusion fencing on both sides of the I-10 corridor (for a total of up to 12 miles of fencing) in the priority locations and distances agreed upon by BLM, USFWS, and CDFW.
2. Conduct initial habitat restoration within the "road-effect zone" of the fenced portion of I-10, to consist of projects identified on the Desert Tortoise Recovery Implementation Team (RIT) Project List or other projects designed to improve habitat for desert tortoises that are identified by the BLM and CDFW. This may include, but is not limited to, restoration of habitat (removal of invasive plants and increasing native plant cover) throughout the Colorado Desert Recovery Unit and/or reduction of raven subsidies within the Chuckwalla Critical Habitat Unit.
3. To ensure ongoing maintenance and periodic replacement of exclusion fencing, the Applicant shall establish an endowment, such as with the NFWF, to fund this work in perpetuity.

***Option II: Acquisition and Protection of Compensation Lands.*** Option II would consist of the following specific requirements:

1. Provide ~~approximately 6,808~~at least 4,767 acres of habitat value that is comparable to the habitat impacted, taking into consideration soils, vegetation, topography, human-related disturbance, invasive species, wildlife movement opportunity, proximity to other protected lands, management feasibility, and other habitat values.
2. The primary focus area for acquiring parcels will be within the Colorado Desert Recovery Unit.

[5] Boarman and Sazaki, 2006. A highway's road-effect zone for desert tortoise (Gopherus agassizii). Journal of Arid Environments 65 (2006) 94-101, www.elsevier.com/locate/jnlabr/yjare .

[6] Boarman, 2009. Effects of Fencing Along Highways on Desert Tortoise Mortality. Prepared for US Department of the Interior Bureau of Land Management, California State Office. October 28.

3. Compensation for the impacts on designated desert tortoise critical habitat will be within the Chuckwalla Critical Habitat Unit.
4. Mitigation may be "nested" or "layered," to the extent that it meets habitat requirements for multiple species that will or may be impacted by the project.
5. The Applicant shall provide funding or bonding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands prior to commencement of construction activities on native habitat.

***Option III: Combination of Fencing and Acquisition Options.*** Under Option III, the Applicant may coordinate with BLM, USFWS, and CDFW to identify a combination of fencing (with restoration and maintenance) and land acquisition and protection to meet the total compensation acreage requirement. An example of this would be if the agencies determined that 45 percent of the mitigation requirement could be met with fencing, and the remaining 55 percent with land acquisition. In such a scenario, the Applicant would commit to constructing 2.7 miles of fencing along both sides of 1-10 (a total of 5.4 miles, or 45 percent of the total from Option I), and acquiring and protecting ~~3,744 acres~~2,622 acres of compensation lands (55 percent of the total from Option II). Total miles and acres would be adjusted for final design.

**MM BIO-7** **Emory's Crucifixion Thorn Mitigation.** The Applicant will mitigate impacts to Emory's crucifixion thorn (CRPR 2) through one or a combination of the following strategies.

- *Off-site compensation*. The Applicant will provide compensation lands consisting of occupied Emory's crucifixion thorn habitat at a 1:1 ratio for any occupied habitat affected by the project, according to the terms described in MM BIO-6a (Compensation for Desert Dry Wash Woodland and Desert Pavement Impacts). Occupied habitat will be calculated on the project site and on the compensation lands as including each special status plant occurrence and a surrounding 100-foot buffer area. Off-site compensation will be incorporated into the project's compensation package for review and approval by CDFW and BLM. Mitigation may be "nested" or "layered," to the extent that it meets habitat requirements for multiple species that will or may be impacted by the project.
- *Salvage, Propagation, and Planting*. The Applicant will consult with ~~Rancho Santa Ana~~California Botanic Garden (~~RSABG~~CBG) regarding potential salvage of Emory's crucifixion thorn plants and cuttings from the project site prior to site preparation. The Applicant will contract with

CBG or another entity with comparable experience and qualifications to salvage at minimum 75 percent of Emory's crucifixion thorn individuals from the project site, and/or cuttings from those individuals, to be propagated in a nursery and planted off-site. The Applicant will prepare a Salvage Plan, to be reviewed and approved by RWQCB (or its designated representative), CDFW, and BLM prior to disturbance of any occupied Emory's crucifixion thorn habitat. The plan will describe methods for salvage of cuttings and plants, transport and propagation in the nursery, planting locations and methods, monitoring of plantings, success criteria, reporting, and adaptive management.

- *Relocation*. Depending on the size and health of the plant, relocation of an individual may be proposed, in coordination with CBG.~~the success of salvage efforts for this species at the Desert Sunlight Solar Farm project site. If the strategy has been shown to be feasible and certain individuals have been judged suitable for relocation, then the Applicant will prepare and implement an Emory's Crucifixion Thorn Salvage and Relocation Plan, to be reviewed and approved by RWQCB (or its designated representative), CDFW, and BLM prior to disturbance of any occupied Emory's crucifixion thorn habitat. Emory's crucifixion thorn on private lands may also be subject to the provisions of the California Desert Native Plants Act. The Applicant will contract with RSABG or another entity with comparable experience and qualifications, to salvage at minimum 75 percent of Emory's crucifixion thorn individuals from the proposed project site and transfer them to a suitable off-site location.~~

- ~~*Horticultural propagation and off-site introduction*. If salvage and relocation is not believed to be feasible for Emory's crucifixion thorn, then the Applicant will consult with RSABG or another qualified entity, to develop and implement an appropriate experimental propagation and relocation strategy.~~

**MM BIO-8** **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 RWQCB (or its designated representative), CDFW, and BLM.

- *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 will 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 will 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 will 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 will be maintained free of holes and will 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 will 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 shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. 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 have been secured or provided with appropriate means for wildlife escape.
- *All pipes or other construction materials or supplies* will be covered or capped in storage or laydown areas. No pipes or tubing will be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials will 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-9** **Desert Tortoise Protection.** No desert tortoise may be handled or relocated without authorization from USFWS and CDFW. The Applicant will 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 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 will 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 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 detailed description of the desert tortoise, including color photographs;
    - The distribution and general behavior of the desert tortoise;
    - Sensitivity of the species to human activities;
    - The protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation;
    - The protective measures being implemented to conserve the desert tortoise during construction activities; and
    - 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 translocated 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:
    - Identify conditions associated with the project that might provide raven subsidies or attractants.
    - Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities.
    - Describe monitoring during construction and operations, including methods to identify individual ravens that prey on desert tortoises.
    - 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-10** **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 (See Plan of Development Appendix K [IP Oberon, 2021]). It describes the proposed Oberon 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.** 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 RWQCB (or its designated representative), CDFW, and BLM. 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 (See POD Appendix K (IP Oberon, 2021)) 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 to be implemented through design and operations to minimize bird and bat fatalities at the solar facilities and gen-tie line, a 2-year O&M monitoring and reporting program for potential bird and bat fatalities, and an adaptive management framework.

**MM BIO-11** **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 would also reduce 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). 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-12** **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 the lead agencies 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, white wash) 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-13 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-14 Streambed and Watershed Protection.** Prior to ground-disturbing activities in jurisdictional waters of the State, the Applicant will obtain a Streambed Alteration Agreement from the CDFW and Waste Discharge Requirements from the RWQCB. The Applicant will implement Best Management Practices (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, 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 Category 3, 4, or 5 streambed or any streambed greater than 10 feet wide and 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, and BLM will be notified immediately by the Applicant of any spills and will be consulted regarding clean-up procedures.

# 3.5 Cultural Resources and Tribal Cultural Resources

This section provides information on existing cultural resources and tribal cultural resources in and surrounding the Oberon Renewable Energy Project (Oberon or Project) area and alternatives. 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 can reflect the history, diversity, and culture of the region, as well as the people who created them. Cultural resources are unique in that they are often the only remaining evidence of human activity that occurred in the past. Cultural resources can be natural or built, purposeful or accidental, physical or intangible. They encompass 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. Any cultural resources located on the ground surface or buried beneath the ground surface at the project site and in the vicinity could be affected by development without adequate protections in place.

Tribal cultural resources (TCR) are a newly defined class of resources under state law; they are described in more detail in Section 3.5.2 Regulatory Framework. 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 (Public Resources Code (PRC) § 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 following discussion is based on information from various sources: the cultural resources technical report prepared for this project: record search, research design and work plan (Thomas et al., 2020); an archaeological inventory (Knabb et al., 2021); an indirect effects study (Ramos et al., 2021); a geoarchaeological study (Knabb et al., 2021; Appendix F); an ethnographic literature review (Potter, 2020); two ethnographic assessments (Bengston, 2021; Braun and Gates, 2013); and the evaluation of resources for the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) (Knabb et al., 2021).

The area of direct impacts to cultural resources under CEQA is identical to the area referred to by BLM as the Area of Potential Effect (APE). For purposes of the analysis of Cultural Resources under CEQA, this area is identified herein as the CEQA Area of Direct Impacts. It consists of all areas of ground disturbance under the Proposed Project plus a 50-meter buffer. The area out to 0.5 miles surrounding the CEQA Area of Direct

Impacts is identified herein as the CEQA Area of Indirect Impacts (which is the same as BLM's visual, auditory and atmospheric APE).

Cultural Resources staff synthesized records of previous projects and previously recorded resources and consulted archival and literary resources pertaining to the prehistory, ethnography, and history of the Proposed Project area and the 0.5-mile surrounding area. In addition, a pedestrian survey was conducted of 100 percent of the CEQA Area of Direct Impacts.

## 3.5.1 Environmental Setting

EIR Appendix C provides additional details on the cultural resources environmental setting described herein.

### Natural Setting

The natural setting is considered by most archaeologists as a key element that "sets the stage" for human development. Fundamentally, the natural setting determines the types of food and material resources available to prehistoric populations that inhabited the proposed project area.

The proposed project area is located in the Colorado Desert, which is situated within the southern Basin and Range geomorphic province. The Colorado Desert's terrain consists of a series of broad, shallow southeast-trending valleys that drain into the Colorado River. Several playas, or closed basin sinks, exist on the valley floor. North-south trending weathered mountain ranges, rarely exceeding 4,000 feet in elevation, surround the valleys.

The climate of the Colorado Desert is generally hot and dry, with minimal rainfall. Average daily temperatures range from 66 degrees Fahrenheit (°F) in winter to 105°F in summer, although summer temperatures can be upward of 120°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 and 4 inches near the Colorado River.

### Paleoclimate

During the time that humans have lived in California, the Colorado Desert has undergone several climatic shifts, which have influenced human use of the proposed project area.

The Pleistocene (1.8 million to 10,000 years ago), and the Holocene (10,000 years ago to the present) environmental record from the Mojave Desert provides a model for the Colorado Desert. The environmental record from the Mojave Desert indicates that the climate of the Late Pleistocene and Holocene was characterized by periods of warm, dry conditions interspersed with periods of cooler, wetter climate. During the wetter periods of the Holocene some of the basins in the Mojave Desert and Colorado Desert regions became shallow lakes, with extensive marshy shorelines. Being sources of

food, water, and materials, these lakes would have attracted Native Americans use and settlement. Palen Dry Lake is one example.

### Prehistoric Setting

The proposed project area's location suggests multiple groups were present in the region at various times because it is near the boundary of the Colorado and Mojave deserts and it is located along a known prehistoric and historic travel corridor. 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 or the Southwest. Therefore, the area's archeological 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.

### Ethnohistoric Setting

There is archaeological evidence that ancestors of the Yuman-speaking groups have been in the Chuckwalla Valley and the CEQA Area of Direct and Indirect Impacts for some time. However, these were not the only people who would have used this area. Ethnographic information indicates that several other Native American groups, such as the Cahuilla and Chemehuevi, at least traversed the Chuckwalla Valley.

Native use of the Chuckwalla Valley area in the eighteenth and early nineteenth centuries was determined by its location in a frontier or boundary zone between the Halchidoma to the east and the Takic groups — the Cahuilla and Serrano — to the west. The Halchidoma 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 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 Halchidoma, the Mojave and the Quechan. Traveling parties from either one of these two groups going up or down the Colorado River had to veer away westward from the Palo Verde Valley to avoid the Halchidoma. This often took them through the Chuckwalla Valley.

Ethnohistorical and ethnographic sources for the Chuckwalla Valley have been limited by the fact that the area was not regularly visited by nonnative 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 nonnative people. In addition, the boundaries and areas of settlement of native groups in the region have changed over time. Thus, ethnohistoric information and archaeological data may outline quite different patterns of occupation and territoriality.

Nevertheless, it can be said with confidence that most groups living in the vicinity of the Oberon Project when the Spanish first made forays into the area spoke languages in the Yuman family of the Hokan language stock. These include the Halchidoma and Mojave, 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 drying up 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 having historical tribal territories falling within the CEQA Area of Direct and Indirect Impacts include the Quechan, Mojave, Halchidoma, Chemehuevi, Desert Cahuilla, and Serrano.

Please see EIR Appendix C for detailed information about these groups.

### 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 of the 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. See EIR Appendix C for details about these historic themes.

## 3.5.2 Regulatory Framework

### Federal Law, Regulations, and Policies

There are numerous federal regulations, executive orders, and policies that direct management of cultural resources on federal lands and by federal agencies. These include the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA), Executive Order (EO) 13007, EO 13175, and the Antiquities Act. For the BLM in particular, the Federal Land Policy and Management Act (FLPMA) and several sections of BLM Manuals are relevant as well. The following is a discussion of the most pertinent laws affecting the Oberon Renewable Energy Project.

NHPA of 1966, as amended (54 United States Code [USC], Section 300101) and its implementing regulations (36 Code of Federal Regulations [CFR], Part 800), is the principal Federal law addressing cultural resources that primarily address compliance with Section 106 of NHPA. Section 106 of the NHPA requires that Federal agencies take into

account the effect of any undertaking on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The implementing regulations describe the process for identifying and evaluating historic properties, for assessing the effects of Federal actions on historic properties, and for consulting with interested parties, including the State Historic Preservation Office (SHPO), ACHP, Indian tribes, local governments, and the public to develop measures to avoid, minimize, or mitigate adverse effects to historic properties.

The term historic properties refers to cultural resources that are listed on, or meet specific criteria of eligibility for listing on, the National Register of Historic Places. These criteria evaluate the quality and significance in American history, architecture, archaeology, engineering, and culture present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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 high artistic values, 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.

**BLM Role and Responsibility under Section 106 of the NHPA.** Cultural resources within an APE for renewable energy projects approved or authorized by BLM within the CDCA, amended by the DRECP LUPA, would be either evaluated or assumed eligible for inclusion in the NRHP. To date, BLM has been actively involved in consulting with federally recognized tribes to identify cultural resources located within BLM's APE for the LUPA and highlight any concerns with historic properties that may be affected. The DRECP Programmatic Agreement (PA) has been developed that establishes the process BLM will follow to fulfill its responsibilities under Section 106 of the NHPA for site-specific, renewable energy application decisions implemented in accordance with the DRECP LUPA. The DRECP PA establishes conditions applicants must identify, evaluate for significance, and assess the effects to historic properties, and to mitigate any adverse effects under 36 CFR 800, in consultation with the public and the SHPO.

**Archaeological Resources Protection Act of 1979 (ARPA) (16 USC 470aa et seq.)** and its implementing regulations found at Title 43 CFR Part 7 protect archaeological resources on public and Indian lands and acknowledges that archaeological resources are an irreplaceable part of America's heritage. This act applies when a project may involve archaeological resources located on federal or tribal land. The act requires that

a permit be obtained before excavating to ensure that recovered artifacts are appropriately curated. The act also provides for notification of Indian tribes when sites of cultural or religious importance could be harmed. This act establishes civil and criminal penalties for the unpermitted excavation, removal, damage, alteration, or defacement of archaeological resources on public or Indian lands. The act also has particular provisions for assuring the confidentiality of sensitive cultural resources information for archaeological excavation.

**Native American Graves Protection and Repatriation Act of 1999 (NAGPRA) (25 USC 3001 et seq.)** and its implementing regulations at 60 CFR Part 10 establish requirements for the treatment of Native American human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony on federal and tribal land. The act defines the ownership of human remains and associated and unassociated funerary objects and objects of cultural patrimony, giving priority to lineal descendants and Indian tribes (43 CFR 10). In the event of an inadvertent discovery of remains or items, work shall stop in the immediate area and the inadvertent discovery protected. The federal agency is required to notify and consult with tribes that are, or likely to be, culturally affiliated with the remains and/or associated funerary objects.

Upon a valid repatriation request, the federal agency is required to return any such items to the lineal descendant(s) or specific tribe with which the items are associated. The act and its implementing regulations contain similar noticing, consulting, and repatriation provisions for planned archaeological excavations (25 U.S.C. 3002[3][c]; 43 CFR 10.3). The act also has particular provisions for assuring the confidentiality of sensitive cultural resources information.

**The American Indian Religious Freedom Act of 1978 (AIRFA) (Title 42, U.S. Code, Section 1996)** establishes policy of respect and protection of Native American religious practices. It seeks to correct federal policies and practices that could (a) deny access to sacred sites required in traditional religions, (b) prohibit use and possession of sacred objects necessary for religious ceremonies, and (c) intrude upon or interfere with religious ceremonies. The BLM complies with AIRFA by obtaining and considering the views of traditional religious practitioners as part of the NEPA compliance process.

**Executive Order (EO) 13007** directs Federal agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners. It requires federal agencies to avoid adversely affecting the physical integrity of sacred sites to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions. EO 13007 reinforces the purposes expressed in AIRFA. The BLM complies with EO 13007 by consulting with tribal governments and Indian religious practitioners as part of the NEPA compliance process.

**EO 13175** reiterates certain fundamental principles in tribal policy, including that the United States maintains a unique relationship with tribes as dependent nations. This

relationship is governed by the acknowledgement of tribal self-government, sovereignty, and self-determination. In addition, EO 13175 establishes standards of behavior for Federal agencies and departments when considering, developing, and implementing policies that are anticipated to have significant impact on one or more recognized tribes. These standards include affording tribal governments maximum discretion in implementing Federal policies within their communities, defaulting to tribal authority when feasible, and engaging in regular and meaningful consultation with tribal leadership throughout the policy development process. EO 13175 also requests that all federal agencies and departments develop proposals for how they plan to coordinate with tribal governments, submit the plan to the Office of Management and Budget for review, and appoint a staff member responsible for ensuring compliance.

**Antiquities Act of 1906 [16 United States Code (USC) 431–433]** establishes criminal penalties for unauthorized destruction or appropriation of "any historic or prehistoric ruin or monument, or any object of antiquity" on federal land and empowers the President to establish historical monuments and landmarks.

**Federal Land Policy Management Act** establishes policy and goals to be followed in the administration of public lands by the BLM. The intent of FLPMA is to protect and administer public lands within the framework of a program of multiple-use and sustained yield. Particular emphasis is placed on the protection of the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources and archaeological values.

### State Law, 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 perspective. These laws identify four types of resources: historical resources, unique archaeological resources, human remains and tribal cultural resources.

#### *Historical Resources*

Under CEQA, cultural resources listed in, or determined to be eligible for listing in, the CRHR or a local register meet the CEQA definition of "historical resources" and must be given consideration in the CEQA process. For this ~~Draft~~ Final EIR, effects on historical resources may be considered impacts of the Project. Under the California Code of Regulations, Title 14, Chapter 11.5, properties listed on or formally determined to be eligible for listing in the NRHP are automatically eligible for listing in the CRHR. A resource is generally considered to be historically significant under CEQA if it meets the criteria for listing in 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, is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion 2, is associated with the lives of persons significant in our past;
- Criterion 3, 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, has yielded, or may be likely to yield, information important to history or prehistory.

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 (PRC 21083.2[g]; 14 California Code of Regulations (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 (PRC 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***

PRC Sections 5097.98(b) and (e) requires a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the Native American Heritage Commission-identified Most Likely Descendants (MLD) to consider treatment options. In the absence of MLDs 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.

Health and Safety Code (HSC), 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.

***Tribal Cultural Resources***

PRC Sections 21073, 21074, 21080.3, 21082.3, 21083.09, 21084.2, and 5097.94 (Assembly Bill AB 52 2014). PRC § 21074 defines a TCR as "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." TCRs also include "non-unique archaeological resources" that may not be scientifically significant, but still hold sacred or cultural value to a consulting tribe.

CEQA requires that impacts to TCRs be identified and, if impacts will be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible (PRC § 21081). In the protection and management of the cultural environment, both the statute and the CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.) provide definitions and standards for management of TCRs.

A resource shall be considered significant if it is: (1) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k) (discussed in detail above); or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in of PRC § 5024.1(c). In applying these criteria, the lead agency must consider the significance of the resource to a California Native American tribe.

A project may have substantial adverse change in the significance of a TCR if:

- The adverse change is identified through consultation with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project (PRC § 21084.2).
- The resource is listed, or eligible for listing, in the California Register of Historical Resources or in a local register of historical resources, and it is demolished as described in detail above (State CEQA Guidelines section 15064.5 (b)).

The fact that a TCR is not listed in, or determined to be ineligible for listing in, the CRHR, is not included in a local register of historical resources or is not identified in a historical resources survey does not preclude a lead agency from determining that the resource may be a historical resource.

### Local Law, Regulations, and Policies

#### *Riverside County General Plan*

Because the project is entirely on BLM land, it is not required to meet local regulations. However, the following policies outlined in the Riverside County General Plan (2015) address cultural resources and were reviewed:

- **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. (AI 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. (AI 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.

## 3.5.3 Methodology for Analysis

The CEQA Area of Direct Impacts, where resources may be subject to direct effects, is defined for the CEQA analysis as an area totaling 5,018 acres including: the solar PV electrical generating and storage facility; a 175-foot-wide gen-tie corridor, areas for all pull and tensioning sites; access roads; and all laydown and staging areas. There is no buffer on the project solar arrays. The maximum depth to be excavated for the project components will not exceed 40 feet below the current ground surface. The CEQA Area of Direct Impacts is identical to the BLM Area of Potential Effect.

The CEQA Area of Indirect Impacts to cultural resources is dictated largely by the low vertical profile of the proposed facility and topographical features surrounding the project. The maximum height of the solar panels for the project will be 8 feet, and the maximum height of the gen-tie and substation towers will not exceed 200 feet. The CEQA Area of Indirect Impacts is a 1-mile-wide extension of the CEQA Area of Direct Impacts totaling 16,156 acres with a variety of private and public landowners. The

CEQA Area of Indirect Impacts is identical to the BLM area of potential visual, audible, and atmospheric effects.

The CEQA Area of Indirect Impacts was used during the records search at the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS). Various sources were consulted as part of the background research associated with the Project. Cultural Resources staff synthesized records and literature housed at the CHRIS EIC and consulted archival and literary resources pertaining to the prehistory, ethnography, and history of the project area and 1-mile surrounding vicinity (i.e., the CEQA Area of Indirect Impacts).

### Previous Studies

A records search was conducted at the Eastern Information Center of CHRIS, housed at the University of California, Riverside, on November 7, 12, and 13, 2019. The records search identified a total of 37 previous cultural resource investigations conducted since 1977 within the CEQA Area of Direct and Indirect Impacts. Previous investigations for the CEQA Area of Direct and Indirect Impacts have been completed as part of for energy generation projects, transmission line projects, transportation projects, communications project, and geothermal or geo-testing projects.

### Previously Identified Resources

The record search identified 372 cultural resources (198 archaeological sites, 8 buildings, 6 structures, 6 objects, 2 districts, and 152 isolates) previously recorded in the CEQA Area of Direct and Indirect Impacts.

The Prehistoric Trails Network Cultural Landscape/Historic District (PTNCL) and Desert Training Center Cultural Landscape/Historic District (DTCCL) are CRHR-eligible districts that encompass the CEQA Area of Direct and Indirect Impacts. Notable resources in the 1-mile buffer beyond the CEQA Area of Direct Impacts include the North Chuckwalla Mountains Petroglyph National Register District (CA-RIV-01383) and segments of the Coco-Maricopa/Halchidoma Trail (CA-RIV-0053T). All three have been determined individually eligible for the NRHP and CRHR and are also contributors to the PTNCL.

### Native American Outreach (Pre-AB 52)

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) are present in the Project area and surrounding 1-mile area. The NAHC responded on November 12, 2019 stating that the SLF search was negative for Native American cultural resources; however, the NAHC requested that Native American individuals and organizations be contacted to elicit information and/or concerns regarding cultural resource issues related to the proposed Project.

## Archaeological Survey

The archaeological survey took place between December 1, 2020, and February 17, 2021. Survey crews performed an intensive field survey of the entire 5,018-acre CEQA Area of Direct Impacts by walking over the ground using parallel transects spaced at 10- to 15-meter (33- to 50-foot) intervals when allowed by terrain and vegetation. Crews carefully inspected all landforms likely to possess archaeological resources including areas with any unusual contours, soil changes, distinctive vegetation patterns, surface features (e.g., road cuts, ditches, and stream cuts), and/or potential cultural markers.

The surveyed landscape was relatively flat, sloping approximately 1 to 2 degrees to the northeast across much of the survey area. Areas of desert pavement were present in the southern and southeastern portions of the survey area. Some of these areas were characterized by slightly steeper slopes (2 to 3 degrees) which were dissected by deeply incised washes, some of which were more than 12 feet (4 meters) deep. Ground visibility across the APE was good to excellent, consistently averaging between 90 to 95 percent, but dropped to 80 percent in some areas of denser vegetation.

For the purpose of this study, a “site” was defined as a location that has material evidence of past life, activities, and culture. The California standard is to record any cultural resources over 45 years of age, despite the NRHP threshold of 50 years of age. In general, an archaeological site should exhibit at least one of the following:

- One or more features
- Five or more artifacts in clear association with a 25-square-meter (5×5-meter) area
- Fewer than five artifacts that have data potential or are “diagnostic” (i.e., fluted points)

Apparent clusters of artifacts were recorded as concentrations. Nonportable elements of sites (i.e., hearths, mining claims) were recorded as features. The crews recorded specific information about surface artifacts, including but not limited to lithics, ceramics, and historical artifacts. Information collected during the in-field analysis of prehistoric artifacts included artifact class, raw material type, morphology or form, and count. For historical artifacts, the crews recorded the material class, functional group, diagnostic information (product name, manufacturer, or maker’s mark), and artifact number. Locational data were collected on all observed features and distinctive artifacts so that they could be found again during future site visits. No cultural material was collected during the survey. All items removed from the surface for inspection and recordation were placed back in their original locations and positions.

Finally, in accordance with the Project’s approved Work Plan and Research Design for Class III Oberon Solar Project, Riverside County, California (Thomas et al., 2020), historic-era metal cans that had clearly been redistributed from their primary depositional

locations were noted but were not formally recorded. Exceptions to this include unusual or uncommon artifact types that were identified as secondary deposits.

### Resources in the CEQA Area of Direct Impacts

The cultural resources inventory identified 426 cultural resources in the approximately 5,000-acre survey area, which is the CEQA Area of Direct Impacts, including 171 archaeological sites, 11 built-environment resources, and 244 isolates. As mentioned previously, the CEQA Area of Direct Impacts is entirely encompassed by two CRHR-eligible historic districts PTNCL and DTCCL. The non-isolate prehistoric archaeological resources include 15 rock rings/cleared circles, 32 artifact scatters, and one habitation site. The historic-era archaeological resources include of 46 refuse deposits, 22 rock features, and 55 WWII-related sites. Eleven historic-era built-environment resources are present in the CEQA Area of Direct Impacts. These consist of four roads, four survey markers, one building, and one earthen mound. The roads include segments of U.S. Route 60/70, Rice Road/State Route 177, and Mecca-Blythe Highway.

The 244 isolates identified during these field efforts are not considered eligible for the CRHR or NRHP, and therefore are not considered further. A total of ~~113~~ 109 resources eligible for the CRHR are present in the CEQA Area of Direct Impacts. Fifty-eight resources are historic and ~~55~~ 51 resources are prehistoric.

#### *Historic-Era Resources*

Three of the historic era resources are the Desert Center Town Dump, a segment of U.S. Highway 60/70, and a segment of Rice Road/State Route 177. The remainder are associated with the DTC/C AMA and are contributors to the DTCCL historic district (see Table Ap.C-1 in EIR Appendix C).

**P-33-015095/CA-RIV-9385 (Desert Center Town Dump).** P-33-015095 is an extremely large historic-period refuse deposit which is the unofficial Desert Center “town dump.” It consists of a refuse deposit containing a diverse variety of materials, including metal cans, bottle glass, ceramics, construction debris, and modern debris. The resource was previously determined eligible for listing in the CRHR under Criterion 1 as part of the Desert Harvest Solar Project.

**33-017766/CA-RIV-9857H (U.S. Highway 60/70).** A 0.32-mile-long portion of Resource P-33-017766 intersects the proposed gen-tie corridor. The resource consists of a 30-foot-wide, asphalt-paved two-lane roadway with associated features consisting of “C” monuments and diversion dams. U.S. Route 60 was first established in 1932 from Arizona to Los Angeles along the route of the former Legislative Route 64. Four years later, U.S. Route 70 was designated along the same route at Route 60. The route was added to the Interstate Highway System in 1947 and designated and signed as I-10 in 1957. The resource is the only remaining California segment of Route 60/70, which was an important interstate route from the 1930s through the 1950s. This segment was

previously determined eligible for listing in the CRHR under Criterion 1 as part of the Desert Sunlight Solar Farm Project.

**P-33-025150/CA-RIV-12372H (Rice Road/State Route 177 Segment).** This road segment was built in the 1930s in support of construction of the Colorado River Aqueduct (CRA) system. It was known at that time as Parker Dam Road, or simply, the Aqueduct Road, and was an asphalt-paved two-lane roadway. The CRA electrical transmission line parallels this road for much of its extent, while the aqueduct itself is farther away and was accessed by dirt roads branching off Aqueduct Road. Portions of the CRA have been recommended eligible for listing in the CRHR under Criterion 1 relating to the system's significance as a 242-mile-long manmade water conveyance system supplying Southern California, and Criterion 3 for engineering merits associated with its construction. At the time of construction, the area between the Colorado River and the San Jacinto Mountains (where the canal terminated) was largely undeveloped. Beginning in 1923, surveyors for the City of Los Angeles (later Metropolitan Water District of Southern California) penetrated the desert by car, mule, and on foot to prepare detailed maps of the entire area so that potential aqueduct construction routes could be considered. The surveyors stayed at temporary campsites and often established their own routes into the region. The surveyed area included 25,000 square miles between Boulder Canyon and the California-Mexico border. Metropolitan engineers designed the CRA to fit the landscape. The first infrastructure in the region (roads, water, electric power, and telephones) was built to accommodate construction of the CRA. Aqueduct Road was one of these early roadways and was recently recommended as a contributing element of the CRA Historic District. The resource was previously recommended as eligible for inclusion in the CRHR under Criteria 1, 3 and 4.

**Desert Training Center Cultural Landscape/Historic District (DTCCL) and Contributors.** The DTCCL is a contiguous historic district that incorporates historical archaeological sites associated with the DTC/C-AMA in the Chuckwalla Valley and on the Palo Verde Mesa. The relevant themes include U.S. Preparation for World War II, 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. 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. 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 determined eligible for listing on the CRHR (Criterion 4) as part of the Palen Solar Power Project. The BLM is in the process of preparing a National Register of Historic Places 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. Property 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.

Table Ap.C-1 in EIR Appendix C summarizes the resources in the CEQA Area of Direct Impacts that are associated with the DTCCL. Fifty-two resources are not eligible individually but are contributors to the DTCCL. Three of these resources, listed below, are eligible for the CRHR individually.

**P-33-023675 (496th Medium Ordnance Company Camp).** P-33-023675 is a previously recorded historic-period site comprising the remains of a camp associated with the 496th Medium Ordinance Company and a possible bivouac area related to DTC/C-AMA activities. Fourteen different feature types were identified at the site by PaleoWest, including burned areas; refuse concentrations; rock alignment features; berms; piles of concrete; depressions; dugout pits; milled wood concentrations; mounds; pits; refuse dumps; rock features; roads; and loose lumber pieces. The camp is evidence of the DTC/C-AMA's larger goals of war planning and troop preparation for battle during WWII. Because of the camp's direct associated with important events associated with the DTC/C-AMA between 1942 and 1944 it is eligible for the CRHR under Criterion 1. It is also 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.

**AE-3752-064H.** AE-3752-064H is a previously recorded historic-period site which contains 42 distinct WWII-era DTC/C-AMA features, including 36 small one- to two-person foxholes and seven larger mechanically dug fighting positions. The site is associated with General Patton's initial plans to practice large-scale maneuvers in the Chuckwalla Valley. It is eligible for listing in the CRHR under Criteria 1 and 4 due to its association with the use of the Chuckwalla Valley as a maneuver area during the operation of the DTC/C-AMA during WWII. Only a small portion of the resource (60- by 12-foot area) extends into the Project's CEQA Area of Direct Impacts.

**AE-3752-200H.** This site consists of tank tracks, a bivouac or temporary campsite, and three refuse scatters. Over 1,000 tank and armored car tracks are visible in the discontinuous areas that make up the site, which covers approximately 40 acres. The tracks were created by M8 and M20 armored cars, half-track M5 tanks, M4 Sherman tanks, and M4A1 scout cars. It is eligible for listing in the CRHR under Criteria 1 and 4 due to its association with the use of the Chuckwalla Valley as a maneuver area during the operation of the DTC/C-AMA during WWII. Only a small portion of the resource extends into the Project's CEQA Area of Direct Impacts.

***Prehistoric Resources***

All of the ~~55~~ 51 prehistoric resources in the CEQA Area of Direct Impacts have been identified as Tribal Cultural Resources as part of AB 52 consultation, and therefore are individually eligible for the CRHR and are contributors to the PTNCL historic district. The district is described in detail below, and the contributors are summarized in Table Ap.C-2 in EIR Appendix C.

**Prehistoric Trails Network Cultural Landscape/Historic District (PTNCL)** – The PTNCL is an historic district that incorporates prehistoric archaeological sites associated with the Halchidoma (or Coco-Maricopa) Trail (CA-RIV-00053T). The District consists of important destinations in the Colorado Desert near Blythe, California, the network of trails that tie them together, and the features and sites associated with the trails. The boundary extends along the length of the historically known route of the Halchidoma Trail, from where it begins near Blythe at the Colorado River, continuing to the west through the Chuckwalla Valley toward modern Los Angeles, with a width of 10 miles. The PTNCL site types are divided into three categories: destinations, trails, and trail-associated sites or features. Destinations primarily include water sources, but also include residential, religious, and resource-collection sites. Trails can either be created by the repeated passage of feet or by formal construction. They average 30 cm in width and can be traced for many kilometers, interrupted only by gullies and washes. Trail-associated sites or features could include: concentrations of ceramics/pot drops, cleared circles, rock rings, rock clusters, rock cairns, rock alignments, petroglyphs, and geoglyphs. When the trail itself is not preserved, its route can 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 determined an historic district eligible for the CRHR as part of the Palen Solar Power Project under Criteria 1 and 4.

The boundaries of the PTNCL encompass the entire Oberon cultural resources CEQA Area of Direct Impacts. Of the ~~55~~51 prehistoric resources in the CEQA Area of Direct Impacts 15 are cleared circles or rock rings, ~~32~~ 34 are lithic or artifact scatters primarily single episode reduction sites, one is a pot drop, and one is a temporary camp.

**Cleared Circles/Rock Rings.** Cleared circles are areas cleared of desert pavement in the shape of a circle. They can be large or small, clustered together or separate. Most cleared circles measure about 1 meter across, with some of the larger circles measuring closer to 3 meters. The Quechan understand that cleared circles that are clustered together are places where a spiritual leader would take students to teach them about the connection between material and spiritual realms. Those larger cleared circles which are not clustered are understood to represent areas where one could rest during physical or dream travel. One of the large, cleared circles identified at the North Chuckwalla Petroglyph District was identified as a potential crying or mourning circle (Braun and Gates, 2013).

Rock rings are similar to cleared circles but have a single circle of stones outlining them. Dimensions are generally about 1 meter across, although, like cleared circles, the dimensions vary. Secular interpretations focus on the rock rings as utilitarian, i.e., for use in subsistence activities, warfare, or trade. When interpreted as a non-secular feature, scholars argue that these rock rings or rock alignments are associated with the earth

figures that are associated with trail systems or are the work of medicine men conducting ceremonies (Braun and Gates, 2013).

The cleared circles and rock rings in the CEQA Area of Direct Impacts have been identified as Tribal Cultural Resources as part of AB 52 consultation, and are considered eligible for the CRHR under Criteria 1, 3 and 4. They are eligible under Criterion 1 at the regional level for their broad contributions to the unique historic events that shape Native American understanding of the cleared circles and rock rings and the deep oral tradition that is understood to be related to these spiritual communications. They are also eligible under Criterion 3 because they embody the distinctive characteristics of a type of resource and a method of construction. Each cleared circle and rock ring is a unique expression of the creator and while there may be similar designs at other sites in the Chuckwalla Valley, these are not replicable and therefore are of a unique craftsmanship. They are eligible under Criterion 4 for their potential to contribute to our understanding of the prehistory of the PTNCL, the prehistory of the Chuckwalla Valley, and the prehistory of religion, and ritual and belief.

**Lithic Scatters.** Lithic scatters and the single temporary camp in the CEQA Area of Direct Impacts been identified as Tribal Cultural Resources as part of AB 52 consultation and are considered eligible for the CRHR under Criteria 1 and 4. They are eligible under Criterion 1 at the regional and local level for their broad contributions to the unique historic events that shape Native American understanding of their ancestor's lifeways, and the deep oral tradition that is understood to be related to their ancestors. These lithic scatters identify several locations in the Chuckwalla Valley where Native American peoples acquired lithic materials on a large scale. On a regional level these resources contribute to the unique historical events surrounding travel, trade, and movement along the PTNCL, and were an important place in the trail network evidenced by the temporary camps and associated resource processing artifacts which have been identified, as well as the importance of the area into the Proto-historic and Historic periods. Criterion 4 is applicable to these resources for the potential of them to contribute to our understanding of the prehistory of the PTNCL in southeastern California and the prehistory of lithic technology, lifeways, trade, and movement in the Chuckwalla Valley.

### CEQA Area of Indirect Impacts

Historical resources and Tribal Cultural Resources in the CEQA Area of Indirect Impacts were identified using the visual, auditory, and atmospheric effects analysis (Ramos et al., 2021) the Class I study (Thomas et al., 2020a), the ethnographic literature review and assessment (Bengston and Fuller, 2021); as well as an Ethnographic Report prepared as part of the Palen Solar Electric Generating System Project (Braun and Gates, 2013).

#### ***Historic Resources***

Six previously recorded CRHR-eligible historical resources are present in the CEQA Area of Indirect Impacts. These include: Coco-Maricopa Trail Segments C and D

(CA-RIV-053T), North Chuckwalla Mountains Petroglyph District (CA-RIV-1383), and the North Chuckwalla Mountains Quarry District (CA-RIV-1814), the Desert Center Café and Associated Structures and Buildings (33-005717), the Ragsdale House (33-006832), and the 18th Ordinance Battalion Campsite (CA-RIV-9481H).

Three previously recorded Tribal Cultural Resources are present in the CEQA Area of Indirect Impacts. These include the previously mentioned North Chuckwalla Mountains Petroglyph District (CA-RIV-1383) and the North Chuckwalla Mountains Quarry District (CA-RIV-1814) as well as Alligator Rock.

**CA-RIV-00053T (Halchidoma or Coco-Maricopa Trail)** – Segments C and D of the Coco-Maricopa Trail, which pass through the CEQA Area of Indirect Impacts to the south of the Red Bluff Substation, Segment C consists of a lithic scatter and an east/west trending trail that measures 34 cm in width and runs for a distance of 38 meters. Segment D consists of a 1,100-meter length of trail that runs northwest/southeast across pediments on the northeast leading edge of the Chuckwalla Mountains, with associated lithic scatter, lithic reduction loci, quartz vein quarry localities, and stacked rock trail markers or cairns. These segments are immediately adjacent to and appear to lead to the North Chuckwalla Mountains Petroglyph National Register District (CA-RIV-01383) and have been determined eligible for the CRHR under Criteria 1 and 4 (Ramos et al., 2021).

**CA-RIV-01383 (North Chuckwalla Mountains Petroglyph National Register District).** The resource includes more than 170 petroglyph panels, rock rings, cleared circles, trails, and artifact concentrations. CA-RIV-01383 has been determined eligible for listing under the CRHR under Criteria 1, 3, and 4 (Ramos et al., 2021).

**CA-RIV-01814 (North Chuckwalla Prehistoric Quarry District).** The Quarry District is centered on an igneous rock feature that was a lithic raw material source and contains at least 84 documented lithic reduction loci in addition to ceramics, a rock shelter, rock rings, and trail segments. CA-RIV-01383 has been determined eligible for listing under the CRHR under Criteria 1, 3, and 4 (Ramos et al., 2021).

**Alligator Rock.** This resource includes the geologic landform which served as a source of Aplite, a fine-grained intrusive felsic rock suitable for making stone tools. In addition, it includes lithic reduction sites, rock rings, temporary camps, and trails adjacent to the landform. This resource is eligible under Criterion 1 at the regional and local level for its broad contributions to the unique historic events that shape Native American understanding of their ancestor's lifeways, and the deep oral tradition that is understood to be related to their ancestors. It is eligible for the CRHR under Criterion 4 for the potential of this place to contribute to our understanding of the prehistory of the PTNCL and the prehistory of lithic technology, lifeways, trade, and movement in the Chuckwalla Valley (Braun and Gates, 2013).

**P-33-005717 (Desert Center Café and Associated Structures and Buildings).** This resource includes a series of buildings and structures that were built and owned by the

Ragsdale family including the Desert Center Café/garage/gas station/market building compound, an adjacent swimming pool (plunge pool), and a group of three "cabins" situated to the east of the Café. These resources comprised the core of the service enterprise of Desert Center Town and from the late-1920s through the late-1960s, provided a multitude of services to motorist traversing the Chuckwalla Valley. They were previously determined eligible for listing in the CRHR under Criterion 1 for their association with an important historical event related to the founding and development of a highway town with origins as a highway service enterprise. The resource was also found eligible under Criterion 2 for its direct association with the productive life of an important historical figure, Stephen Ragsdale (Ramos et al., 2021).

**P-33-006832 (Ragsdale House).** The structure was originally constructed between 1927 and 1928, and was the home of Stephen and Lydia Ragsdale, founders of the town of Desert Center. It was previously determined eligible for listing in the CRHR under Criterion 2 for its direct association with the productive life of an important historical figure, Stephen Ragsdale, and for exhibiting architectural merits that qualify it as a historically significant building under Criterion 3 (Ramos et al., 2021).

**CA-RIV-9481H (18th Ordinance Battalion Campsite).** CA-RIV-9481H represents the historic period remains of the 18th Ordinance Battalion Campsite associated with the Desert Training Center/California-Arizona Maneuvers Area (DTC/C-AMA). The site contains five features, along with two concentrations of historical refuse. Features include a grid of foundation piers that once supported a building, a concrete block, a capped well casing, and a fire ring. The site was previously determined eligible for listing in the CRHR under Criterion 1 for its association with the DTC/C-AMA (Ramos et al., 2021).

### *Tribal Cultural Resources*

Information presented in this section was gathered during AB 52 consultation between the RWQCB and California Native American Tribes that have cultural affiliations with the CEQA Area of Direct and Indirect Impacts and that have requested to consult on the proposed Project. Supplementary information was gathered from: the record search (Thomas et al., 2020); an archaeological inventory (Knabb et al., 2021); an indirect effects study (Ramos et al., 2021); an ethnographic literature review (Potter, 2020); two ethnographic assessments (Bengston, 2021; Braun and Gates, 2013); and the evaluation of resources for the CRHR (Knabb et al., 2021).

## Project Notification

AB 52 requires that within 14 days of the lead agency determining that a project application is complete, a formal notice and invitation to consult about the proposed Project be sent to all tribal representatives who have requested in writing to be notified of projects that may have a significant effect on TCRs located within the Proposed Project area (PRC § 21080.3.1(d)). On December 31, 2020, the RWQCB mailed certified letters to representatives of 17 tribes that had previously submitted a written

request to the RWQCB to receive notification of proposed projects. These tribes included Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Indians, Cabazon Band of Mission Indians, Cahuilla Band of Mission Indians, Chemehuevi Indian Tribe, Colorado River Indian Tribes (CRIT), Cocopah Indian Tribe, Fort Mojave Indian Tribe, Los Coyotes Band of Cahuilla and Cupeno Indians, Quechan Tribe of the Fort Yuma Indians, Ramona Band of Cahuilla, San Manuel Band of Mission Indians, Santa Rosa Band of Cahuilla Indians, Soboba Band of Luiseño Indians, Twenty-Nine Palms Band of Mission Indians, Morongo Band of Mission Indians, and Torres Martinez Desert Cahuilla Indians.

The letters included a brief description of the proposed project, information on how to contact the lead agency project manager, and two maps showing the project location and components and lay-down areas. The letters noted that requests for consultation needed to be received within 30 days of the date of receipt of the notification letter; two responses were received.

### 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)).

The Agua Caliente Band of Cahuilla Indians (Agua Caliente) and Quechan Tribe of the Fort Yuma Indians (Quechan) tribes requested to consult on the proposed Project. The RWQCB formally initiated consultation with Quechan on February 2, 2021, and with Agua Caliente on February 22, 2021.

Consultation meetings took place with Quechan on March 2, May 13, May 20 and June 8, 2021. At the initial meeting Quechan requested copies of the confidential inventory report, Google Earth KMZs of the project boundary and resource location. During subsequent consultation the Historic Preservation Officer identified all of the prehistoric resources in the CEQA Area of Direct Impacts to be Tribal Cultural Resources. Their preferred mitigation for direct effects to these resources is avoidance of the resource. For resources

where avoidance is not possible no alternative suitable mitigation was identified. Quechan also noted that the project would have visual impacts on two resources in the CEQA Area of Indirect Impacts: CA-RIV-01383 (North Chuckwalla Mountains Petroglyph National Register District) and CA-RIV-01814 (North Chuckwalla Prehistoric Quarry District). Although several options were discussed in an additional consultation meeting on July 16, 2021, no suitable mitigation was identified to address these concerns.

Consultation meetings with Agua Caliente were scheduled for after the draft confidential inventory report, Google Earth KMZs of the project boundary and resource locations were available. Meetings were held on May 14, May 19 and June 8, 2021. The Tribal Historic Preservation Officer also identified all of the prehistoric resources in the CEQA Area of Direct Impacts to be Tribal Cultural Resources. Like Quechan, the preferred for direct effects to these resources is avoidance. In addition, Agua Caliente requested that a cluster of 14 sites containing cleared circles or rock rings be recorded as a CRHR-eligible historic district. Agua Caliente also noted that the project would have visual impacts on two resources in the CEQA Area of Indirect Impacts: CA-RIV-01383 (North Chuckwalla Mountains Petroglyph National Register District) and CA-RIV-01814 (North Chuckwalla Prehistoric Quarry District). Mitigation Measures CUL-12 and TCR-1 were developed to address these concerns.

The project mitigation measures were provided to the consulting tribes on July 19, 2021. No revisions to the mitigation measures were requested by Agua Caliente or Quechan and AB 52 consultation was concluded.

In a comment letter submitted by the Colorado River Indian Tribes (CRIT) on the Draft EIR, the CRIT indicated that it would like to consult with the RWQCB. The RWQCB responded on October 28, 2021, that it would be interested in meeting with the CRIT to discuss its concerns with the project and its comments on the Draft EIR. This meeting is not considered to be AB 52 statutory consultation per Public Resources Code section 21080.3.1, as the 30-day period to request to consult as part of AB 52 elapsed in February 2021. ~~Consultation is currently ongoing. RWQCB anticipates formally concluding consultation prior to the publication of the Final EIR.~~

## 3.5.4 CEQA Significance Criteria

The significance criteria listed below are from the Environmental Checklist Form in Appendix G of the CEQA Guidelines. They are used to determine whether a project or alternatives would result in significant impacts under CEQA related to cultural resources or tribal cultural resources. Under CEQA, the Project would cause a significant impact if it caused a substantial adverse change in the significance of a historical resource, an archeological resource, or a tribal cultural resource as defined under CCR, Title 14, Chapter 3, Section 15064.5.

The Project would have a significant impact on these cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5.
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations, Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

The project would 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:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k); or,
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c). of Public Resources Code Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe.

Under all of these criteria, adverse changes and impacts are 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; or
- 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.

## 3.5.5 Proposed Project Impact Analysis

### Scoping

Issues raised during scoping related to cultural resources and Tribal Cultural Resources include the following, which are addressed in the potential impacts discussed below:

- Concern about the Project's potential to remove, damage, or destroy cultural resources and artifacts.
- Requests the development of mitigation measures to reduce impacts through avoidance and in-situ or adjacent reburial of prehistoric cultural resources, if such resources are located in the project area and cannot be avoided.
- Requests that cultural resource mitigation and treatment plans are in place prior to any ground-disturbing activities.
- Requests that tribal monitors are used during all activities that have the potential to impact cultural resources, including but not limited to mowing, grading, and excavation.
- Requests the analysis of cumulative impacts to cultural resources.

### Geographic Limits of Analysis

The geographic limits of the cultural resource analysis under CEQA are referred to as the cultural resources "CEQA Area of Direct and Indirect Impacts," which includes the area of land surrounding a project site and ancillary linear facility corridors. For the Oberon Renewable Energy Project evaluated in this EIR, the Regional Water Board has identified the CEQA Area of Direct and Indirect Impacts as follows:

- Direct impacts to all resource types: the solar PV electrical generating and storage facility; a 175-foot-wide gen-tie corridor, areas for all pull and tensioning sites; access roads; and all laydown and staging areas.
- Indirect impacts to all resource types: the direct impacts study area plus a 1-mile buffer.

### Proposed Project

The project would consist of a 500 MW solar photovoltaic facility on approximately 2,700 acres of public land administered by the BLM. In addition, a 500 kV gen-tie line, a BESS, and an O&M facility are proposed for construction and operation at the project site. The gen-tie line would extend 4.4 miles and interconnect with the power grid at SCE's Red Bluff Substation.

***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.***

***Solar and BESS Facility – SIGNIFICANT AND UNAVOIDABLE.***

**Direct Effects.** Twenty-~~four~~ two CRHR-eligible resources and therefore considered historical resources under CEQA, are potentially subject to direct impacts from the proposed project solar facility.

~~One~~ Two prehistoric rock rings/cleared circles and 20~~21~~ artifact scatters are potentially subject to direct impacts from the solar facility (see Table Ap.C-3 in EIR Appendix C for full list). These resources are eligible in the own right and are contributors to the PTNCL. Direct impacts to these resources would be addressed by Mitigation Measures CUL-10 (Flag and Avoid) which would ensure avoidance of resources, MM CUL-11 (Reburial of Artifacts), which would provide for the reburial of artifacts from resources that cannot be avoided, and MM CUL-12 (Historic District), which would establish an historic district for prehistoric-era rock rings.

In addition, two of these resources, AE-3752-064H, and AE-3752-200H, are eligible in their own right and are contributors to the DTCCL. Only small portions of AE-3752-064H, and AE-3752-200H extend into the proposed project solar field. The destruction of these small portions would not cause a substantial adverse change in the significance of these historical resources. Therefore, the proposed project will not cause direct impacts to AE-3752-064H and AE-3752-200H.

Twenty WWII-era archaeological sites are potentially subject to direct impacts from the solar facility. These resources are not eligible for the CRHR in their own right under any criteria, so are not subject to direct impacts. However, the 20 WWII-era resources are contributors to the DTCCL.

Direct impacts to newly identified resources would be addressed by the implementation of Mitigation Measures CUL-1 through CUL-9, which would reduce these impacts to less than significant levels.

**Indirect Effects.** Thirty-eight CRHR-eligible resources are potentially subject to indirect effects from the solar facility. These include 29 prehistoric resources and 9 historic-era resources.

Four sensitive prehistoric resources eligible for the CRHR are present in the CEQA Area of Indirect Impacts These include North Chuckwalla Petroglyph National Register District (CA-RIV-1383), the North Chuckwalla Mountains Quarry District (CA-RIV-1814), Coco-Maricopa Trail (CA-RIV-53T) segments C and D, and Alligator Rock. In addition, 13 rock rings/cleared circles and 10 artifact scatters in the CEQA Area of Direct and Indirect Impacts Area would avoid direct effects, but would be subject to indirect effects.

Visual simulations indicate that the proposed project's solar arrays would be visible from these resources. These project components would be a prominent addition within the viewshed of the site. These resources are eligible under Criterion 1. Setting is a

significant element of integrity to Criterion 1. Therefore, the proposed project will create a significant visual intrusion to these resources. In addition, during AB 52 consultation, tribes indicated that these Tribal Cultural Resources would be subject to indirect effects from the Proposed Project. Indirect effects to these resources would be addressed by Mitigation Measure TCR-1 (Traditional Knowledge Workshops), which would ensure that tribal groups affiliated with the Project Area have the opportunity to learn about the resources present in the vicinity.

Three historic-era resources eligible for the CRHR are present in the CEQA Area of Indirect Impacts. These are the Desert Center Café and Associated Structures and Buildings (33-005717), the Ragsdale House (33-006832), and the 18th Ordinance Battalion Campsite (CA-RIV-9481H).

In addition, linear resources Highway 60/70 (CA-RIV-9857H) and Rice Road/State Route 177 (P-33-025150/CA-RIV-12372H) as well as P-33-015095/CA-RIV-9385 (Desert Center Town Dump), P-33-023675 (496th Medium Ordnance Company Camp), AE-3752-064H, and AE-3752-200H are in CEQA Area of Direct and Indirect Impacts. These resources are not within the solar field boundary, and are therefore not subject to direct effects, but they would potentially be subject to indirect effects.

Highway 60/70 (CA-RIV-9857H), Rice Road/State Route 177 (P-33-025150/ CA-RIV-12372H), Desert Center Café and Associated Structures and Buildings (33-005717), 18th Ordinance Battalion Campsite (CA-RIV-9481H) P-33-023675 (496th Medium Ordnance Company Camp), AE-3752-064H, and AE-3752-200H – A visual simulation indicates that the proposed Project solar field would introduce a dominant visual intrusion to these resources. However, these components would add in-kind intrusions to an already highly developed and modified setting along the I-10 corridor that crosses the valley floor, and which is limited in scenic value. Therefore, the proposed Project would not cause an adverse change in the significance of these resources. As such these resources are not subject to indirect effects from the construction of the proposed project, and no mitigation is necessary.

**Ragsdale House (33-006832).** The visual simulations show that the proposed solar field array will be visible as a relatively dominant horizontal feature along the valley floor. This resource has been determined eligible for the CRHR due to its association with the productive life of an important historical figure (Criterion 2) and for exhibiting architectural merits (Criterion 3). Visual integrity is not an important element for eligibility for these criteria. Therefore, the proposed project would not cause an adverse change in the significance of this resource. As such these resources are not subject to indirect effects from the construction of the proposed project, and no mitigation is necessary.

**P-33-015095/CA-RIV-9385 (Desert Center Town Dump).** A visual simulation indicates that the solar field of the proposed project would introduce a dominant visual intrusion to this resource. However, this resource has been determined eligible for the CRHR due to its information potential (Criterion 4). Visual integrity is not an important element for

eligibility for this criterion. Therefore, the proposed project would not cause an adverse change in the significance of this resource. As such these resources are not subject to indirect effects from the construction of the proposed project, and no mitigation is necessary.

***500 kV Generation-Tie Line – SIGNIFICANT AND UNAVOIDABLE***

**Direct Effects.** Eight resources eligible for the CRHR and therefore considered historical resource under CEQA are potentially subject to direct effects from the gen-tie line. Of these no historical resources would be directly impacted, because the Applicant has agreed to avoid four prehistoric rock rings/cleared circles and three prehistoric artifact scatters in and adjacent to the gen-tie line ROW. In addition, the segment of Highway 60/70 (CA-RIV-9857H) would be easily spanned. To ensure avoidance of prehistoric resources, potential direct impacts to the prehistoric resources would be addressed by Mitigation Measures CUL-10 (Flag and Avoid). MM CUL-11 (Reburial of Artifacts) would provide for the reburial of artifacts from known and unknown resources that cannot be avoided, and MM CUL-12 (Historic District) which would establish an historic district for prehistoric-era rock rings. Potential impacts to Highway 60/70 (CA-RIV-9857H) would also be addressed by MM CUL-10.

Four WWII-era archaeological sites are potentially subject to direct effects from the gen-tie line. These resources are not eligible for the CRHR in their own right under any criteria, so are not subject to direct impacts. However, the four WWII-era resources are contributors to the DTCCL.

**Indirect Effects.** The 38 CRHR-eligible resources that are potentially subject to indirect effects from the solar facility also would be subject to indirect effects from the gen-tie line. These include 29 prehistoric resources and 9 historic-era resources.

Visual simulations indicate that the proposed project's gen-tie line is visible from the 27 sensitive prehistoric resources. These project components would be a prominent addition within the viewshed of the resources resulting in indirect effects from the proposed project. Indirect effects to these resources would be addressed by Mitigation Measure TCR-1 (Traditional Knowledge Workshops), which would ensure that tribal groups affiliated with the Project Area have the opportunity to learn about the resources present in the vicinity.

As discussed previously, for the nine historic-era resources the gen-tie line components would add in-kind intrusions to an already highly developed and modified setting along the I-10 corridor that crosses the valley floor. As such these resources are not subject to indirect effects from the construction of the proposed project, and no mitigation is necessary.

The full text of all cultural and Tribal Cultural Resource mitigation measures (MMs) is provided in Section 3.5.7. The measures applicable to Impact CUL-1 are:

- MM CUL-1: Retain a Cultural Resources Specialist
- MM CUL-2: Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan
- MM CUL-3: Develop and Implement Cultural Resources Environmental Awareness Training
- MM CUL-4: Archaeological Monitoring
- MM CUL-5: Native American Monitoring
- MM CUL-6: Post-Review Discovery and Unanticipated Effects
- MM CUL-7: Cultural Resources Monitoring Report and Cultural Resources Report
- MM CUL-8: Long Term Management Plan
- MM CUL-9: Inadvertent Discovery of Human Remains
- MM CUL-10: Flag and Avoid
- MM CUL-11: Reburial of Artifacts
- MM CUL-12: Historic District for Prehistoric Rock Rings
- MM CUL-13: DTC/C-AMA Supplemental Resource Documentation
- MM TCR-1: Traditional Knowledge Workshops

Impacts to historic-era resources eligible for the CRHR would be less than significant with implementation of mitigation. Implementation of MM CUL-10, CUL-11, CUL-12, and TCR-1 would reduce the impact of the Project on prehistoric resources; however, the direct, indirect and cumulative impacts to prehistoric-era CRHR-eligible resources would remain significant.

***Impact CUL-2 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.***

***LESS THAN SIGNIFICANT WITH MITIGATION.*** The direct and indirect impacts of solar and energy storage facility and gen-tie construction, operation, and decommissioning to unique archaeological resources could create significant impacts. No unique archaeological resources have been identified to date, therefore, adverse impacts are not anticipated; however, mitigation may be required should unique archaeological resources be identified.

Implementation of Mitigation Measures CUL-1 through CUL-13 and TCR-1 would mitigate Impact CUL-2 should unique archaeological resources be identified. This impact would be less than significant with implementation of mitigation.

***Impact CUL-3. The project would disturb any human remains, including those interred outside of formal cemeteries.***

***LESS THAN SIGNIFICANT WITH MITIGATION.*** The direct and indirect impacts of solar facility and gen-tie construction, operation, and decommissioning, to human remains could create significant impacts under criterion CUL-3 (disturb human remains). Adverse

impacts are not anticipated because no human remains have been identified to date; however, mitigation may be required should they be identified.

Implementation of Mitigation Measures CUL-1 through CUL-12, and TCR-1 would mitigate Impact CUL-3. This impact would be less than significant with implementation of mitigation.

***Impact TCR-1. The project would cause adverse change in the significance of a Tribal Cultural Resource determined by the Lead Agency.***

***SIGNIFICANT AND UNAVOIDABLE.*** The direct and indirect impacts of solar facility and gen-tie construction, operation, and decommissioning, to Tribal Cultural Resources could create significant impacts under criterion TCR-1 (adverse change to TCR).

Implementation of Mitigation Measures CUL-1 through CUL-13, and specifically MMs CUL-10, CUL-11, CUL-12 and TCR-1 would reduce the impact of the project on Tribal Cultural Resources; however, the direct, indirect and cumulative impacts to these resources would remain significant.

***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).***

***SIGNIFICANT AND UNAVOIDABLE.*** The direct and indirect impacts of solar facility and gen-tie construction, operation, and decommissioning, to Tribal Cultural Resources could create significant impacts under criterion TCR-2 (adverse change to TCR eligible for CRHR).

Implementation of Mitigation Measures CUL-1 through CUL-13, and specifically MM CUL-10, CUL-11, CUL-12 and TCR-1 would reduce the impact of the project on Tribal Cultural Resources; however, the direct, indirect and cumulative impacts to these resources would remain significant.

## 3.5.6 Cumulative Impacts

The effects of the proposed project or an alternative when combined with impacts from past, present, and reasonably foreseeable projects, contribute to the cumulatively considerable adverse impacts to two cultural landscapes/historic districts in eastern Riverside County.

A total of 24 CRHR-eligible resources are potentially subject to direct effects from the proposed project. These include 22 prehistoric resources and 2 WWII era resources. In addition, 24 WWII-era archaeological sites are potentially subject to direct effects. These resources are not eligible for the CRHR in their own right under any criteria; however, they are contributors to the DTCCL. The destruction of ineligible contributors as a result of the project contributes in a small but measurable way to the destruction of the DTCCL as a whole. Cumulative impacts to the DTCCL would be addressed through MM CUL-13 (DTC/C-AMA Supplemental Resource Documentation). With implementation of MM

CUL-13, the Project would not result in a considerable contribution to cumulative effects on these WWII-era resources.

All 22 of the prehistoric resources are eligible in their own right for the CRHR and are contributors to the PTNCL. In addition, 82 of the 244 identified isolated prehistoric artifacts are subject to direct effects from the proposed project. These resources are not individually eligible for the CRHR, but AB 52 consultation indicates that they are considered part of the larger PTNCL. The destruction of these resources as a result of the project contributes in a small but measurable way to the destruction of the PTNCL as a whole. Cumulative impacts to the PTNCL would be addressed through MM CUL-11 (Reburial of Artifacts), CUL-12 (Historic District for Prehistoric Rock Rings) and TCR-1 (Traditional Knowledge Workshops). Implementation of MMs CUL-11, CUL-12 and TCR-1 would reduce the contribution of the project, but the cumulative impact would remain significant.

Four sensitive prehistoric resources eligible for the CRHR are present in the indirect effects Study Area. These include North Chuckwalla Petroglyph National Register District (CA-RIV-1383), the North Chuckwalla Mountains Quarry District (CA-RIV-1814), Coco-Maricopa Trail (CA-RIV-53T) segments C and D, and Alligator Rock. In addition, 29 prehistoric resources in the CEQA Area of Direct Impacts not be directly affected, but will be subject to indirect effects. All of these resources are contributors to the PTNCL. The addition of more industrial components to the Chuckwalla Valley contributes in a small but measurable way to a visual intrusion upon the setting of the PTNCL, a defining characteristic of the resource under Criterion 1. This visual intrusion compromises the integrity of the resource. Cumulative impacts to the PTNCL as a result of visual intrusion would be addressed with implementation of MMs CUL-11 (Reburial of Artifacts), CUL-12 (Historic District for Prehistoric Rock Rings) and TCR-1 (Traditional Knowledge Workshops). Implementation of CUL-11, CUL-12 and TCR-1 would reduce the contribution of the project but the cumulative impact would remain significant.

The project would result in a cumulatively considerable contribution to a significant cumulative impact to the PTNCL as a result of visual intrusion.

## 3.5.7 Mitigation Measures

**MM CUL-1** **Retain a Cultural Resources Specialist.** Prior to the start of construction, the project proponent shall retain a project Cultural Resources Specialist (CRS) and one or more alternates, if alternates are needed, whose training and background conforms to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). The CRS's qualifications shall be appropriate to the needs of the project, specifically an archaeologist with demonstrated prior experience in the southern California desert and previous experience working with Southern California Tribal Nations. A copy of the CRS's qualifications shall be provided to the BLM and California

Regional Water Quality Control Board–Colorado River Basin Region 7 for review and approval.

The CRS shall manage all monitoring, mitigation, curation, and reporting activities for the Project. The CRS shall have a primarily administrative and coordination role for the Project. The CRS may obtain the services of additional cultural resources specialists, if needed, to assist in monitoring, mitigation, and curation activities. The CRS shall have a BLM California cultural resource use permit (CRUP) and all supervisory cultural resource field staff (Principal Investigators and Field Directors or Crew Chiefs) shall be listed on that permit and otherwise meet the requirements outlined in BLM Manual 8150.

**MM CUL-2** **Prepare and Implement a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery, and Unanticipated Effects.** Prior to start of construction, the CRS shall develop a Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery, and Unanticipated Effects (Monitoring Plan) that addresses the details of all activities and provides procedures that must be followed to reduce the potential impacts to known resources and previously unidentified resources within the project area.

The Monitoring Plan shall describe a program for avoiding and monitoring undiscovered NRHP- and CRHR-eligible cultural resources during Project construction. The Plan may require that protective fencing or other markers be erected and maintained to protect these resources from inadvertent adverse effects during construction. The Plan shall also include maps and narrative discussion of areas considered to be of high sensitivity for discovery of buried archaeological resources, if any. The Plan shall detail provisions for monitoring construction activities in these high-sensitivity areas. It shall also detail the methods, consultation procedures, and timelines for addressing all post-review discoveries.

The Plan shall identify person(s) expected to perform any monitoring tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team. It shall also specify monitoring reporting and what forms/documentation needs to be completed daily during monitoring.

The Plan shall also discuss the role of tribal participants in any monitoring tasks, their responsibilities, and which tribes have requested to monitor.

The CRS shall manage all monitoring, mitigation, curation, and reporting activities under the Plan. The Project Owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the NRHP and CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.

The Plan shall address the authority to halt ground disturbance during construction. If a cultural resource over 50 years of age is found (or if younger, determined exceptionally significant by the RWQCB), or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting shall continue during the Project's ground-disturbing activities elsewhere. Additional procedures regarding halting ground disturbance to address a post-review discovery or unanticipated effects shall be described in the Plan.

In addition, the Plan shall include the following elements, with specific details to be determined based on input from consulting parties:

1. A general research design;
2. Protocols for the National Register and California Register evaluation (for all criteria) and treatment of known and newly discovered prehistoric and historic-period archaeological resource types. Treatment may involve data recovery as mitigation. Protocols shall be specified for addressing unanticipated effects to known CRHR-eligible resources. ~~historic properties.~~ Protocols for addressing new discoveries and unanticipated effects to known CRHR-eligible resources ~~historic properties~~ will involve notification procedures for contacting the RWQCB, RWQCB review, and how the RWQCB will involve AB 52 consulting tribes~~parties~~.
3. Artifact collection and curation policies, as related to the research questions formulated in the research design, that apply to cultural resources materials and documentation resulting from evaluation and data recovery at both known prehistoric and historic-period archaeological sites and any California Register–eligible (as determined by the RWQCB in consultation with AB 52 consulting tribes) prehistoric and historic-period archaeological sites discovered during construction;
4. The implementation sequence and the estimated time frames needed to accomplish all project related tasks during the ground disturbance and post-ground-disturbance analysis phases of the project;
5. The person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team;
6. The role of tribal participants in any monitoring tasks, their responsibilities, and which tribes have requested to monitor;
7. Description of all impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction,

and/or operation and identification of any areas where these measures are to be implemented shall be identified;

8. The commitment to record on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all encountered cultural resources over 50 years of age and to curate all archaeological materials excavated and/or recovered as a result of fieldwork under the Monitoring Plan (i.e., data recovery), in accordance with 36 CFR Part 79 (or if applicable, the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections);
9. The commitment of the Project Owner to pay all curation fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the Project and, through the Project CRS, to identify a curation facility that will accept cultural resources materials resulting from the project cultural resources investigations;
10. The Project CRS shall attest to having access to equipment and supplies necessary for site mapping, photography, and recovery of all cultural resource materials (that cannot be treated prescriptively) from previously identified National Register– and California Register–eligible archaeological resources and from National Register– and California Register–eligible resources that are encountered during ground disturbance;
11. The contents, format, and review and approval process of the final Cultural Resource Report (CRR; see CUL-6);
12. Monitoring recommendations for different areas of the CEQA Area of Direct Impacts including the level of monitoring intensity based on subsurface sensitivity; and
13. Procedures to follow for any discoveries of human remains.

**MM CUL-3** **Develop and Implement Cultural Resources Environmental Awareness Training.** Prior to beginning construction and for the duration of ground disturbance Project Owner shall provide WEAP training to all workers within their first week of employment at the project site, along the linear facilities routes, and at laydown areas, roads, and other ancillary areas. Ground disturbance is defined as any of the following activities: mowing, grading, disk and roll, pile or stake driving, mechanical excavation, drilling, digging, trenching, blasting, and using high pressure water to cut into the ground. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in a video format. The training shall be prepared in consultation with culturally affiliated Native Americans and shall incorporate the traditions and beliefs of these Native American groups into the presentation. ~~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:

- 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 acknowledgement form signed by each worker indicating that they have received the training; and
- a sticker that shall be placed on hard hats indicating that environmental training has been completed.

This is a mandatory training, and all construction personnel must attend prior to beginning work on the project. A copy of the sign in sheet shall be kept ensuring compliance with this mitigation measure. A record of attendance shall be available to the consulting tribes upon request.

**MM CUL-4** **Archaeological Monitoring.** A qualified archaeological monitor that meets the Secretary of the Interior's Professional Qualifications Standards (as defined in 36 Code of Federal Regulations Part 61), shall be present for all ground disturbing activities. Ground disturbance is defined as any of the following activities: mowing, grading, disk and roll, mechanical excavation, drilling, digging, trenching, blasting, and using high pressure water to cut

into the ground. The archaeological monitor shall complete daily monitoring forms. The CRS, in consultation with the BLM Authorized Officer and RWQCB, will have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted.

**MM CUL-5** **Native American Monitoring.** Prior to conducting any grading or ground disturbance, the developer/grading permit applicant shall enter into an agreement with the consulting tribe(s) for at least one Native American Monitor. A Native American Monitor is defined as an individual who is presented as a representative of a tribal government for one of the AB 52 consulting tribes for the Oberon Project and who has received specialized training approved by that tribal government to serve as a 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 RWQCB (or its designated representative) to ensure compliance with this measure.

**MM CUL-6** **Post-Review Discovery and Unanticipated Effects.** In the event that previously unknown cultural resources (sites, features, or artifacts) are exposed during grading or other construction, operation, or decommissioning activities, all construction work within 50 feet of the find shall immediately stop until a qualified cultural resources specialist can evaluate the significance of the find and determine (in consultation with the BLM and RWQCB and AB 52 consulting tribes) whether additional study is warranted. Depending upon the significance of the find, the cultural resources specialist may record the find and allow work to continue. If the discovery proves eligible under the CRHR and/or NRHP and cannot be protected through avoidance, specific resource documentation or recovery shall be implemented, including preparation of a treatment plan with data recovery as a treatment option. General methods for determining NRHP Criterion D eligibility as well as data recovery as a treatment option for Criterion D eligible resource types will be provided in the Monitoring Plan (MM CUL-2). During the assessment and recovery time, construction work may proceed in other areas. The Monitoring Plan (MM CUL-2) will also provide procedures for addressing unanticipated effects to known CRHR-eligible resources ~~historic properties~~ during project construction.

**MM CUL-7** **Cultural Resources Monitoring Report and Cultural Resources Report (CRR).** Within 6 months of finishing construction of the Project, a Cultural

Resources Monitoring Report shall be prepared and provided to BLM and the RWQCB for review and approval. These reports will meet all BLM requirements. The report shall include documentation of the required cultural/historical sensitivity Worker Environmental Awareness Program training for the construction staff (see CUL-3). The details of the report's structure and contents will be described in the Monitoring Plan (see CUL-2). A CRR, if required as the result of a discovery during construction, shall conform to BLM Cultural Resource Use Permit stipulations regarding reporting which include, but are not limited to, those listed in the California Office of Historic Preservation's Preservation Planning Bulletin Number 4(a) December 1989, Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports.

**MM CUL-8** **Long-Term Management Plan.** The Applicant shall prepare a Long-Term Management Plan (LTMP) for protection and management of National Register– and California Register–eligible cultural resources in the CEQA Area of Direct Impacts during Project operations and decommissioning. The LTMP shall be developed in consultation with AB 52 consulting tribes and include requirements for conducting the post-construction monitoring/ condition assessments and regular reporting to the BLM and RWQCB, as well as procedures for addressing unanticipated effects to cultural resources covered under the LTMP. The draft plan shall be provided to BLM and the RWQCB for review and approval. RWQCB will provide the draft plan to AB 52 consulting tribes for review and comment.

**MM CUL-9** **Inadvertent Discovery of Human Remains.** For inadvertent discovery of human remains, the plan for securing the discovery site and subsequent actions shall be included in the Monitoring Plan required under Mitigation Measure CUL-2. In the event of a discovery, the ~~RWQCB and~~ BLM, the RWQCB and AB 52 consulting tribes must be contacted immediately and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin.

**MM CUL-10** **Flag and Avoid.** To address direct impacts to prehistoric-era CRHR-eligible resources, the following resources in the transmission line corridor or near or adjacent to the solar field fenceline shall be avoided: 19-387-EM-025, 19-387-KH-016, 19-387-WH-064, ~~33-015091,~~ 33-015093, 33-018270, 33-018292, 33-018293, 33-018302, 33-021070, 33-021071, 33-021072, 33-021073, 33-021074, 33-021075, 33-021076, 33-021078, 33-021079, 33-021080, 33-021083, and 33-021077.

The project owner shall:

1. Ensure that a CRS, alternate CRS, or field staff re-establish the boundary of each site, add a 10-meter-wide buffer around the periphery of each site boundary, and flag the resulting space in a conspicuous manner;
2. Ensure that an archaeological monitor enforces avoidance of the flagged areas during construction; and
3. Ensure, after completion of construction, boundary markings around each site and buffer are removed so as not to attract vandals.
4. After completion of construction, an archaeologist that meets the requirements outlined in BLM Manual 8150, shall visit each of these resources once a year to document their condition for the life of the project. A letter report with the results of each yearly visit shall be prepared and submitted to RWQCB and BLM for review and approval.
5. If project construction, operation, maintenance or decommissioning directly impacts these resources the RWQCB, BLM, and AB 52 consulting tribes must be contacted within 24 hours. Appropriate mitigation for those impacts must be developed in consultation with the consulting tribes and relevant agencies and implementation must begin within 1 month of the original impact.

**MM CUL-11** **Reburial of Artifacts.** To address direct and cumulative impacts to prehistoric-era CRHR-eligible resources that cannot be avoided, if BLM allows, all prehistoric isolated artifacts and all artifacts associated with prehistoric resources that are not considered eligible for the NRHP that will be directly impacted by construction will be collected by archaeological and Native American monitors, and reburied. Ideally, the reburial location should be as near as possible to their original location and be protected from future impacts. Reburial should be conducted by representatives of consulting tribes.

**MM CUL-12** **Historic District for Prehistoric Rock Rings.** To address direct, indirect, and cumulative impacts to prehistoric-era CRHR-eligible resources the following rock rings/cleared circles shall be considered contributors to a CRHR-eligible district, and a district form shall be prepared and submitted to the CHRIS: 33-018292, 33-018293, 33-021070, 33-021071, 33-021072, 33-021073, 33-021074, 33-021075, 33-021076, 33-021078, 33-021079, 33-021080, 33-021083, and 33-021077.

**MM CUL-13** **DTC/C-AMA Supplemental Resource Documentation.** To address direct and cumulative impacts to the Desert Training Center California Arizona Maneuvers Area (DTC/C-AMA), the project owner shall retain cultural resources specialists, including a historian (preferably a military historian), who are qualified to receive a California BLM Cultural Resources Use Permit and associated Fieldwork Authorization to prepare a desktop

inventory, map, ArcGIS file geodatabase using existing aerial photography, digital surface models, and orthoimagery of WWII-era features near Desert Center. The specific features will be identified by BLM. The maps will be displayed on DPR 523K forms and include overview maps, facility boundaries, and all major cultural features (i.e., roads, trails, tent camps, etc.). A digital copy of all maps and the geodatabase will be submitted to the BLM. The geodatabase will comply with all GIS data standards established by BLM and will include historical maps, metadata and digitized features, and requirements of the National Register of Historic Places nomination process. The project owner must ensure that the details of this effort are provided to RWQCB and the BLM Authorized Officer or Authorized Officer (AO) for BLM review and approval prior to the implementation of Mitigation Measure CUL-13.

**MM TCR-1** **Traditional Knowledge Workshops.** In order to address direct, indirect and cumulative impacts to Tribal Cultural Resources identified by AB 52 consulting tribes ~~Agua Caliente Band of Cahuilla Indians~~ the project owner shall fund and facilitate 3 multi-day (1-2 days) workshops focusing on sharing traditional tribal knowledge. These workshops may be attended by members of multiple tribes if all participants agree. The topic of the workshops will be determined by AB 52 consulting tribes ~~Agua Caliente~~, but may include but is not limited to topics such as ethnobotany, oral history, cooking traditional foods, harvesting plants, archaeological site visits etc. Each class shall include both lecture and field activities if appropriate. Workshop instructors will have previously developed the course content. Participants of each workshop shall be no more than 15 enrolled ~~Agua Caliente Band of Cahuilla Indians~~ tribal members of AB 52 consulting tribes. It is assumed that AB 52 consulting tribal governments hosting these workshops ~~Agua Caliente~~ will provide ~~an~~ appropriate classroom space. ~~in Palm Springs.~~ Travel costs associated with the field activities (such as van rental) will be provided. Lodging and travel expenses will be provided for students or instructors that live more than 50 miles away from the classroom location. ~~Palm Springs.~~

# 3.6 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.

Comments received during the Scoping Period included concerns about the energy market, where the energy would go, and who would purchase it. These concerns are outside of the scope of CEQA. 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).

## 3.6.1 Environmental Setting

The proposed solar facility would generate up to 500 megawatts (MW) of renewable energy. The project would include a BESS, electrical substation, an approximately 4.4-mile-long 500 kilovolt (kV) generation intertie (gen-tie) line that would interconnect to SCE 500 kV Red Bluff Substation, and a 12 kV electrical distribution line to supply electricity to the O&M building and substation. The project would generate energy that would be conveyed to the statewide power grid via an overhead or partially underground 500 kV gen-tie line to the SCE Red Bluff Substation, located south of I-10 and approximately 0.5 miles south of the project area on BLM-administered land. The SCE transmission system serves approximately 15 million people in central, coastal, and southern California, excluding the City of Los Angeles and certain other cities (SCE, 2021). 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).

The proposed project would be located within the CDCA Planning Area within the Riverside East SEZ pursuant to the BLM's Solar Programmatic EIS and associated ROD, and within a DFA pursuant to the DRECP and associated ROD.

## 3.6.2 Regulatory Framework

### Federal Law, Regulations, and Policies

There are no federal regulations, plans, or standards for energy that apply for the proposed project.

### State Law, 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)).

### Local Law, Regulations, and Policies

The proposed project is on federal land; there are no local regulations, plans, or standards for energy that apply to the proposed project.

## 3.6.3 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.

Lead agency actions that are consistent with these goals would not likely cause an energy-related impact. The energy impact analysis emphasizes avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy resources, and whether the project would result in a potentially significant environmental impact due to inefficient, wasteful, and unnecessary consumption of energy.

## 3.6.4 CEQA Significance Criteria

The criteria used to determine the significance of the project's energy impacts are based on the criteria identified in the CEQA Guidelines, Appendix G. Project-related impacts would be considered significant if they would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (see Impact E-1).
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (see Impact E-2).

## 3.6.5 Proposed Project Impact Analysis

***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 is anticipated to last approximately 15 to 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. A discussion of the GHG emissions resulting from the energy used during construction is presented in Section 3.8, Greenhouse Gas Emissions. Energy used during project construction would be reduced by air quality measures (see Section 3.3, Air Quality) that 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. Likewise, implementation of Mitigation Measure TRA-1 (Construction Traffic Carpool and Trip Reduction Plan) would encourage carpooling, which would reduce vehicle trips and associated emissions during construction.

Although construction would require the temporary use of energy resources, 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 minimal activity, as the solar modules would automatically generate power from solar energy. The switchyard and gen-tie line would carry electricity to the existing SCE Red Bluff Substation. During operations, up to 10 permanent staff could perform daily visual inspections, maintenance, and minor repairs. Alternatively, approximately two permanent staff and eight project operators could be located off site and would be on call to respond to any alerts generated by the monitoring equipment at the project site. Water for construction and operations would be obtained from several potential sources, including an on-site or off-site groundwater well, or trucked from an off-site water purveyor. Trucking of water would require fuel usage for the truck. Maintenance would typically include panel repairs, panel washing, transformer, inverter, energy storage system, and electrical equipment maintenance, and vegetation management. The Applicant would recondition internal roads up to once per year after any heavy storm events that may cause destabilization or erosion. Vegetation on the project site may be trimmed approximately once every 3 years or as needed. Solar panel washing would be required to maintain optimal electricity production. Washing would occur as needed (up to four times a year) using light utility vehicles and tow-behind water trailers. Up to 10 workers may be required intermittently for repairs, replacement of equipment, and panel cleaning. However, on average, 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. An estimate of the electricity produced by the proposed project from renewable energy resources that would displace the production of electricity from conventional (fossil-fueled) resources is presented in Section 3.8, Greenhouse Gas Emissions. While the proposed project would require the use of some energy for the battery storage system or other uses, the energy generated 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; however, the types and amount of energy used is uncertain. Mitigation and existing regulations would ensure that the proposed project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources.

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

***NO IMPACT.*** The proposed project would generate up to 500 MW of renewable energy 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 land allocated as the Riverside East Solar Energy Zone in the BLM's Western Solar Program and as a DFA under the DRECP. 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. 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.

## 3.6.6 Cumulative Impacts

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.

As discussed above, construction of the proposed project would not result in potentially 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 proposed mitigation requirements that 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. 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 contribute cumulatively considerable impacts, and most of the projects would have a beneficial cumulative

contribution related to directly supporting federal, state, and local plans for renewable energy development.

## 3.6.7 Mitigation Measures

All impacts would be less than significant, and no mitigation is required.

# 3.7 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.

Comments received during the Scoping Period included recommendations for practices that minimize disturbance of desert pavement or other crusts and adopting methods and installation techniques that will minimize impacts to soil crusts. These concerns are addressed in the analysis below.

## 3.7.1 Environmental Setting

### Geologic Setting and Physiography

The project site's elevation ranges from approximately 610 feet above mean sea level (amsl) on the northeastern boundary to 865 feet amsl along the southwestern boundary. 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 above msl 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.

## 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 alluvial ranging from Holocene (less than 11,700 years before present [BP]) to Pleistocene (11,700 to 1.8 million years 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. This unit underlies most of the project site.

**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 eastern part of the project site and along the southern boundary. Proposed solar structures would be located on portions of this unit in these areas.

## 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.[1] 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 maps the project area as having no potential for

[1] Colluvium is poorly sorted (a mixture of clay, silt, sand, and gravel), primarily gravity deposited sediment that has accumulated on and at the base of slopes.

seismically induced slope instability and as having slope grades of less than 15 percent (County of Riverside, 2019). There is no potential for slope failure at the project site.

### 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 entirely underlain by one soil association, the Vaiva-Quilotosa-Hyder-Cipriano-Cherioni association. The Vaiva-Quilotosa-Hyder-Cipriano-Cherioni soils typically consist 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, 2021).

Geotechnical evaluations conducted near 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 County of Riverside General Plan Safety Element (2019) maps the project area as having moderate to high wind erosion susceptibility.

A total of approximately 175 acres of isolated areas of desert pavement were identified in the eastern portion of the project site within and near areas of desert dry wash woodland during the biological survey for the project, with about ~~71~~ 57 acres of desert pavement underlying project development areas (Ironwood 2021 in IP Oberon, 2021, Appendix F). 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. It typically protects the finer grained underlying sediment from further erosion (NRCS, 2015). The rocks that make up desert pavement commonly are coated by desert varnish on their exposed surfaces. 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 varnish was not mapped during project surveys; however,

it is common on exposed rock faces of desert pavement and is visible on photographs of desert pavement in the Biological Technical Resources Report (BRTR) (Ironwood 2021 in IP Oberon, 2021, Appendix F). Both desert pavement and desert varnish take thousands of years to form.

The significance of desert pavement is their 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 pavements restrict the infiltration of water into the underlying soils and allow for 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); several areas of older alluvium are mapped in the eastern portion of the project area. Some of the surface soils in the area have been disturbed by past activities, including agricultural uses, grading of roads, use as a World War II maneuver area (see Section 3.9, Hazards and Hazardous Materials), and as a borrow pit in the southern portion of the site, that have likely disrupted and significantly reduced the amount of desert pavement in the area.

### 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, 2021a) and is not located within an Alquist-Priolo Earthquake Fault Zone as shown on the State Fault Hazard Maps (CGS, 2021). The closest known Quaternary faults to the site are the Aztec Mine wash fault, approximately 15 miles south of the project, the Blue Cut fault, located approximately 16.5 miles north of the project, and the Salton Creek fault, approximately 16 miles south of the project (USGS, 2021a). 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, 2021a). 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 will be 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 impact 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 most of the area in a moderate zone of liquefaction susceptibility with small areas of low susceptibility. The area has not been mapped by the 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 (County of Riverside, 2019). A geotechnical evaluation in the project vicinity (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.

### 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 (County of Riverside, 2019). Additionally, no subsidence areas are mapped by the USGS as underlying the site (USGS, 2021b).

### 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. 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.

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. Recent studies performed by Miles Kenney at Kenney GeoScience (BLM, 2019a and 2019b) reviewed the sand corridor throughout the Chuckwalla Valley and concluded that the sand transport system relies on local sand systems, rather than systems that cross the entire Chuckwalla Valley. 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; however, they are located more than a mile southwest of the SMZ and they have not been mapped as an eolian sand source.

### Mineral Resources

The 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 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, 2021a and 2021b).

The project site is mapped within Mineral Resource Zone (MRZ) 4 (CGS, 1994), which is identified as “areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of industrial mineral resources.” Therefore, no economically viable mineral deposits are known to be present at the site, and no mines are known to have existed within the project site boundary. The California Department of Conservation Mines Online website (CDOC, 2021) indicates that no mines are located within the project area.

The presence of alluvial materials at the site location and the presence of a mapped former borrow pit within the project boundaries (USGS, 1986) indicates the potential for sand and gravel materials, collectively referred to as aggregate resources, to be present on the site.

## 3.7.2 Regulatory Framework

### Federal Law, Regulations, and Policies

**International Building Code.** Published by the International Code Council, the purpose of the IBC is to establish minimum structural requirements to provide a reasonable level of safety, public health and general welfare through structural strength, and safety to life and property from fire and other hazards attributed to the built environment. The provisions of the IBC apply to the construction, alteration, relocation, enlargement, replacement, repair, 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 SWPPP, which would further specify 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 RWQCBs. 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 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 Plan**. The BLM manages the project area under the California Desert Conservation 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 amended the California Desert Conservation Plan with a focus on renewable energy and conservation. With regard to minerals, the DRECP does not amend the CDCA Plan goals, it adds the goal to support the national need for a reliable and sustainable domestic mineral and energy supply and to support responsible mining and energy development operations necessary for California's infrastructure, commerce and economic well-being.

### State Law, 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 for 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.

### Local Law, Regulations, and Policies

**Riverside County Department of Environmental Health.** The Environmental Health Department oversee 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 your 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 (PR) registered with this 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.

## 3.7.3 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. The EIR assesses impacts to soils and geologic hazards based on these considerations.

## 3.7.4 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 CEQA Guidelines. The project would result in a significant impact under CEQA related to geology, soils, and paleontological resources if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:
  - Strong seismic ground shaking (see Impact GS-1a);
  - Seismic-related ground failure, including liquefaction (see Impact GS-1b);

- Result in substantial soil erosion or the loss of topsoil (see Impact GS-2);
- 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 (see Impact GS-3);
- 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 (see Impact GS-4);
- 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 (see Impact GS-5);
- 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 (see Impact MR-1)

The following CEQA significance criteria from Appendix G were not included in the analysis and are not discussed further beyond the following 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 (County of Riverside, 2015a) or the Desert Center Area Plan (County of Riverside, 2015b).

## 3.7.5 Proposed Project Impact Analysis

***Impact GS-1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:***

- Strong seismic ground shaking? (Impact GS-1a)

***LESS THAN SIGNIFICANT.*** Although no known active or potentially active faults underlie the area, seismically induced ground shaking 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 to 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. 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 less than significant.

- Seismic-related ground failure, including liquefaction? (Impact GS-1b)

***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 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 primarily 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. 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 is less than significant.

### *Impact GS-2. Would the project result in substantial soil erosion or the loss of topsoil?*

***LESS THAN SIGNIFICANT WITH MITIGATION***. Since most of the 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 parcels 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, and other features. These activities would expose soil and increase the potential for wind and water erosion, and the ecological loss of this soil characteristic. 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). Ground disturbance for project construction could also disturb approximately ~~71~~ 57 acres of desert pavement (or 33% of the total 175 acres of desert pavement mapped on the project site), and although, most areas of mapped desert pavement underlie the solar arrays which will be primarily mowed and grubbed it is likely that the desert pavement would be disturbed during construction activities for components that ~~overly~~ overlie mapped desert pavement. 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.

Small areas of desert pavement would be disturbed during grading for structures for the substation yard secondary location option, whereas no desert pavement is mapped at or near the proposed central substation location, which would result in a minor increase in erosion potential for the substation yard secondary location option as compared to the proposed central substation location. Construction of the either gen-tie line approach would have similar erosion impacts, although the longer gen-tie option does cross an additional very small area of desert pavement, fractionally increasing erosion impacts for this option.

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 Oberon, 2021, Appendix T). 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-4 (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. 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 desert pavement during Project operation and MM BIO-6 (Compensation for Natural Habitat Impacts) which would require a 1:1 acre compensation for impacts to desert pavement. 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 that would also include BMPs that would reduce potential erosion.

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. 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-4 (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.

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 an eolian sand source. Impacts would be less than significant.

***Impact GS-3. 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?***

***LESS THAN SIGNIFICANT***. The solar facility site is in an area that has a low landslide and lateral spreading hazard due to the gentle slope and a low liquefaction potential. The site is in an area susceptible to subsidence. 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 (County of Riverside, 2016). However, there are no areas of

documented current or historic subsidence in or near to the project area (County of Riverside, 2019; USGS, 2021b). 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 less than 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 by the BLM 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.

### *Impact GS-4. Would the project be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

***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.

### *Impact GS-5. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

***LESS THAN SIGNIFICANT.*** Construction and decommissioning would require several hundred temporary employees. Above ground portable sanitary waste facilities would be used during these activities and no permanent wastewater disposal system would be needed.

During operations, the O&M facility would include restroom facilities for on-site personnel and wastewater generated by the restroom facilities. A septic system and leach field would be located 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 septic system requirements. The impact would be 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?***

***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 and a former borrow pit is located within the project boundary; 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 area. 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 to known mineral resources.

## 3.7.6 Cumulative Impacts

**Geographic Scope.** The geographic extent for the consideration of cumulative effects to geologic, mineral, and soils 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 Athos Renewable Energy Project and the Victory Pass Solar Project would be adjacent to the project site, with the gen-tie lines possibly partially co-located in the same ROW. These projects could therefore combine with the proposed project and result in a cumulatively considerable geologic or erosion impacts.

**Cumulative Impacts.** The project would have no impact related to fault rupture, landslides, seismically induced landslides, or locally important mineral resource recovery sites, therefore, they 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 listed above for 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.

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 several large solar projects that would require substantial ground disturbance, the Athos Renewable Energy Project (in construction), Easley Project (proposed), and the Victory Pass Solar Project (proposed). While each project's soil disturbance could result in off-site water and wind erosion, the Athos, Easley, and Victory Pass 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, the Athos Project started construction in January 2021, so the ground disturbance portion of the construction is likely to be complete or almost complete prior to the construction of the Oberon Project. Additionally, the Oberon Project would be subject to the same regulations, have a SWPPP, and have mitigation measures for dust control, a DESCP, and a Drainage Plan (MM AQ-1, MM HWQ-1, and MM HWQ-4, 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.

## 3.7.7 Mitigation Measures

**MM AQ-1** **Fugitive Dust Control Plan.** *See full text in Section 3.3, Air Quality.*

**MM BIO-5** **Vegetation Resources Management Plan.** *See full text in Section 3.4, Biological Resources.*

**MM BIO-6** **Compensation for Natural Habitat Impacts.** *See full text in Section 3.4, Biological Resources.*

**MM HWQ-1** **Drainage Erosion and Sedimentation Control Plan [DESCP].** *See full text in Section 3.10, Hydrology and Water Quality.*

**MM HWQ-4** **Project Drainage Plan.** *See full text in Section 3.10, Hydrology and Water Quality.*

# 3.8 Greenhouse Gas Emissions

This section describes the environmental setting and regulatory framework with respect to 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 based on supporting information provided in the Oberon Renewable Energy Project Air Quality/Greenhouse Gases Technical Report (IP Oberon, 2021).

There were no comments received during the Scoping Period related to greenhouse gas emissions.

## 3.8.1 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 484 million metric tons of $CO_2$ equivalent (MMTCO2e) according to the official Air Resources Board inventory (CARB, 2020). The State's economy-wide emissions have been declining in recent years. California's sources of GHG emitted approximately 425 MMTCO2e in 2018 (CARB, 2020), less than ten percent of the U.S. GHG emissions total for 2019 of 6,577 MMTCO2e.

## 3.8.2 Regulatory Framework

### Federal Law, 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 $SF_6$.

### State Law, 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 CARB to develop regulations and a mandatory reporting system to track and monitor global warming emissions levels (AB 32, Chapter 488, Statutes of 2006). The CARB Climate Change Scoping Plan, initially approved December 2008 (CARB, 2008) and most recently updated by CARB in December 2017, provides the framework for achieving California's goals (CARB, 2017).

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 eco-systems 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 petroleum refiners and suppliers of transportation fuels, and 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.

**Emission Reductions of $SF_6$ from Gas Insulated Switchgear (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 adopted by CARB in 2010, pending revisions in 2021, currently requires owners of such switchgear to: (1) annually report their $SF_6$ emissions; (2) determine the emission rate relative to the $SF_6$ capacity of the switchgear; (3) provide a complete inventory of all gas insulated switchgear and their $SF_6$ capacities; (4) produce a $SF_6$ gas container inventory; and (5) keep all information current for CARB enforcement staff inspection and verification.

**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.

### Local Law, Regulations, and Policies

**County of Riverside Climate Action Plan (CAP).** The Climate Action Plan, adopted December 8, 2015, establishes goals and policies for the County of Riverside to incorporate environmental responsibility into its daily management of residential, commercial, and industrial growth. The CAP includes GHG inventories of community-wide and municipal sources based on the data available for the year 2008. Emissions within the scope of the inventories include transportation, electricity and natural gas use, landscaping, water, and wastewater pumping and treatment, and treatment and

decomposition of solid waste. The County's 2008 community-wide inventory amounted to 7.013 MMTCO2e for the unincorporated areas, and 226,753 MTCO2e from municipal operations (Riverside County, 2015).

The CAP also provides an implementation tool to guide future decisions made by the County, including a guidance document in the County's Appendix F of the CAP titled "Greenhouse Gas Emissions, Screening Tables." The procedures for evaluating GHG impacts includes a threshold level of 3,000 MTCO2e per year that allows Riverside County to identify projects that may require a project-specific technical analysis to quantify and mitigate emissions (Riverside County, 2015).

The County General Plan includes one policy directly relevant to the proposed projects, to facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations (*Policy AQ 20.19*).

## 3.8.3 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 2016.3.2) software developed by CAPCOA. The Oberon Renewable Energy Project Air Quality/Greenhouse Gases Technical Report provides details on the construction activity assumptions, emission factors, and resulting quantities of emissions output by CalEEMod (IP Oberon, 2021).

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 production 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 facilities 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.

## 3.8.4 CEQA Significance Criteria

The threshold of significance for GHG emissions from industrial facilities in the SCAQMD is 10,000 MTCO2e per year (SCAQMD, 2019). Project-related GHG emissions would be considered significant if total emissions (direct and indirect effects) would exceed this threshold. Construction-phase GHG emissions arising from short-term activities may be

amortized over the longer-term life of the project, defined as 30 years, and added to the operational emissions for comparison with the threshold (SCAQMD, 2008).

## 3.8.5 Proposed Project Impact Analysis

### *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 proposed project would cause 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 and Operations.** Construction, operations, and eventual decommissioning activities would cause GHG emissions as a result of 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. Total GHG emissions over the duration of construction would amount to 8,961 MTCO2e, or 299 MTCO2e/year when averaged over a 30-year life of the project, as recommended by SCAQMD (SCAQMD, 2008). Use of up to 700 acre-feet of water during construction would require consumption of electricity to supply the water, and the indirect GHG associated with this construction-phase use of electricity would be approximately 946 MTCO2e. Direct on-site O&M activities would contribute an additional amount of 1,234 MTCO2e/year for mobile sources plus 54 MTCO2e/year for water use.

**Emissions Related to Land Use Conversion.** Construction of the proposed 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 by the existing soil and vegetation, which 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 on site would no longer be present to sequester $CO_2$. The loss of carbon uptake depends on what portion of natural vegetation on the site would be cleared for permanent installation of foundations, roads, or other on-site 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 (CalEEMod User's Guide, 2017). At this rate, this analysis assumed a permanent conversion of up to 3,500 acres for an estimate of up to 15,085 MTCO2e per year of sequestration capability being lost. This estimate considers that a large portion of the 5,000 acres within the project application area would retain natural conditions, and approximately 2,700 acres of the site would be occupied by proposed project facilities. The estimate is also conservatively high because some carbon sequestration capabilities would be restored within the site through revegetation efforts.

**Emissions Avoided by Producing Electricity.** The renewable power produced by the proposed project 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 proposed project would produce overall about 1.277 million megawatt-hours (MWh) each year for delivery to California's end-users. The volume of production is based on the generating capacity of 500 MW at a capacity factor of 30 percent, which is typical for a solar PV system in eastern Riverside County. The electricity produced by the project would displace fuel-burning by California's flexible natural gas–fired resources or electricity otherwise imported to California. The project's production of renewable power would avoid approximately 484,000 MT of $CO_2$ each year that could otherwise be emitted by fuel-burning generators, after accounting for line losses based on an avoided emissions displacement factor of 0.379 MT of $CO_2$ per MWh (CEC, 2015; CEC, 2019).

The quantity of avoided GHG could vary somewhat from the quantity predicted here depending on whether a storage component would be included. By using power to charge the storage component before discharging, some round-trip loss of energy would occur, and this would reduce the overall MWh-produced for end-users. The output of the storage component would be likely to be timed (dispatched) to occur during hours of peak demand for electricity. By dispatching stored renewable power during the hours of highest demand, the storage component is likely to result in beneficial GHG effects by displacing the peak-hour use of fossil fuel-burning generating units on the grid. Although the GHG effects of the storage component are not quantified here, the relative scale of avoided GHG of the project with storage would be comparable to the amount without storage.

**Quantification GHG Emissions Resulting from the Project.** The combined direct and indirect effects of the GHG emissions resulting from the proposed project are summarized in Table 3.8-1.

**Table 3.8-1. Oberon Project GHG Emissions**

| Activity | One-Time During Construction (MTCO2e) | Construction and Operations, Annualized (MTCO2e/year) | Proposed Project GHG Emissions (MTCO2e/year) |
|---|---|---|---|
| Duration of Construction | 8,961 | — | — |
| Water Supply for Construction | 946 | — | — |
| **Construction Total** | **9,907** | — | — |
| Construction Total, 30-year Amortized | — | 330 | 330 |
| Operations (Area and Mobile Sources) | — | 1,234 | 1,234 |
| Operations (Water Supply) | — | 54 | 54 |
| Annualized GHG Emissions | | | 1,619 |
| GHG Related to Land Use Conversion | | | 15,085 |
| GHG Avoided by Producing Renewable Power | | | –484,000 |
| **Total GHG, Construction and Operations** | | | **–467,296** |

Source: Appendix R in IP Oberon, 2021.

The combined direct and indirect effects of the emissions quantified in Table 3.8-1 indicates that a net GHG reduction would occur as a result of implementing the proposed project, by avoiding around 467,000 MTCO2e annually. This impact would be less than significant, and no mitigation is required.

### *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 proposed 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 proposed solar generating facility would be used to serve the needs of California's customers and would facilitate compliance with California's 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 CARB Climate Change Scoping Plan. Overall, the electricity produced by the proposed project would contribute to continuing GHG reductions in California's power supply. Because the proposed 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.

Other activities related to construction and operation of the proposed project would either be exempt from or would be required to comply with CARB rules and regulations to reduce GHG emissions and would cause no other potential conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

As the total GHG emissions generated during construction and operation of the proposed project would be considerably less than the amount of 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 proposed 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.

## 3.8.6 Cumulative Impacts

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. No single project could, by itself, result in a substantial change in 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 impact on GHG emissions would therefore not be cumulatively considerable.

## 3.8.7 Mitigation Measures

Impacts would be less than significant and no mitigation would be required.

# 3.9 Hazards and Hazardous Materials

This section evaluates the impacts from hazards and hazardous materials resulting from implementation of the proposed Oberon 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 hazards and risk of storage of batteries on site (the energy storage system), concerns regarding disposal and recycling of the solar panels during decommissioning, and concerns relating to Valley Fever. These issues are discussed in the analysis below.

## 3.9.1 Environmental Setting

### Land Use

Existing and past land use activities are commonly used as indicators of sites or areas where hazardous material storage and use may have occurred or where potential environmental contamination may exist. For example, many historic and current industrial sites have soil or groundwater contaminated by hazardous substances. Other hazardous materials sources include leaking underground tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes. Current and former agricultural properties commonly have herbicide, pesticide, and/or fumigant soil contamination.

The project is located primarily on open space desert scrub land in Riverside County, north of I-10 and east of Desert Center, California. The project is entirely on BLM-administered public lands within a DRECP DFA. The surrounding area consists of primarily BLM 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 located north of the proposed project site, the under construction Palen Solar Project is located east of the project site, the approved Athos Solar Project, is located immediately east and north of the project, and the proposed Arica and Victory Pass Projects, would be located approximately 1,000 feet east of the project. The project's proposed gen-tie line would be located within one 175-foot ROW, running approximately 0.5 miles southeast from the solar facility, across BLM-owned land and I-10, to the existing SCE Red Bluff Substation

### Hazards and Hazardous Materials

During construction, small amounts of hazardous materials, such as fuels and greases to fuel and service construction equipment, would be used and may be stored in

temporary aboveground storage tanks or sheds on site. The fuels stored on-site would be within a fenced and secure temporary staging area. If quantities exceed regulatory thresholds, the project would ensure that storage is undertaken in compliance with the Spill Prevention, Control, and Countermeasure) Rule[1] and a Hazardous Materials Business Plan, which would be developed prior to construction, in compliance with the Unified Program[2] (EPA, 2010; CalEPA, 2021). 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 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of the project's construction. Safety Data Sheets for all applicable materials present on site would be made readily available to on-site personnel.

Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at municipal 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.

Naturally occurring hazardous materials include asbestos. However, there are no mapped occurrences of naturally occurring asbestos minerals located near the proposed project (USGS and CGS, 2011).

**Energy Storage System.** The project includes the installation of up to 500 MW of energy storage. The storage system would consist of battery, flywheel, or other similar storage technology housed in electrical enclosures and buried electrical cable. The storage component would have a footprint of approximately 25 acres.

The project 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, both systems would be accompanied by air conditioners or heat exchangers.

The energy storage system would be designed, constructed, operated and maintained in accordance with applicable industry best practices and regulatory requirements, including fire safety standards. If applicable, the system would be certified to UL 9540, the standard associated with control, protection, power conversion, communication,

[1] The Spill Prevention, Control, and Countermeasure (SPCC) Rule was created by the United States Environmental Protection Agency as a part of its oil spill prevention program and was published under the Clean Water Act in 1974. The purpose is to help facilities prevent a discharge of oil into navigable waters or adjoining shorelines.

[2] The Unified Program is overseen by the California Environmental Protection Agency. The Program protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistency apply statewide standards when they issue permits, conduct inspections, and engage in enforcement activities.

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.

**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, west 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 2 miles northwest 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, 2018). 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 ordnance (UXO).

**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.

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, 2020b).

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 (CDPH, 2020a, 2020c). According to the California Department of Public Health (CDPH) the number of reported incidences of Valley Fever in California in 2019 is the highest since coccidioidomycosis became individually reportable in 1995. There were 9004 cases reported in 2019, with an incidence rate of 22.5 cases per 100,000 population. This is a 159 percent increase from 2013 (CDPH, 2020c). 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 255 cases and an incidence rate of 10.4 per 100,000 in 2019 (CDPH, 2020c).

Several notable incidences of solar farm construction workers contracting Valley Fever (coccidioidomycosis) 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.

### 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. Some ground disturbing activities for the proposed project include compaction, micrograding, or disc-and-roll grading on the solar facility site. Some of the parcels where facilities and arrays would be located would require light grubbing for leveling and trenching. In addition, access road beds would also be grubbed, graded, and compacted and underground cables to connect panel strings would be installed using ordinary trenching techniques. Ground disturbance for the 500 kV gen-tie line would include excavation for tower foundations and grading for spur roads.

Land uses in the region of the proposed project include three existing/under construction solar facilities: the Desert Sunlight Solar Farm, Desert Harvest Solar Project, and the Palen Solar Project, and the Chuckwalla Valley Raceway and associated private airport (Desert Center Airport). Otherwise, no commercial or other industrial uses are near the project site, although several solar facilities have been proposed or approved adjacent to the project. A Phase I Environmental Site Assessment will be undertaken to identify if there are known contaminants at the site.

### Wildland Fires

The proposed project is located entirely within an area designated as Federal Responsibility Area (FRA), with some adjacent areas of Local Responsibility Area (LRA) (CAL FIRE, 2007; County of Riverside, 2019). 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. 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 an area of Moderate FHSZ (CAL FIRE, 2020; County of Riverside, 2019). There is limited potential for wildfire on the site due to sparse vegetation. The project is located adjacent to the Lake Tamarisk Community, which is within a Local Responsibility Area. (See also Section 3.18, Wildfire, where wildfire hazards are discussed in more detail.)

### Schools

There are no schools or learning centers located within a 0.25-mile radius of the proposed project. As discussed in Section 3.15, Public Services, the closest school to the proposed project is the Eagle Mountain School, located approximately 13 miles northwest of the site.

### Airports and Airstrips

The private Desert Center Airport is located approximately 1 mile northwest of the proposed project. (see Figure 2-1, Project Area). The airport is part of the Chuckwalla Valley Raceway and is available for daily use for airplane, helicopter, and skydiving operations. A private airstrip, Julian Hinds Pump Plant Airstrip, is located about 19 miles west of the proposed project.

### Electromagnetic Fields

Electric voltage and electric current from transmission lines create electromagnetic 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.

## 3.9.2 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 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.

### Federal Law, Regulations, and Policies

**USEPA California Toxics Rule (40 Code of Federal Regulations 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.

**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. 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 DoD are under the jurisdiction of the FAA. This regulation includes: (a) FAA notification requirements for proposed construction, or the alteration of existing structures, that meet specific standards; (b) the standards used to determine obstructions to air navigation, and navigational and communication facilities; (c) the process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and (d) the process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

**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.

**National Fire Protection Association 855.** Standard for the Installation of Stationary Energy Storage Systems which provides the minimum requirements for mitigating the hazards associated with ESS. 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 a BESS.

### State Law, 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 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 1206 of the 2019 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 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 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.

### 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, 2016).

- **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.

**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.

## 3.9.3 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 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.

## 3.9.4 CEQA Significance Criteria

The criteria listed below were used to determine if the proposed project would cause or exacerbate hazards at and in the vicinity of the solar facilities. These criteria are the same as the significance criteria for Hazards and Hazardous Materials listed in the CEQA Environmental Checklist, Appendix G of the CEQA Guidelines. Although CEQA does not require a study of the effects of the environment on the project, the criteria were also applied to determine whether the project would be exposed to substantial existing risks. Under CEQA, the proposed project would have a significant impact on hazards and hazardous materials if it 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).
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area (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 following CEQA significance criterion from Appendix G was not included in the analysis and is not discussed further:

- 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.

## 3.9.5 Proposed Project Impact Analysis

### *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?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** 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. Such substances may be stored in temporary aboveground storage tanks or sheds located on the site. The small quantities of chemicals to be stored at the site during construction would be stored in their appropriate containers in an enclosed and secured location such as portable outdoor hazardous materials storage cabinets. The

portable chemical storage cabinets may be moved to different locations around the site as construction activity locations shift. If quantities exceed regulatory thresholds, the project would ensure that storage is undertaken in compliance with the SPCC Rule and a Hazardous Materials Business Plan (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 Hazardous Materials Management Plan (HMMP)(IP Oberon, 2021, Appendix X).

Construction of the project is not anticipated to produce, use, store, transport, or dispose of extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations). Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel.

The project may use a variety of PV technologies including, but not limited to, cadmium telluride panels, crystalline silicon panels, or copper indium gallium diselenide panels. None of the panels being considered contain materials that are classified as hazardous wastes. 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. During decommissioning, the solar panels would be removed and placed in secure transport containers for storage, and transported to another facility for reuse, material recycling, or disposal in accordance with regulations in effect at the time of closure. With current technology over 90 percent of a PV system is recyclable with the glass, metallic, and PV film components easily separated by mechanical and chemical processes for remanufacturing into new panels or other products.

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 municipal 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. The Applicant would develop an Environmental Inspection and Compliance Monitoring program and plan for construction and operation of the project and designate a Project Environmental Manager to oversee the plan. Implementation of these procedures and plans and compliance with applicable local, state and federal regulations would minimize the risk of damage or injury from use, disposal, and transport of hazardous materials to less than significant levels.

During construction, herbicides may be applied to control weed growth. Use of herbicides would occur in accordance with all recommended application procedures as identified on product labels. If herbicides or pesticides are required, they would be BLM-approved

herbicides to control weed populations when manual control methods are not successful in managing the spread of invasive plants. The process for treatments would be characterized in a Pesticide Use Proposal that would be approved by the BLM. 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. The plan would comply with existing BLM plans and permits including the requirements of the Vegetation Treatments Using Herbicides (2007) and Vegetation Treatment Final EIS (2007). The project would not contain a residential or commercial component that would potentially expose people to pesticides or herbicides and their use would follow the BLM approved Pesticide Use Proposal; as a result, application of herbicides during construction would have 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. IP Oberon, LLC, and InDepth Corporation have prepared an UXO Hazard Mitigation Plan that includes proposed assessment, training, and UXO Recognition, Avoidance and Reporting Procedures (IP Oberon, 2021, Appendix BB).

Construction of the project could encounter previously documented and un-documented 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 munitions debris (MD). The project would be required to implement a UXO Identification, Training and Reporting Plan which addresses potential encounter of UXO, MEC, and MD and a WEAP which addresses hazardous materials handling and disposal training and information (Mitigation Measures HAZ-1 and HAZ-2).

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. Hazardous materials would be transported, stored, and disposed of as required by the HMMP (IP Oberon, 2021, Appendix X). Bulk chemicals

are not expected to be used on site; chemicals would be stored in smaller returnable delivery containers. Waste lubricating oil would be recovered and recycled by a waste oil recycling contractor. Small quantities of diesel fuel and gasoline may also be used and stored at the facility for use in off-road service vehicles and generators. Transformers located on-site would be equipped with biodegradable coolant that contains no poly-chlorinated biphenyls or other toxic compounds. 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. 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 to less than significant levels during the project's operation and maintenance.

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.

### *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?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** 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 an enclosed and secured location such as portable outdoor hazardous materials storage cabinets.

The Applicant's description of the project specifies that all hazardous materials would be kept in segregated storage with secondary containment as necessary. The portable chemical storage cabinets may be moved to different locations around the site as construction activity locations shift. The chemical storage area would not be located immediately adjacent to any drainage. The required SWPPP must include a list of potential pollutants (i.e., hazardous materials, fugitive dust, sediment, concrete waste), identify fueling areas, and include best management practices (BMP) to prevent and limit pollutants from reaching stormwater runoff.

Spill response plans would be developed prior to project construction and operation, and personnel would be made aware of the procedures for spill cleanup and the procedures for reporting a spill. Spill cleanup materials and equipment appropriate to the type and quantity of chemicals and petroleum products expected would be located on-site and

personnel shall be made aware of their location. The project HMMP includes requirements for spill response and cleanup) (IP Oberon, 2021, Appendix X). The project would implement the project SWPPP, spill response plans, 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. The implementation of Mitigation Measure HAZ 2 (Worker Environmental Awareness Program) would further ensure that any impact from accidental releases of hazardous materials into the environment would be less than significant by providing further detail regarding worker training, ensuring that workers would be trained on site-specific spill prevention, emergency response, and safe material handling.

As noted above, Valley Fever (coccidioidomycosis) is considered endemic in California and Coccidioides fungus are present in the arid desert regions of California, including Riverside County. 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.

If regulatory thresholds are exceeded for storage of hazardous materials, a SPCC would be implemented during operation, as required. 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. In addition, an HMBP and 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 project would include operation an energy storage system. This may include an up to 500 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. As noted previously, the BESS would be designed, 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, 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. Implementation and compliance with these design and safety regulations and MM FIRE-1 would reduce the impact to less than significant.

### *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 § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** No known hazardous material or environmentally contaminated sites have been identified at the site according to EnviroStor and GeoTracker, as of 2021. However. 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 formalize UXO training, investigation, removal, and disposal to ensure that potential UXO impacts would be less than significant. IP Oberon, LLC, and InDepth Corporation have prepared an UXO Hazard Mitigation Plan that includes proposed assessment, training, and UXO Recognition, Avoidance and Reporting Procedures (IP Oberon, 2021, Appendix BB).

### *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.*

***LESS THAN SIGNIFICANT.*** The proposed project is 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. As can be seen in Figure 2-1, Project Area, none of the proposed project's elements would be located within 5,000 feet of Desert Center Airport, which is considered Compatibility Zone E for an airport. 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). 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 does not have an influence area 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 200 feet. The gen-tie line structures would be approximately 3 miles south of the single east-west trending runway. The closest project element would be over 6,000 feet away. The owners of the airport, Chuckwalla Valley Raceway, are aware of the project and would coordinate any landings at the airport including advising any planes as to the potential nearby structures. Impacts to the airport due to the project structures are less than significant.

The PV solar panels for the proposed project would not create 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.

With respect to fire risks near the Desert Center Airport due to the project, the solar facility would be designed and constructed to industry safety design standards to reduce the risk of electrical fires at the site. A Fire Prevention Plan would be prepared in consultation with the Riverside County Fire Department and BLM to reduce the risk of an electrical fire on-site. Any impacts due to fire risk would therefore be less than significant.

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.

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

***LESS THAN SIGNIFICANT.*** The proposed site is in a remote area with few residences in the vicinity. Access to the solar facility site would be provided from Rice and Orion Roads via access gates. The routes would be maintained throughout construction, and appropriate detours would be provided in the event of potential road closures.

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 farm. These access points would allow for emergency vehicle access into and through the site. 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 co-located with other existing and proposed high-voltage transmission lines and would not introduce a new obstruction that would adversely impact fire suppression efforts.

See Section 3.17, Transportation, for detailed discussions regarding access in and around the area.

Thus, 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.

### *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?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** As discussed in Section 3-18 (Wildfire), the project is located within an area of moderate fire severity, not high/very high fire hazard area, as determined by CAL FIRE. The project site would be within a Federal Responsibility Area, but the project vicinity is designated as a mix of federal and Local Responsibility Areas according to CAL FIRE's Fire Hazard Severity Zones Map and the fire severity level of the area is Moderate (CAL FIRE, 2007). The site consists of undeveloped open space, with minimal native or ruderal vegetation. The solar facility would be designed and constructed to industry safety design standards (i.e., Institute of Electrical and Electronic Engineers, National Electric Code) and Riverside County Building and Safety Department requirements to reduce the risk of electrical fires at the site. Solar arrays are fire-resistant, as they are constructed largely out of steel, glass, aluminum, or components housed within steel enclosures. Substation equipment and inverters would be sited on concrete foundations and inverters would be housed in steel and concrete equipment enclosures, minimizing the risk of electrical sparks that could ignite a fire if there were equipment failure. In the event of a fire, the complete facility alternating current (AC) power system could be shut down, and each power block could be isolated and shut down individually. The inverters automatically shut down when they no longer sense voltage from the grid.

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 1206 of the California Fire Code. These standards would require installation of fire suppression 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.

A written emergency response plan (ERP) would be developed by the Applicant; project contractor(s) would include the ERP in the contractor-prepared project safety plan. In addition. The ERP would be consistent with applicable laws and regulations governing such emergencies. A Fire Management and Prevention Plan (FMPP) 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. Topics would include fire-safe construction,

including during any welding, reduction of ignition sources, control of fuel sources, availability of water, and proper maintenance of firefighting systems.

Overall, the construction, operation, and maintenance of the gen-tie line would result in a minimal increased risk of wildfires in the area. Compliance with all applicable wildland fire management plans and policies established by CAL FIRE, BLM, and the Riverside County Fire Department and implementation of a WEAP, as required under Mitigation Measure HAZ-2 (WEAP), would further reduce wildfire risks to less than significant levels. With mitigation, the risk of loss, injury, or death involving wildland fires due to the project would be less than significant.

Additional fire protection measures would include: sprinkler systems in the O&M building; a fire suppression system in the facility control room at the O&M building; and portable carbon dioxide (CO2) fire extinguishers mounted at the power conversion system units. The project would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health and safety requirements. Effective maintenance and monitoring programs are vital to productivity as well as to fire protection, environmental protection, and worker protection. The project would have a Project Fire Plan in place for construction and operation. This plan would comply with applicable BLM and Riverside County regulations and would be coordinated with the Riverside County Fire Department. Additionally, Mitigation Measure FIRE-1 (see Section 3.18) specifies information and training required by the Fire Plan.

Overall, the construction, operation, and maintenance of the proposed project would result in a minimal increased risk of wildfires in the area. The proposed project would comply with all applicable wildland fire management plans and policies established by CAL FIRE and the Riverside County Fire Department and specified in MM Fire 1.

Implementation of a WEAP, as required under Mitigation Measure HAZ-2, would further reduce wildfire risks to less than significant levels. 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. 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.

## 3.9.6 Cumulative Impacts

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; 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.

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 to hazards and hazardous materials from the cumulative projects within the geographic scope of analysis would not be considered cumulatively significant.

Construction of the project could encounter previously documented and un-documented 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 which addresses the identification and treatment of UXO and munitions debris and a WEAP which addresses hazardous materials handling and disposal training and information. All of 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 in conjunction with development of projects listed in Tables 3.1-1 and 3.1-2 is not anticipated to present a cumulatively significant impact to public health and safety hazards to residents.

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 combined effects related to contracting Valley Fever from the cumulative projects within the geographic scope of analysis would not be considered cumulatively significant.

The Oberon 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 cumulatively significant 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. The proposed project would be required to comply with applicable federal, state, and Riverside County requirements relating to fire safety and fire hazards, the Fire Management and Prevention Plan, and Mitigation Measures FIRE-1 and HAZ-2, 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 and therefore, the related projects impacts would not be considered cumulatively significant. In addition, the proposed project would result in cumulatively insignificant impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan because no aspect of the project would interfere with emergency response (e.g., construction is not expected to require any temporary lane closures that could restrict the movements of emergency vehicles).

## 3.9.7 Mitigation Measures

**MM AQ-1** **Fugitive Dust Control Plan.** *See full text in Section 3.3, Air Quality.*

**MM FIRE-1** **Fire Safety.** *See full text in Section 3.18, Wildfire.*

**MM HAZ-1** **UXO Identification, Training, and Reporting Plan.** Where ground disturbance work is involved, contractor(s) should 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 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 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 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

# 3.10 Hydrology and Water Quality

This section presents the existing local and regional water resources baseline for the Oberon Renewable Energy 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 information in this section is based primarily on the Oberon Renewable Energy Project Water Supply Assessment (WSA) by Aspen Environmental Group (IP Oberon, 2021, Appendix O) and the Oberon Solar Project Hydrology Study by Westwood Professional Services (Westwood, 2020).

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 groundwater. Comments included specific questions regarding groundwater availability and water quality in the basin, such as groundwater pumping, pollution, and the effect to regional aquifers. Commenters also recommend that BLM require all applicable CMAs associated with groundwater use to prevent overdraft. Commenters recommended that the impacts of changing precipitation patterns should be analyzed, and this should be considered 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 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.

## 3.10.1 Environmental Setting

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, a broad interior region 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.

The project is proposed on approximately 5,000 acres of land administered by the BLM; however, the project would disturb only approximately 2,700 acres overall. The project lies on alluvial fans emanating from the Chuckwalla Mountains to the south. The Chuckwalla Valley is bisected by a broad drainage system that extends southwest between the Chuckwalla and Coxcomb mountains to the Palen Dry Lake located about 6 miles northeast of the project. The elevation of the project site ranges from about 610 feet above mean sea level (amsl) on the northeastern boundary of the site to 865 feet amsl at the southwestern end of the site. The surrounding mountains rise to approximately 3,000

and 5,000 feet amsl (BLM, 2011). The project's site is relatively flat to gently sloping to the northeast.

## Climate and Precipitation

The Chuckwalla Valley, being part of the Sonoran Desert ecoregion, is characterized by high aridity, low precipitation, hot summers, and cool winters. Average maximum temperature is 108 degrees Fahrenheit (ºF) in July. Average minimum temperature is 66.7ºF in December (BLM, 2011). Average annual precipitation, based on the gauging station at Blythe Airport, is approximately 3.4 inches (IP Oberon, 2021, Appendix O). 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 (BLM, 2011). Eastern Riverside County is currently (March 2021) classified by the National Drought Mitigation Center (NDMC), National Oceanic and Atmospheric Administration (NOAA) and United States Department of Agriculture (USDA) as being in a severe to extreme drought (U.S. Drought Monitor, 2021).

## Groundwater

The information presented below for groundwater resources and the CVGB is primarily from the WSA prepared for the project by Aspen Environmental Group (2020) (IP Oberon, 2021, Appendix O). References used are cited in the WSA.

### *Groundwater Overview*

The Oberon Project overlies the CVGB. The CVGB covers an area of 940 square miles in eastern Riverside County, California. The basin underlies the Palen and Chuckwalla Valleys, and is bounded by 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. The Coxcomb, Granite, Palen, and Little Maria Mountains bound the valley on the north and extend ridges into the valley. The surface watershed contributing to the CVGB is 1,344 square miles, comprised of the Chuckwalla Valley (940 square miles) and the surrounding bedrock mountains (404 square miles). The CVGB is bordered by the Orocopia Valley Groundwater Basin on the west, the Palo Verde Mesa Groundwater Basin on the east, the Arroyo Seco Groundwater Basin on the southeast, the Chuckwalla and Little Chuckwalla Mountains on the south, the Cadiz Valley, Rive Valley, and Ward Valley Groundwater Basins on the north, and the Pinto Valley Groundwater Basin on the northwest.

Water-bearing units of the CVGB include Pliocene to Quaternary age continental deposits divided into Quaternary alluvium, the Pinto Formation, and the Bouse Formation. Bedrock is as deep as 5,000 feet below ground surface in the eastern portion of the CVGB. Wells in the vicinity of the Oberon Renewable Energy Project extend to depths of approximately 550 to 875 feet below ground level, depth to groundwater is approximately 100 to 150 feet below ground level (Aspen, 2018).

The CVGB is an unadjudicated groundwater basin considered very low priority under the California Sustainable Groundwater Management Act. Owners of property overlying the basin have the right to pump groundwater from the basin for reasonable and beneficial use, provided that the water rights were never severed or reserved. Groundwater production in the basin is not managed by an entity and no groundwater management plan has been submitted to the California Department of Water Resources (CDWR) (CDWR, 2021). There is no Urban Water Management Plan for the area, and there is no Integrated Regional Water Management Plan. Groundwater accounts for approximately 100 percent of the water supply in the Chuckwalla Valley.

**Recharge.** Recharge to the CVGB occurs from subsurface inflow from other groundwater basins, infiltration of precipitation, irrigation return flow, and wastewater return. Leakage from the Colorado River Aqueduct has also been identified as a possible source of inflow.

Subsurface inflow originates from the Pinto Valley and Orocopia Valley groundwater basins, which are west of the CVGB (IP Oberon, 2021, Appendix O). 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 experts ranging from a low of 953 acre-feet per year[1] (afy) to 6,575 afy (Aspen, 2018). The Oberon WSA groundwater budget analyses uses 3,500 afy and 953 afy, developed by NPS, to provide a probable range (Aspen, 2018).

Infiltration recharge to the CVGB by precipitation is difficult to assess due to lack of reliable data and the aridity of the area. Previous recharge estimates have ranged from 2,060 afy to 9,448 afy (Aspen, 2018). Generally, precipitation recharge has been estimated as a percentage of total precipitation. The Oberon WSA uses the recommended estimate calculated by the Energy Commission of 3 percent of total incident precipitation ending up as groundwater recharge, which results in an estimated precipitation-related recharge of 8,588 afy to the CVGB (CEC, 2015).

**Return Inflow.** Irrigation water applied to crops within the CVGB has the potential to infiltrate to groundwater depending on the amount and method of irrigation, soils, crop type, and climate, and about 800 afy of irrigation water return flow is estimated to reach the CVGB. Wastewater return flow within the CVGB originates from the Chuckwalla State Prison, the Ironwood State Prison, and the Lake Tamarisk development near Desert Center, and it is estimated that 831 afy infiltrates to the CVGB. Leakage into the CVGB from the Colorado River Aqueduct into the CVGB, which runs across the western edge of the CVGB, has not been documented, but was hypothesized. However, since this recharge component is not well documented and is only hypothesized, it is not used in the Oberon WSA (IP Oberon, 2021, Appendix O).

[1] One acre-foot (AF) is the volume of water that would cover one acre to a depth of one foot. One AF equals 326,000 gallons or 35,560 cubic feet of water.

**Storage.** Total groundwater storage in the CVGB was originally estimated at 9,100,000 acre-feet (af), and more recently at 15,000,000 af. The estimate of 15,000,000 af was made by the CDWR based on multiplying specific yield times saturated thickness times basin size (CDWR, 1979 and 2004). Saturated thickness was obtained by subtracting the average depth to water from the average thickness of alluvial sediments, or 500 feet, whichever is smaller. A 2013 analysis for the Eagle Mountain project estimated the storage capacity of the Chuckwalla Valley Groundwater Basin to be about 10,000,000 af (SWRCB, 2013). The most recent CDWR estimate of 15,000,000 af is used in this baseline description.

**Demand/Outflow.** Outflow from the CVGB occurs from subsurface outflow to the Palo Verde Mesa Groundwater Basin, groundwater extraction wells, and evapotranspiration from Palen Dry Lake. Subsurface outflow to the Palo Verde Groundwater Basin has been estimated by several studies, with estimated outflow ranging from 400 acre-feet per year (afy) to 1,162 afy (CEC, 2015). The WSA for this project adopted the 400 afy estimate. Current and historical groundwater extraction in the CVGB includes agricultural water use, pumping for Chuckwalla and Ironwood State Prisons, pumping for the Tamarisk Lake development and golf course, pumping for solar farm construction and operation, domestic pumping, and a minor amount of pumping by Southern California Gas Company (CEC, 2010). Groundwater is very close to the surface at Palen Dry Lake, which would allow for water loss through evapotranspiration, estimated at approximately 350 afy (CEC, 2015).

### *Groundwater Trends*

Groundwater levels range from the ground surface to about 400 feet below ground surface within the CVGB. Groundwater contour data from 1979 show that CVGB groundwater moves from the north and west toward the gap between the Mule and McCoy Mountains at the southeastern end of the valley. Groundwater levels were stable up to about 1963 (CDWR, 2004). The CDWR reported total groundwater extraction of 9,100 afy in 1966.

The direction of groundwater movement is not expected to have changed since 1979, but there have been changes in groundwater levels, especially localized around areas of significant 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 when combined pumping exceeded 20,000 afy, well above historic water usage for the western portion of the basin (AECOM, 2011).

The NPS 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 monitoring data such as groundwater level trends since the 1980s; however, several wells have been used to collect groundwater data for the past 25 years, and these data show that groundwater level trends have been fairly stable in the eastern

CVGB and rising slowly back toward pre-agricultural pumping groundwater levels in the western CVGB, while dropping slowly but steadily only in the central CVGB. Monitoring wells installed in the eastern CVGB in 2012 by the United States Geological Survey show rising water surface levels since 2012 (USGS, 2020).

In general, well data show a relatively stable groundwater surface, interrupted locally in the past mainly by agricultural pumping. Local groundwater levels show evidence of rising after the agriculture-related drawdown of the 1980s ended, indicating that local extraction rates have not exceeded recharge.

The groundwater level trends derived from the available data show a general trend toward stability, but the analysis is inconclusive because the data are not complete, there are gaps in the record, and well locations do not cover the entire CVGB. The monitoring wells that show the most prominent historic declines are in agricultural or prison areas where a local drawdown would occur from intense use but would not necessarily be representative of the CVGB.

### *Baseline Groundwater Budget*

The baseline groundwater budget for the proposed project is the groundwater budget for the CVGB in the absence of the proposed project and all other known cumulative projects not already in place. For the purposes of this analysis, agricultural uses are considered as part of the baseline budget, as is the prison water use, and the Genesis Solar Project. There are no manufacturing water uses in the area.

Table 3.10-1 provides a baseline normal groundwater budget (see Appendix O in IP Oberon, 2021, for the derivation of this budget). This budget indicates a safe yield, which is the maximum quantity of water that can be continuously withdrawn from a groundwater basin without adverse effect. The baseline safe yield for the CVGB is estimated at 2,390 afy (Budget Balance from Table 3.10-1), meaning the basin is currently close to capacity in terms of groundwater extraction. This budget would be for a normal (average) year, in terms of precipitation and water use.

**Table 3.10-1. Estimated Normal Baseline Groundwater Budget for the Chuckwalla Valley Groundwater Basin**

| Budget Components | Acre-Feet per Year |
|---|---|
| **Inflow** | |
| Recharge from Precipitation | 8,588 |
| Underflow from Pinto Valley and Orocopia Valley Groundwater Basins | 3,500 |
| Irrigation Return Flow | 800 |
| Wastewater Return Flow | 831 |
| Total Inflow | 13,719 |

**Table 3.10-1. Estimated Normal Baseline Groundwater Budget for the Chuckwalla Valley Groundwater Basin**

| Budget Components | Acre-Feet per Year |
|---|---|
| **Outflow** | |
| Groundwater Extraction | –10,579 |
| Underflow to Palo Verde Mesa Groundwater Basin | –400 |
| Evapotranspiration at Palen Dry Lake | –350 |
| Total Outflow | –11,329 |
| **Budget Balance (Inflow – Outflow)** | **2,390 (= +0.02% of total annual storage)** |

Source: Oberon Renewable Energy Project Water Supply Assessment, Table 1 (IP Oberon, 2021, Appendix O).

Because of uncertainty in CVGB inflow rates, Table 3.10-2 provides the same analysis using lower inflow rates that have been used by the National Park Service (NPS; see Appendix G). This baseline budget shows the CVGB to be in deficit, with a loss of approximately 6,685 afy in the groundwater resource, meaning groundwater levels would be expected to drop as the resource is depleted over time.

**Table 3.10-2. Estimated Normal Baseline Groundwater Budget for the Chuckwalla Valley Groundwater Basin Using NPS Estimates of Precipitation and Subsurface Inflow**

| Budget Components | Acre-Feet per Year |
|---|---|
| **Inflow** | |
| Recharge from Precipitation | 2,060 |
| Underflow from Pinto Valley and Orocopia Valley Groundwater Basins | 953 |
| Irrigation Return Flow | 800 |
| Wastewater Return Flow | 831 |
| Total Inflow | 4,644 |
| **Outflow** | |
| Groundwater Extraction | –10,579 |
| Underflow to Palo Verde Mesa Groundwater Basin | –400 |
| Evapotranspiration at Palen Dry Lake | –350 |
| Total Outflow | –12,755 |
| **Budget Balance (Inflow – Outflow)** | **–6,685 (= –0.04% of total annual storage)** |

Source: Oberon Renewable Energy Project Water Supply Assessment Table 2 (IP Oberon, 2021, Appendix O).

Based on the estimated normal baseline groundwater budget using CDWR storage estimates and the water budget presented in Table 3.10-1, the basin would have an overall additive surplus of 76,480 af over an approximate 32-year period equivalent to

the construction and operation life of the Oberon Project and that in normal year conditions the Project water use would reduce the 32-year additive surplus by approximately 3 percent. Analyses of single dry year and multiple dry year scenarios for the Oberon Project indicates that a worst case single dry year scenario would result in a deficit; however, when normal rainfall resumes this deficit would be recovered within 2 to 3 years. Under the multiple dry year scenario, a deficit would occur over the life of the Project that could represent approximately 0.2 to 0.6 percent of the total groundwater within the basin. Analyses based on the conservative National Park Service (NPS) estimates of inflow recharge and reduced precipitation recharge, see Table 3.10-2, indicate that in this scenario there would be a deficit at the end of the Project's life representing approximately 1.4 percent of the total groundwater within the basin.

## Surface Water

### *Hydrology*

The Oberon Project is located within the Chuckwalla Valley Drainage Basin. All surface water in the western portion of the valley flows to Palen Dry Lake, located approximately 10 miles northeast of the Oberon Project. Surface water in the eastern portion of the valley flows to Ford Dry Lake, located approximately 10 miles southeast of the Palen Dry Lake. All the project's parcels drain to the Palen Dry Lake.

There are no perennial streams in the Chuckwalla Valley. Palen, Ford, and several smaller dry lakes are at topographic low points with the valley. All surface water in the western portion of the valley, which includes the Oberon Project area, flows to Palen Dry Lake.

Jurisdictional waters on the proposed project site were delineated for the Project area in the Jurisdictional Waters Report by Ironwood (2021) (see Appendix G in IP Oberon, 2021) and are discussed in Section 3.4 Biological Resources. The Jurisdictional Waters Report concluded that there were no jurisdictional waters of the U.S. on the Project site. However, based on the desktop and field surveys conducted for the Jurisdictional Waters Report, RWQCB and CDFW jurisdictional waters of the State were identified on the Project site consisting of unvegetated ephemeral dry washes and desert dry wash woodland habitat. The mapped washes on the alluvial fan underlying the Project consist of numerous braided channels flowing to the northeast that show signs of frequent avulsion (the rapid abandonment of and the formation of new channels) due to patterns of brief, intense surface water flow, which has resulted in a network of active and inactive (abandoned) channels across the site.

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 (Aspen, 2018). All these springs are in the surrounding mountains and none are located such that they could serve as water supply for the Oberon Renewable Energy Project.

### *Flooding*

Off-site stormwater flows that could affect the project are primarily from the numerous small washes originating in the Chuckwalla Mountains to the south of the project. The numerous small washes from the south flow across an alluvial fan descending from the northern slope of the Chuckwalla Mountains. The alluvial fan is characterized by unconsolidated shallow flow pathways with numerous small, unstable, and shifting stream pathways that, due to the arid climate and distance from the mountains, would carry water infrequently and only after sufficient rainfall.

Federal Emergency Management Agency (FEMA) has not prepared flood insurance rate maps for the project site; however, FEMA has mapped the area as an "Area of Undetermined Flood Hazard – Zone D" and the surrounding lands and the site do not lie within a federally mapped floodplain (FEMA, 2021). However, portions of the site along washes crossing from south to north across the site and the northwest corner of the site are within CDWR Flood Awareness zones (Westwood, 2020); however, most project facilities or components are planned outside of these areas. The site would be subject to flooding from the unnamed watercourses that cross the property.

At the location of the Oberon Project, all the unnamed 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 form.

A preliminary hydrology study has been performed for the project by Westwood Professional Services (Westwood, 2020), using a two-dimensional flow analysis appropriate for unconsolidated alluvial fan flooding. This study showed that the site would be subject to 100-year flooding to some degree. 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.

Because of the complex and distributary nature of the flow path upstream and throughout the project site, the Westwood study (2020) analyzed major sources of flooding in the area on a fixed-boundary terrain using a two-dimensional model grid with 50-foot cells. The model is an overview of the major sources of flooding in the area. Aerial photos show minor desert watercourses (washes) affecting the project that may be subject to flooding. The drainage area to these washes may be small and most of the larger washes are avoided by infrastructure design, and the flood potential therefore is minor, but there remains a potential for portions of the site to be affected by flooding to some

degree. There is also a potential for the alluvial washes to shift course during a large flood which would result in the need to remap the floodplains.

Flood flow depths for the 100-year flood generated by the washes descending from the southern flank of the Chuckwalla Mountains would be less than 0.5 feet across the majority of the site, 0.5 to 1 foot along and adjacent to the desert washes that cross the site in a generally south to north direction, and small areas of 1 to 1.5 feet within the washes (Westwood, 2020). Flow velocities from the washes crossing the site generally range from 1 to 2 feet per second (fps) for the smaller washes, with some areas of up to 2.0 ft fps. Small areas with velocities of up to 4.0 fps are mapped near the southern upstream areas of the larger washes crossing the site. Most of the larger flood zones identified in the Westwood study are avoided by project design; however, some solar components or facilities for the project are planned across smaller, narrower areas of potential flooding and along the edges of the larger wash flood areas.

### *Water Quality*

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 (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).

Groundwater quality is variable throughout the basin. Total Dissolved Solids (TDS) content across the basin ranges from 274 to 12,300 milligrams/liter (mg/L) (CDWR, 1979). Groundwater to the south and west of Palen Dry Lake is typically sodium chloride to sodium sulfate-chloride in character. The best water quality is found in the western portion of the basin, where TDS content ranges from 275 to 730 mg/L (CDWR, 2004). Sulfate, chloride, fluoride, and TDS concentrations are high for domestic use (CDWR, 2004). High boron and TDS concentrations, and high sodium impair groundwater for irrigation use (CDWR, 2004). Groundwater TDS content north of Palen Dry Lake ranges from 2,960 to 4,370 mg/L (CDWR, 2004).

None of the waters in or near the proposed project are currently listed as impaired on the CWA Section 303(d) list of impaired waters (SWRCB, 2018).

## 3.10.2 Regulatory Framework

### Federal Law, 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 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 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 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 U.S. Army Corps of Engineers 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 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 U.S. Army Corps of Engineers has determined that waters on the proposed 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*.[2] 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.

### State Law, 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

[2] The treaties, compacts, decrees, statutes, regulations, contracts and other legal documents and agreements applicable to the allocation, appropriation, development, exportation and management of the waters of the Colorado River Basin are often collectively referred to as the Law of the River. There is no single, universally agreed upon definition of the Law of the River, but is useful as a shorthand reference to describe this longstanding and complex body of legal agreements governing the Colorado River.

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 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 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;
- 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 (BLM, 2018). 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 (BLM, 2018).

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 afy, which would amount to 150 to 250 acre-feet per year for 500 units.

### Local Law, Regulations, and Policies

If project-related water is obtained from wells not on federal lands, certain local ordinances would apply:

**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 (OWTS). 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.

## 3.10.3 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.

## 3.10.4 CEQA Significance Criteria

The criteria used to determine the significance of potential hydrology and water quality impacts are based on Appendix G of the CEQA Guidelines. The proposed 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 groundwater 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 off site (See Impact HWQ-3b);
    - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (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).

### Effects Found Not to Be Significant

The following CEQA significance criterion from Appendix G was not included in the analysis and is not discussed further beyond this summary:

- 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 inundation due to seiche or tsunami. There are no FEMA mapped flood hazard zones at or adjacent to the site and the mapped CDWR flood awareness zones on site are avoided by project design.

## 3.10.5 Proposed Project Impact Analysis

#### *Impact HWQ-1. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

***LESS THAN SIGNIFICANT WITH MITIGATION.***

**Surface Water.** Construction of the project does not include extensive grading and ground disturbing activities, but would require excavation and grading for access roads, buildings, substation, and other features. Disturbance of soil during construction could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local ephemeral streams. Downstream beneficial uses (see Section 3.10.1) 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 or groundwater. 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, as discussed in Section 3.10.1, for ephemeral streams 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 Management Plan (HMMP) that has been prepared for the project. 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.

The Applicant has committed to development and adherence to an SWPPP or SWPPP-equivalent document, which will require best management practices 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 will include electrical transformers, an electrical substation, an operations and maintenance building, and battery storage systems. 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 or groundwater. A Hazardous Material Management Plan has been prepared, and if determined necessary based on regulatory thresholds, a HMBP, and site-specific SPCC would be developed; hazardous materials would be subject to the regulatory requirements described in Section 3.10.2.

Alterations to site topography due to the site preparation would affect both RWQCB and CDFW jurisdictional waters of the State that traverse the Oberon site. Approximately 54.6 acres of RWQCB jurisdictional waters consisting of unvegetated ephemeral dry washes would potentially be impacted by Project construction and surface alterations. Streambeds on the Oberon site classified as CDFW waters of the State consist of 64.9 acres of unvegetated ephemeral dry wash and 71.5 acres of desert dry wash woodland. A breakdown of both RWQCB and CDFW jurisdictional waters of the State for Oberon Project components is presented in the Jurisdictional water Report (see Appendix G in IP Oberon, 2021).

Surface flow patterns would be affected by alteration to jurisdictional waters of the State (unvegetated ephemeral dry washes and desert dry wash woodland) on the site which could result in increased siltation or downstream erosion. As noted in Section 3.4.5 Biological Resources, Proposed Project Impact Analysis construction of the Project would avoid most desert dry wash woodland in accordance with CMA LUPA-BIO-RIPWET-1. Changes to streambeds classified as RWQCB and CDFW jurisdictional waters of the State by the Oberon Project 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 and implementation of MM BIO-6 (Compensation for Natural Habitat Impacts), MM BIO-14 (Streambed and Watershed Protection), MM HWQ-1 (Drainage Erosion and Sedimentation Control Plan (DESCP)), and MM HWQ-4 (Project Drainage Plan).

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. The BLM approved Closure, Decommissioning, and Reclamation Plan would ensure public health and safety, environmental protection and compliance with all applicable laws, ordinances, regulations, and standards, including those related to water quality.

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 could be subject to flooding at depths of up to 1 foot. Although mass grading is not proposed, some ground disturbance is expected, and some of the solar panels and proposed other 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. With Mitigation Measure HWQ-1 in place, this impact is less than significant.

**Groundwater.** 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. With adherence to the Hazardous Materials Management Plan and SWPPP, the potential for such impacts to groundwater quality is low.

The project would produce sanitary wastewater from the O&M building, which would be treated and disposed at the site using a proposed septic system and leach field. The Riverside County Department of Environmental Health has permit and design require-

ments for wastewater treatment system design, including requirements for percolation, vertical distance from the groundwater table, and setbacks from the nearest groundwater well. The use and application of septic fields is an established practice as a method of wastewater treatment and disposal. Construction and design of the project's septic system would be subject to the Department of Environmental Health permit and design requirements and would have a less-than-significant impact to groundwater quality.

### *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.*** Construction water use is expected to be 700 acre-feet (af) total for the anticipated 15- to 20-month construction period. Construction water would be used primarily for dust control and soil compaction, with minor amounts for sanitary and other purposes. The average total annual water usage during operation is estimated to be up to 40 acre-feet per year (afy) for the assumed 30 years of operation. Water use during operations would be primarily for panel washing, restrooms, and general maintenance activities.

The project's water needs would be met by use of groundwater pumped from on- or off-site wells. All water needs would be met by groundwater from the CVGB.

A WSA has been prepared (IP Oberon, 2021, Appendix O) that concluded the Oberon Project's use of water, which would be 700 af during the 15 to 20 months of construction and up to 40 afy during the approximately 30 years of operation, would be well below the estimated CVGB annual calculated surplus of 2,390 af (Table 3.10-1) and the additive 32-year surplus for the life of the project using the CDWR groundwater storage estimates. Dry year scenarios for the Project water use indicate a short-term recoverable deficit for a worst case single dry year and a minimal deficit of 0.2 to 0.6 percent of the basin storage over the life of the project for a worst case multiple dry year scenario. Under average conditions the Oberon Project alone would not cause nor contribute to a groundwater deficit and would contribute only a minimal amount to a deficit over the lifetime of the Project in a multi-year drought scenario, nor would it impact the sustainable groundwater management of the basin. However, as described in the WSA and Section 3.10.1, there is substantial uncertainty regarding the baseline groundwater budget. Using the NPS estimates of baseline recharge, the CVGB is already in overdraft. Assuming NPS estimates, the Oberon Project's operations would contribute about 1.4 percent to the groundwater overdraft after the 30-year life of the project. Although the Proposed Action may result in a deficit in the CVGB, the projected worst-case scenario would not be a substantial increase to a deficit in the basin and would not be a substantial increase in groundwater use compared to current groundwater use presented in the WSA.

One concern is that project-related groundwater use could affect the adjacent Palo Verde Mesa Groundwater Basin (PVMGB) by inducing flows from the Colorado River into that basin. Any resulting use of Colorado River water without an entitlement would be illegal.

However, given the distance of the project from the Colorado River, and the pumping elevation, the project would not likely result in direct impacts to the PVMGB, and wells drawing groundwater for the project's use would not induce flow from the Colorado River. Nonetheless, because of uncertainty regarding an induced flow from the Colorado River, Mitigation Measure HWQ-2 (Mitigation of Impacts to the Palo Verde Mesa [PVMGB] Groundwater Basin) is required to reduce the possibility of impacts related to Colorado River water.

An additional concern is that groundwater use during the project's construction, operation, and decommissioning would cause drawdown in the immediate vicinity of the well(s) used to produce groundwater for the project. This is true regardless of whether the wells are on site or off site. This drawdown may have the potential to adversely affect nearby wells by lowering localized water levels such that the wells' operational capability would be affected, pumping rates decline, or pumping and operation costs increase. Implementation of Mitigation Measure HWQ-3, which includes the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan (GMRMP) prior to the onset of groundwater pumping for the project, would provide a detailed methodology for monitoring site groundwater levels and comparisons for levels within the basin, including identification of the closest private wells to the project site. If monitoring identifies an adverse effect on nearby wells, cessation or reduction of pumping, and/or compensation for equipment, other well improvements, or for increased costs for affected nearby wells would be required to mitigate the impact.

With Mitigation Measures HWQ-2 and HWQ-3 in place, Impact HWQ-2 is less than significant.

***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***

***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 substation, 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 will 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 will not be substantially altered. Although significant grading or ground disturbing activities will not occur, parts of the solar facility would be impacted by some form of ground disturbance from compaction, excavation, or grading. There would be some light grubbing for leveling and trenching. Any access roads that would be required would be grubbed, graded, and compacted along sections not already improved, resulting in minimal disturbance to topography. Impervious groundcover would be limited to foundations for the proposed solar panels (if needed), foundations for the transmission structures, the O&M building, energy storage system, and the substation, and compacted roads and parking areas.

Because of the proposed plan of 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 existing hydrologic patterns with respect to runoff, avoiding washes, stream beds, and stream banks, where feasible. This includes avoiding the largest washes that cross the Oberon site from south to north which correspond to the designed desert dry wash woodland setbacks. 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 as part of the Oberon Project. 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 and implementation of MM BIO-6 (Compensation for Natural Habitat Impacts), MM BIO-14 (Streambed and Watershed Protection), MM HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]), and MM HWQ-4 (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 Mitigation Measure 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 Mitigation Measure HWQ-1 in place, Impact HWQ-3a would be less than significant.

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

***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 will be minimal and limited to the foundations for the proposed solar panels (if needed), foundations for the transmission structures, the proposed buildings, energy storage system, and substation. The proposed parking area and roadways will be compacted, which will increase the runoff potential. Together, these features are anticipated to be only a small portion of the 5,000-acre site. Additionally, the project plans to leave drainage patterns relatively intact. Therefore, the increase in runoff is expected to be minimal, though an impact potential remains. 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 would 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. The project plans to maintain natural drainage to the maximum extent possible.

Although minimal alteration of drainage patterns is expected, the final site plans are not yet complete, and 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 (2020) presents an 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-4 (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 Mitigation Measures HWQ-1 and MM HWQ-4 in place, Impact HWQ-3b would be less than significant.

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

***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 Mitigation Measures HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) and MM HWQ-4 (Project Drainage Plan) in place, this potential impact from runoff would be less than significant.

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

***LESS THAN SIGNIFICANT WITH MITIGATION***. The project will 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 west, east, and southern boundaries of the project could cause flooding of the properties to the west, east, and southwest.

The flood depths described in the Westwood study (Westwood, 2020) are minor for the project, with depth estimated at up to 1 foot across portions of the site. Mitigation Measure HWQ-4 (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.

Portions of the project, as described in Section 3.10.1, would be subject to flooding with depths up to 1 foot. Any structures placed in those areas would be subject to flood damage. The solar panels will be 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 yard location option in the southeastern project area is located in an area that would also be subject to flooding of approximately 1 foot; the proposed central substation/BESS location is not in an area mapped as prone to flooding. The operations and maintenance building, depending on location, could be subject to flooding, as well as the inverters, internal power lines, telecommunications system, and access roads. 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. Both gen-tie line options would have similar potential for flood-related scour if structures were placed near flood zones. The substation yard location option structures, O&M buildings and other features could be subject to flood damage. Mitigation Measures HWQ-1 (Drainage Erosion and Sedimentation Control Plan [DESCP]) and MM HWQ-4 (Project Drainage Plan) would ensure that the site design include consideration of flood flows. Mitigation Measure HWQ-5 (Flood Protection) is proposed to ensure that all structures be protected from flooding and flood-related scour.

## 3.10.6 Cumulative Impacts

### *Surface Water and Water Quality*

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. The majority (81 percent) of the groundwater basin is BLM-administered land, with an additional 7 percent in NPS and State land. Twelve percent of the groundwater basin overlays undefined/private land of which a portion is the Athos solar project which would also use groundwater during construction. The private land in and around Desert Center and the associated water use is primarily for private use or some small amounts of agriculture. This amount of private water use was assumed in the WSA. The following existing, proposed, and reasonably foreseeable projects from Tables 3.1-1 and 3.1-2 are located within this same hydrologic unit, which has relatively uniform drainage and water quality characteristics: West-wide Section 368 Energy Corridors, Genesis Solar Energy Project, Desert Sunlight Solar Project, SCE Red Bluff Substation, Devers–Palo Verde No. 1 Transmission Line, Devers–Colorado River Transmission Line, Blythe Energy Project Transmission Line, Desert Harvest Solar Project, Palen Solar Project, Desert Southwest Transmission Line, Eagle Mountain Pumped Storage Project, Athos Renewable Energy Project, Victory Pass Solar Project, and Arica Solar Project.

Cumulative impacts to hydrology and water quality include the impacts of the Oberon Project together with those likely to occur from other existing, proposed, and reasonably foreseeable projects, many of which are similar solar power projects. These cumulative projects have the potential to contribute to cumulative 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 watercourses 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 Oberon 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*

A cumulative groundwater analysis has been performed in the WSA (IP Oberon, 2021, Appendix O), which considers the entire CVGB. Existing, proposed, and reasonably foreseeable projects that were considered in the cumulative groundwater analysis are: Arica Solar Project, Victory Pass Solar Project, Palen Solar PV Project, Desert Sunlight Solar Farm, Red Bluff Substation, Eagle Mountain Gen-tie line, Eagle Mountain Pumped Storage Project, Desert Harvest Solar PV Project, and Athos Renewable Energy Project. There is no foreseeable residential, recreational, or industrial development that would increase the groundwater use. The WSA shows that the Oberon Project contributes a little less than two percent of the total cumulative operational extractions long-term and would have little effect on the rate of groundwater use or recovery. The Eagle Mountain Pumped Storage Project would use nearly 10 times the operational groundwater of all other cumulative projects combined.

Assuming the adopted inflow estimates presented in Table 3.10-1, and assuming construction starts in 2022, with the Oberon Project and the cumulative projects in place, there would be an initial groundwater overdraft of up to 11,527.5 af in the year 2024. The CVGB would then begin to slowly recover. By the end of the 30-year period of analysis, the cumulative groundwater deficit would be approximately 6,896.2 af (approximately 0.05 percent of total CVGB storage). Without the Oberon Project and all other cumulative projects in place, there would be a surplus of 81,260 af at the end of the 30-year period (Approximately 0.5 percent of total CVGB storage). Under this scenario, though there would be an initial overdraft of approximately 0.05 percent of total CVGB storage, cumulative water use would be slightly less than the current CVGB surplus, meaning the cumulative impact would be less than significant.

The same analysis using NPS infiltration and underflow estimates (Table 3.10-2) would result in a total cumulative deficit of about 315,446 af (2.1 percent of total storage), to which the Oberon Project would contribute about 0.6 percent, or 1,900 af. Using these inflow estimates, the CVGB would not recover the overdraft within the 30-year period, with or without the Oberon Project. Although this would be an impact, the small percentage of cumulative deficit is not substantial considering the amount of groundwater available in storage so would not be considered cumulatively significant.

Like the proposed project, many of the cumulative projects may install or use existing wells on or near each project site, drawing directly from the CVGB. All the cumulative projects listed would overlap for some period during operation and it is possible that some projects could overlap in construction and/or decommissioning timing. In this case, groundwater withdrawal could combine from these projects such that cumulatively

they would cause local CVGB groundwater levels to decline. Lowered groundwater levels due to pumping to supply water for the cumulative projects and proposed project could combine to cumulatively impact pumping rates and capability in other nearby wells, a potentially significant cumulative impact. Mitigation Measure HWQ-3 would require the development and implementation of a Groundwater Monitoring, Reporting, and Mitigation Plan prior to the onset of construction of the project that would result in implementation of measures to mitigate any adverse effects on nearby wells. This would reduce the project's incremental contribution to a less-than-significant level because it would ensure that all project-related impacts would be reversed through cessation or reduction of pumping or would be compensated for through equipment other well improvements or offset of increased costs for continued groundwater pumping at affected wells.

## 3.10.7 Mitigation Measures

**MM BIO-6** **Compensation for Natural Habitat Impacts.** *See full text in Section 3.4, Biological Resources.*

**MM BIO-14** **Streambed and Watershed Protection.** *See full text in Section 3.4, 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 and the BLM for review and approval a DESCP for managing stormwater during project construction and operations. The DESCP must 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. The plan must also cover all linear project features such as the proposed gen-tie line. 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 for the proposed 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.
- *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 prevent wind and water erosion including application of chemical dust palliatives after rough grading to limit water use.
- *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 erosion control specialist. The DESCP shall include copies of recommendations, conditions, and provisions from the Regional Board and/or BLM.

**MM HWQ-2** **Mitigation of Impacts to the Palo Verde Mesa Groundwater Basin (PVMGB).** 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 would be owned and/or operated by the Applicant, the Applicant shall develop a Colorado River Water Supply Plan (Plan) 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 Plan 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 (MM HWQ-3). No pumping of groundwater below the accounting surface shall occur without compensatory mitigation according to the approved plan. A copy of the Plan shall also be submitted to the Metropolitan Water District 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 Plan shall identify measures that will be taken to reduce and replace water on an acre-foot to acre-foot basis should the project consume any water from within or below the Colorado River Accounting Surface.

The Plan 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 Plan shall further describe that if project-related groundwater pumping draws water from below the accounting surface the following shall occur:

1. Based on groundwater monitoring data, the quantity of groundwater pumped from below the Accounting Surface shall be recorded, and
2. 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 Plan shall include the following information:
    - Identification of water conservation/offset activities that reduce/ replace the quantity of water diverted from the Colorado River;

- Identification of any required permits or approvals and compliance of conservation/offset activities with CEQA and NEPA;
- An estimated schedule of completion for each identified activity;
- Performance measures that would be used to evaluate the amount of water reduction and replacement by each identified activity; and
- 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-3** **Groundwater Monitoring, Reporting, and Mitigation Plan**. 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 Groundwater Monitoring, Reporting, and Mitigation Plan (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) has 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 plan to the 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 basin 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 (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-4** **Project Drainage Plan.** The Applicant shall provide the RWQCB 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. In areas of increased flood hazard where desert tortoise exclusion fencing would be installed, breakaway fencing shall be designed and installed so as not to adversely affect flooding or scour at adjacent properties. 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 project 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-5** **Flood Protection.** Substations, the O&M Building, energy storage system, 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.

# 3.11 Land Use and Planning

This section describes existing land uses and land use plans and policies in the project area. Land use can be assessed by analyzing current land activities, land ownership, zoning, and consistency with existing land use plans, ordinances, regulations, and policies. The proposed project and gen-tie line are located entirely on BLM-administered public lands.

Comments received during the scoping period included concerns about noncompliance with the DRECP CMAs, and that the project would require a land use plan amendment. One comment letter stated that the proposed exemption of unspecified DRECP CMAs could lead to future exemptions and undermine the intent of the DRECP, and that the Applicant should analyze the proposed project within the umbrella of the entire DRECP framework. The Desert Tortoise Council stated that it believes that the management of the Mojave desert tortoise and its habitats in California is not in compliance with FLPMA or the purposes for establishing the CDCA. These comments are addressed in the analysis below.

## 3.11.1 Environmental Setting

The project site is in eastern Riverside County, north of I-10 at Desert Center (see Figure 2-2). The project area is primarily BLM land with some scattered rural residences and agricultural operations. The project site is located in a DRECP DFA, a BLM land use designation that permits development of solar projects.

Three large solar projects are in operation in the vicinity: the Desert Sunlight Solar Farm approximately 4.5 miles northwest of the Oberon site; the Desert Harvest Solar Project approximately 3.5 miles north of the site; and the Palen Solar Project approximately 4 miles east of the site. The approved Athos Solar Project is under construction on parcels north and east of the Oberon site, with some of its parcels adjacent to the Oberon site. The proposed Victory Pass and Arica Solar Projects are undergoing environmental review and would be located east and northeast of the Oberon site. The proposed Easley Solar and Green Hydrogen Project is early stages of review and is proposed on parcels north and east of the Oberon site. Associated with each of these solar projects is either an existing or a proposed gen-tie line connecting to the SCE Red Bluff Substation (see Figure 3.1-1). Where there are multiple gen-tie lines, the preference is that they be in the same or adjacent ROWs where feasible. IP Oberon, LLC, is proposing that the Easley Project would share the Oberon gen-tie line. In addition, several BLM-granted ROWs cross the project site, including gen-tie and access routes for the existing or approved Desert Sunlight, Desert Harvest, Palen, and Athos Solar Projects and the Eagle Crest Pumped Storage project, located west of the Desert Sunlight project. The Desert Harvest and Desert Sunlight ROWs cross east-west through the length of the Oberon site. The other ROWs are clustered at the east end of the Oberon site. The proposed shared gen-tie line for the Arica and Victory Pass Solar

Projects also would cross the Oberon site parallel to this existing north-south gen-tie line corridor.

The project site is approximately 1.8 miles southwest of the Chuckwalla Valley Raceway and 1.3 miles from its associated airport. The Joshua Tree National Park boundary is approximately 6 miles south and east of the site. The Tamarisk Lake Desert Resort is near the northwest corner of the site. Other land uses in the area include active and fallow agricultural fields, residences, solar development, and electrical transmission lines. Surrounding areas also include undeveloped desert land that is largely federally administered.

The Oberon Project's 500 kV gen-tie line would cross into the Chuckwalla Area of Critical Environmental Concern (ACEC) south of I-10, within the designated utility corridor,[1] to tie into the existing Red Bluff Substation. A portion of the other gen-tie lines north and south of the I-10 corridor also would be sited within the Section 368 energy corridor established by the Westwide Energy Corridor Final PEIS and ROD.

## 3.11.2 Regulatory Framework

### Federal Law, Regulations, and Policies

**Federal Land Policy and Management Act (FLPMA), 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 ROW over, upon, under, or through such lands for roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System." Section 601(d) under Title VI, Designated Management Areas, of the FLPMA required preparation of a long-range plan for the CDCA, which is further described below. The primary directive guiding all of BLM's decisions under FLPMA is to put public lands to their highest and best use.

[1] In accordance with Section 368(a) of the Energy Policy Act of 2005, the BLM designated 5,000 miles of energy corridors (commonly referred to as "Section 368 energy corridors" or "West-wide energy corridors") for potential placement of future oil, gas, and hydrogen pipelines and electricity transmission and distribution infrastructure.

The Applicant is requesting a grant of ROW approval from the BLM (Palm Springs–South Coast Field Office) for the solar project and the gen-tie line, which are on land under the jurisdiction of the BLM.

**California Desert Conservation Area Plan, 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 10.7 million acres 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 CDCA identifies ACECs as special management areas where attention is required to protect important historic, cultural, scenic, biological, or other natural resources. There are seven ACECs located near the project (see Section 3.16, Recreation: Table 3.16-1).

**Desert Renewable Energy and Conservation Plan Amendment (DRECP) to the CDCA.** The DRECP is a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. The Record of Decision for the DRECP LUPA 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 11,000,000 acres of BLM-managed federal lands. The project is located within an area designated as a DFA. DFAs are locations where renewable energy generation is an allowable use, incentivized, and could be streamlined for approval under the DRECP LUPA.

### State Law, Regulations, and Policies

The project would be located entirely on BLM-administered public lands~~;~~. In general, state laws, regulations, and policies relating to land use (such as requiring general plans) do not apply on federal lands. However, both the Colorado River Basin RWQCB and CDFW have jurisdiction over water quality and wildlife, respectively. Their jurisdictional authorities are specified in the federal Clean Water Act, the Porter-Cologne Water Quality Control Act, CEQA, California Endangered Species Act, and the Fish and Game Code. The RWQCB will consider issuing discretionary Waste Discharge Requirements for the protection of water quality, and the CDFW will consider issuing a discretionary Incidental Take Permit for the threatened desert tortoise, and entering into a discretionary Lake and Streambed Alteration Agreement for effects of the project on

jurisdictional dry streambeds, including those supporting microphyll woodlands (see EIR Section 3.4, Biological Resources).

### Local Law, Regulations, and Policies

The project would be located entirely on BLM-administered public lands; local plans and ordinances do not apply on federal property. However, the following Riverside County land-use based plans and policies are provided for information only and apply solely to private lands.

**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 the County's territory. 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.

RCGP land use designations within the project area include Open Space Rural and some Agriculture. The Open Space-Rural 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.

The Agriculture land use designation is established to help conserve productive agricultural lands within the County. These include row crops, nurseries, citrus groves and vineyards, dairies, ranches, poultry and hog farms, and other agriculture-related uses. Areas designated AG generally lack infrastructure that is supportive of urban development. This land use designation allows one single-family residence per 10 acres except as otherwise specified by a policy or an overlay.

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 by the year 2020. Using that Vision as the primary foundation, the RCGP establishes policies for development and conservation within the entire unincorporated County territory. Examples of pertinent policies include:

***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 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 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. The Desert Center Area Plan provides customized direction specifically for this portion of the County and guides the evolving character of the desert area. The Area Plan 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. It 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 the following zone classifications: General Commercial (C-1/C-P), Commercial Tourist (C-T), Scenic Highway Commercial (C-P-S), Rural Commercial (C-R), Industrial Park (I-P), Manufacturing Servicing Commercial (M-SC), Medium Manufacturing (M-M), Heavy Manufacturing (M-H), Mineral Resources (M-R), Mineral Resource and Related Manufacturing (M-R-A), Light Agriculture (A-1), Light Agriculture with Poultry (AP), Heavy Agriculture (A-2), Agriculture-Dairy (A-D), Controlled Development (W-2), Regulated Development Areas (R-D), Natural Assets (N-A), Waterways and Watercourses (W-1), and Wind Energy Resource Zone (W-E).

The Development Standards of Zone N-A state that no building shall exceed 20 feet in height (Section 15.201). The Development Standards of Zone W-2 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.

**Board of Supervisors Policy B-29.** 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. 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. 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. Because the Oberon Project would be located entirely on BLM-administered land and no discretionary actions would be required by Riverside County, the project would not be subject to Policy B-29.

## 3.11.3 Methodology for Analysis

Evaluation of potential land use conflicts that may result from the project was based on a review of relevant planning documents, including the CDCA Plan and Amendments, and a review of the proposed solar facilities 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.

## 3.11.4 CEQA Significance Criteria

The criteria used to determine the significance of potential land use impacts are based on Appendix G of the CEQA Guidelines. The project would result in a significant impact under CEQA related to land use 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 (see Impact LU-1)

The following CEQA significance criteria from Appendix G is not included in the analysis:

- Physically divide an established community.

The project and its gen-tie line would not divide an established community because all project components are allocated on undeveloped parcels of BLM-administered public lands and there is not established community that would be divided.

## 3.11.5 Proposed Project Impact Analysis

***Impact LU-1. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

***LESS THAN SIGNIFICANT.*** This impact considers both the use of the land and the existing rights and potential conflicts with the project.

**Project's Use of Land.** The project would be located entirely on BLM-administered land within a DFA. The DFA designation allows for development of renewable energy facilities and associated infrastructure including gen-tie lines without requiring a land-use plan amendment if the project complies with relevant DRECP CMAs.

Areas of desert dry wash woodland, synonymous to blue palo verde (*Parkinsonia florida*)–ironwood (*Olneya tesota*) (microphyll) woodland alliance occur within the Sonoran creosote bush scrub in ribbons within the Oberon Project area. The language in DRECP CMA LUPA-BIO-RIPWET-1 states that a 200-foot setback be established for Semi-Desert Wash Woodland/Scrub areas. While the solar facility has been designed to optimize solar panel layout while minimizing impacts to microphyll woodland to the maximum extent practicable (aside from minor incursion), a 200-foot setback along all

ribbons of microphyll woodland habitat may needlessly prevent the development of lands that are otherwise suitable for solar development and near transmission infrastructure. To consider these lands for construction of the Oberon Renewable Energy Project, as proposed, during the NEPA process, BLM ~~may~~ considered whether a Land Use Plan Amendment (LUPA) to the CDCA, as amended, ~~that~~ would be required allow a project-specific variance to a portion of this CMA, as well as CMAs LUPA-BIO-3 and LUPA-BIO-SVF-6.

The Applicant is also seeking a variance to the USFWS protocol and an exemption from BLM in the LUPA, as allowed in DRECP CMA LUPA-BIO-IFS-4 in order to comply with the CMA and perform clearance surveys outside of the desert tortoise activity window.

Because the project may not comply with all of the DRECP CMAs, the project would not be constructed without BLM either: (1) issuing a project-specific LUPA, (2) the BLM State Director approving an alternative method of compliance with the applicable DRECP CMAs (DRECP LUPA ROD Section II.1.1, page 63), or (3) BLM determining that certain BLM criteria that achieve the intent of the CMAs are met and thus a LUPA is not required.

Approximately 500 feet of the gen-tie line would be within an ACEC and would require ground disturbance for the transmission structure(s) but would remain within an existing designated utility corridor. There is no feasible route to interconnect with the Red Bluff Substation, which is located withing the ACEC, without entering the ACEC. The proposed gen-tie line would parallel existing gen-tie lines to the extent feasible. The project and the gen-tie line would be consistent with the CDCA as amended by the DRECP LUPA, and its CMAs for the ground disturbance within the ACEC. Since this land is specifically designated for development, such as the proposed project, there would be no conflicts with BLM land use, and the action would not conflict with federal policies, regulations, and goals. However, the BLM retains the discretion to deny renewable energy right-of-way applications based on site-specific issues and concerns, even in areas identified as DFAs.

If the project is developed on this site, the land would not be available for other use opportunities that would otherwise be available on public lands during the life of the project. As discussed in Section 3.16 (Recreation), the project would permanently affect some BLM designated open routes by closing them, while others would be left open. Closure of BLM open routes is being considered by the BLM in their NEPA document and is considered an implementation process, consistent with BLM regulations.

At the end of the BLM ROW grant term, if there is no extension available, no other buyer of the energy emerges, or there is no further funding, the project would be decommissioned. Decommissioning would include removal of all facilities and reclamation of all disturbed areas. The land would then be available for other multiple uses.

The project is located on federal land and is not required to be consistent with local land use policies. Nonetheless, local land use policies have been reviewed in this CEQA

document where appropriate. The project would be consistent with Riverside County's policies to promote alternative energy supply sources and provide solar opportunities (see also Section 3.2, Aesthetics). As part of the permitting process, the project's developers would coordinate as appropriate with specific County Departments, such as the Riverside County Fire Department, that may be impacted by the project to ensure any impacts are addressed and that the project does not impact public facilities.

**Existing Rights and Potential Conflicts.** Grants, including the project ROW grant is subject to the valid existing right of others. Other valid existing rights pertain to collocated transmission lines, which do not conflict with the project, as the shared transmission line ROWs would be managed to meet all applicable regulations. If there are other applications in the project area, the BLM retains the right to require common use of rights-of-way for compatible uses, including facilities or access routes and the right to change grants to protect public health or safety of the environment.

The BLM retains the right to issue other compatible ROWs within the boundary of the project. If subsequent ROWs are granted within the site for the proposed ROW, the BLM would be required to notify those with valid existing rights, per CFR 2807.14. Grant holders would have an opportunity to respond in writing as to how the actions would impact their existing operations/rights. The BLM would consider the potential effects prior to granting subsequent ROWs. There are multiple active, approved, and proposed projects in the area, as shown in Tables 3.1-1 and 3.1-2, in Section 3.1.2 (Cumulative Impact Scenario). These include the existing and proposed solar projects, and the approved Eagle Mountain Pumped Storage project gen-tie line. Each of these projects include gen-tie lines that would cross or be adjacent to the Oberon Project gen-tie line, and all would connect into the SCE Red Bluff Substation (IP Oberon, 2021, Appendix W). If the secondary substation yard option is utilized in the southeastern project area, then the Oberon 500 kV gen-tie line would not cross any other gen-tie line ROWs.

Prior to ROW grant approval, the Applicant is required to coordinate with any legally existing ROWs or conflicting uses to ensure the project does not impact these uses, including bearing the cost of this coordination. This includes coordinating the construction of the gen-tie lines with construction of other approved projects. The Applicant has started this coordination process, in consultation with the BLM, by submitting documentation to the various existing and planned land users to ensure the gen-tie line does not infringe on their existing rights (IP Oberon, 2021, Appendix W).

**Conclusion.** The proposed project would not conflict with applicable land use plans, policies, and regulations upon approval by BLM of a LUPA to the CDCA or a decision by BLM approving an alternative method of compliance with the applicable DRECP CMAs or determining that criteria that achieve the intent of the CMAs are met and thus a LUPA is not required, and it would not result in an alteration of the present or planned land use of the area. The project is not inconsistent or incompatible with the site's existing, proposed, or surrounding land uses. As a result, any impacts with the use of the land and other conflicts would be less than significant.

## 3.11.6 Cumulative Impacts

The cumulative scope for land use would include eastern Riverside County. This is because the uses and users of the land from Desert Center to Blythe are similar and this region is often considered as a whole for land use planning. Implementation of the Oberon Project and other past, present, and reasonably foreseeable future projects, primarily solar development, would preclude the development of other future uses on the project site over the lifetime of the project and could affect land use opportunities on lands within the eastern Riverside County portion of the CDCA Plan area. Potential effects could include access conflicts, or conflicts with various gen-tie line routes connecting to the Red Bluff Substation.

Past, present, and reasonably foreseeable future actions making up the cumulative scenario are identified in Tables 3.1-1 and 3.1-2. Many solar and renewable energy projects have been proposed, approved, or constructed in the area, on both private and public land. Similar to the project, some cumulative projects would also block or preclude access to recreational opportunities or preclude other types of multiple use (e.g., agriculture, mining, grazing, etc.). With appropriate permitting, each project would avoid impacts to land use. During the permitting of the cumulative projects, multiple uses would be reviewed by the BLM and/or County to ensure there would be appropriate access and no direct conflicts. As part of its planning process, the BLM has set aside millions of acres for uses other than renewable development (including for recreation, mining, conservation, etc.) and has directed renewable development to DFAs. While the County Desert Center Area Plan did not anticipate the potential for multiple solar projects in the area, the County has recently approved nearby solar projects (Athos Renewable Energy Project) and has shown that it does not conflict with the County plans. Because each individual project must undergo review and because the agencies have identified the Desert Center area as one where renewable energy is acceptable, the project in conjunction with the cumulative projects would not result in a cumulatively significant land use impact.

## 3.11.7 Mitigation Measures

All impacts would be less than significant, and no mitigation is required.

# 3.12 Noise

This section evaluates the environmental impacts caused by the noise and ground-borne vibration levels resulting from implementation of the proposed 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 impacts of the proposed Projects. Noise impacts to wildlife are separately addressed in this EIR in Section 3.4, Biological Resources.

There were no comments received during the Scoping Period related to potential noise or vibration impacts.

## 3.12.1 Environmental Setting

### 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 wilderness areas, the Ldn noise levels can be

below 35 dBA (BLM, 2010). 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, 2013). 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).

## Existing Noise Environment

Historically, noise surveys conducted for the Riverside County General Plan found locations along I-10 to be exposed to noise over 60 dBA Ldn, for any location within approximately 750 feet of the I-10 centerline, and over 65 dBA Ldn, for locations within approximately 350 feet of the I-10 centerline. For other major highways, the 60 dBA traffic noise contour was projected to be approximately 410 feet from the centerline (Riverside County, 2008). Locations along SR-177 are exposed to lower noise levels. Data collected for SR-177 in the Desert Center area shows roughly 2,800 vehicles daily and 7.5 percent of the baseline traffic as trucks (Caltrans, 2016); with this mix of baseline traffic the existing 60 dBA Ldn contour is approximately 230 feet from the centerline of SR-177 (Riverside County, 2019).

The setting for noise also includes the private Desert Center Airport and Chuckwalla Raceway, which offers use of the track for a fee and hosts motor sports events primarily on weekends. The raceway is located near the Desert Center Airport, which is infrequently used. The Desert Center Airport is a private airport owned by Chuckwalla Raceway that is available to racetrack users. The 5,300-foot-long asphalt runway is in fair condition and is in daily use for airplane, helicopter, and skydiving operations (Chuckwalla Valley Raceway, 2021). Prior to establishment of the Chuckwalla Valley Raceway in 2010, the Riverside County Airport Land Use Compatibility Plan Policy Document (2004) showed an average of fewer than one aircraft operation per day at the Desert Center Airport, and the 55 dBA CNEL noise contour is limited to the immediate vicinity of the runway (Riverside County, 2004).

Because few human-induced sources of noise occur around the project, the noise environment is generally serene and quiet. In 2009, ambient noise levels were measured

at two isolated locations east of the proposed project.[1] For these residences more than 1.5 miles from I-10, the daytime average noise levels were found to be 43 dBA Leq, and nighttime average noise levels were 34 dBA Leq (CEC, 2010). Because of the remote nature of the site and with the existing information regarding the noise levels in the area, additional ambient noise measurements are not needed.

### 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, 2015). Noise sensitive areas are places where quiet is necessary for the intended use of the land, such as residences where noise can interfere with sleep, concentration, and communication, and where excessive noise can cause physiological and psychological stress and hearing loss. In addition, wildlife management areas where breeding could be disturbed are considered sensitive receptors to noise.

The description of noise-sensitive receptors focuses on noise sensitive land uses or inhabited dwellings within a quarter-mile of project activities because Section 2 of County Ordinance No. 847 provides an exemption for construction noise that occurs a quarter-mile or more from the nearest inhabited dwelling.

The proposed project site is primarily surrounded by uninhabited open space and agriculture and is adjacent to the alignments of State Route 177 (SR-177) and Interstate 10 (I-10). Project facilities would occupy approximately 2,700 acres within an overall site of 5,000 acres.

As shown in Figure 3.12-1 (Noise Sources and Sensitive Receptors), the nearest occupied residences in Desert Center are within a mobile home park located at 43551 Ragsdale Road, and these receptors would be approximately 500 feet (150 meters) from the nearest proposed construction within the site. Other Desert Center–area residences are along SR-177 (Rice Road), at Black Binder Road, approximately one-quarter mile from the nearest proposed construction. Homes in the Lake Tamarisk community would be over 2,000 feet from the nearest proposed construction.

The BLM administers a range of recreational resources near the proposed project site, and the nearest recreation allocations are the Chuckwalla Special Recreation Management Area, the Palen-Ford Playa Dunes ACEC and the Chuckwalla Desert Wildlife Management Area ACEC, whose boundaries are approximately 500 feet south of the project site boundary, on the opposite side of the I-10 corridor.

Construction traffic would access the project site from I-10 via SR-177 at proposed new access points and BLM trails/roads near the site.

[1] These locations (one of which was previously a residence) are located on land that is part of the approved and under construction Athos Renewable Energy Project.

## 3.12.2 Regulatory Framework

### Federal and State Law, 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 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 following summarizes the local requirements.

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).

### Local Law, Regulations, and Policies

#### *Riverside County General Plan Noise Element*

**Land Use Compatibility.** 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 3.12-1.

**Table 3.12-1. Riverside County Land Use Compatibility Standards**

| | CNEL or Ldn Noise Level | | | |
|---|---|---|---|---|
| **Land Use** | **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 |
| 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 |

**Table 3.12-1. Riverside County Land Use Compatibility Standards**

| Land Use | CNEL or Ldn Noise Level | | | |
|---|---|---|---|---|
| | Normally Acceptable | Conditionally Acceptable | Normally Unacceptable | Clearly Unacceptable |
| 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: Noise Element Table N-1 (Riverside County, 2015).

**Policies for Noise Compatibility.** 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.

**Temporary Construction.** 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.

**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, as shown in Table 3.12-2.

**Table 3.12-2. 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: Noise Element Table N-2 (Riverside County, 2015).
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.

**Vibration.** Ground-borne vibrations can be a source of annoyance to people or a source of structural damage to some types of buildings. Although vibration measurements can be presented in many different forms, peak particle velocity (PPV) is the unit of measure used most often to assess building damage potential. Table 3.12-3 describes human reaction to typical vibration levels.

The General Plan Noise Element (2015) includes consideration of ground-borne vibrations. Residential areas, schools, and sensitive research operations are among the land uses that are vibration sensitive.

### *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.

**Table 3.12-3. 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 Noise Element Table N-3 (Riverside County, 2015).

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 a quarter-mile or more from the nearest inhabited dwelling; and
- Private construction projects located within a quarter-mile of an inhabited dwelling provided that construction activities are limited to 6:00 a.m. to 6:00 p.m. during the months of June through September and are limited to 7:00 a.m. to 6:00 p.m. during the months of October through May.

## 3.12.3 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).

The Applicant would implement the following noise protection measures during construction and operation and maintenance (IP Oberon, 2021, Appendix S):

- Construction vehicles and equipment would be maintained in proper operating condition and would be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, engine enclosures). Improperly functioning equipment would be fixed and or removed from the construction site until the issue is corrected.
- Noise associated with construction and operations activities shall comply with applicable noise restrictions.

## 3.12.4 CEQA Significance Criteria

Each CEQA lead agency has discretion to establish thresholds for when a noise level increase would be considered substantial. Typically, an increase in noise level of at least 5 dBA is noticeable by most people and in a residential setting would not be a substantial adverse impact. An increase in noise level of 10 dBA is judged by most people as a doubling of the sound level, which would be considered a substantial adverse impact (Caltrans, 2013). Other factors that are considered in determining adverse noise impacts include: (1) the resulting combined noise level; (2) the duration and frequency of the noise; (3) the number of people affected; and (4) the land use designation of the affected receptor sites. Mitigation measures must be considered if significant impact to noise would occur from the construction, operation and maintenance, or decommissioning of the project.

Typically, noise impacts due to construction activities are not considered substantial assuming construction activities are temporary, intermittently affect any one location, limit the use of heavy equipment and noise activities to daytime hours, and implement all industry standard noise abatement measures for noise-producing equipment (Riverside County, 2019).

A PPV threshold of 0.20 inches per second (in/sec) is a level of vibration impacts that can create adverse human reactions and a risk of damage to nearby buildings or structures, as shown in the Riverside County General Plan Noise Element (2015). This PPV threshold was used in this analysis to determine whether construction-related vibration levels could cause a significant impact.

## 3.12.5 Proposed Project Impact Analysis

Decommissioning impacts are anticipated to be similar to those determined for construction as described below. The actual impacts would depend on the proposed decommissioning action and final use of the site.

***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?***

***DURING CONSTRUCTION, LESS THAN SIGNIFICANT WITH MITIGATION.*** Noise would be generated during construction of the proposed project. Heavy-duty construction equipment would be used on the site and in the surrounding area for transporting equipment and materials by truck to the site.

Construction of the proposed project is estimated to occur over an approximately 15- to 20-month period. During these months, the 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 3.12-4 summarizes the typical noise levels for individual pieces of construction equipment.

The activity likely to cause the highest noise levels at the site would be installa-

**Table 3.12-4. Typical Noise Levels for Individual Construction Equipment**

| Equipment | Noise Level at 50 ft (dBA $L_{max}$) | Noise Level at 50 ft (dBA $L_{eq}$) |
|---|---|---|
| Mounted impact hammer (hoe ram) | 90 | 83 |
| Scraper | 84 | 80 |
| Dozer | 82 | 78 |
| Grader | 85 | 81 |
| Forklift, man lift | 75 | 68 |
| Crane | 81 | 74 |
| Backhoe, loader | 79 | 75 |
| Excavator | 81 | 77 |
| Compactor | 83 | 76 |
| Generator | 81 | 78 |
| Drill rig, auger | 84 | 77 |
| Dump truck, haul truck, concrete mixer truck | 76-79 | 73-76 |
| Pickup truck, crew truck | 75 | 62-71 |

Source: FHWA, 2006.

Lmax: Maximum noise level from Actual Measured in Roadway Construction Noise Model (RCNM).
Leq: Equivalent noise level for one hour incorporating the Acoustical Usage Factor.

tion of steel piles for supporting the PV module structures. Steel piles 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. The proposed project would use a small, light-duty mounted impact hammer 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 the equipment would vary up to 84 dBA Lmax and 81 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 (–6 dB per doubling of distance) and the highest unmitigated construction noise level of 83 dBA Leq at 50 feet, construction noise levels would be 64 dBA Leq at the nearest occupied residences in Desert Center, which are within a mobile home park that would be approximately 500 feet (150 meters) from the nearest proposed construction. Construction noise levels would be no more than 52 dBA Leq at a distance of 2,000 feet, the distance to the Lake Tamarisk community.

The boundaries of the BLM Chuckwalla Special Recreation Management Area and Chuckwalla Desert Wildlife Management Area ACEC would be approximately 500 feet from the nearest work activities, and at the boundaries of these BLM recreation allocations, the highest unmitigated construction noise level would be 64 dBA Leq. The portions of these recreational resources that would be nearest to construction noise are immediately south of I-10 and are separated from the proposed project site by I-10. During times of the nearest work activities, construction noise would be comparable to the existing noise levels along I-10, which exceed 65 dBA Ldn for locations within approximately 350 feet of the I-10 centerline (Riverside County, 2008).

With respect to construction-related traffic noise, development activities would also cause noise away from the site, 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 from I-10 in Desert Center and BLM trails/roads near the site.

The peak noise levels associated with passing trucks and commuting worker vehicles would be approximately 70 to 75 dBA at 50 feet (see Table 3.12-4), and this noise would be concentrated along the site access roads, primarily SR-177 and BLM trails/roads near the site. Along SR-177 in the Desert Center area, the traffic from construction-related workers and haul trucks would increase SR-177 daytime noise levels by 1 to 2 dBA over the baseline levels, to approximately 67 dBA Ldn within 100 feet of the traffic.

The construction-related traffic noise impacts would be limited to daytime conditions. Nighttime traffic noise levels would not change notably with construction that occurs mostly in the daytime, and construction-related traffic would not cause the overall day-night noise level to be in excess of any standards established in the local general plan or noise ordinance. Project construction traffic along SR-177 and the access roads would cause day-night noise levels to increase, the increase in day-night noise levels would not be substantial in comparison to the baseline noise along SR-177. To reduce the impact of peak hour construction traffic noise, this analysis recommends mitigation to minimize the effects of construction traffic noise.

The Riverside County Noise Ordinance allows noise from construction activities, and designates this noise as exempt, when: (a) the construction project is located a quarter-mile or more from the nearest inhabited dwelling, or (b) when the construction project is located within a quarter-mile of an inhabited dwelling and the activities are limited to certain daytime hours. The closest occupied residences in Desert Center would be within a quarter-mile of project construction traffic and on-site construction activities within the proposed project site.

The typical construction work schedule is expected to be from 7:00 a.m. to 7:00 p.m., Monday through Friday. The Riverside County Noise Ordinance allows construction noise to be exempt between the hours of 7:00 a.m. and 6:00 p.m. However, 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 policies require implementation of acceptable practices to minimize the effects of adverse construction noise.

Mitigation Measure 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.

***DURING OPERATION, LESS THAN SIGNIFICANT WITH MITIGATION.*** 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 substation and 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 block of PV arrays. Auxiliary equipment for inverters-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) (IP, 2021); with multiple units on each skid to achieve up to a 5,000 kilowatt output, the resultant noise level would be approximately 71 dBA at 50 feet and 45 dBA Leq at 1,000 feet from each inverter-transformer pad.

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 five 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 and inverters throughout the solar field would not be discernable in the background conditions at any locations over 2,000 feet from the edges of the solar field.

The dominant stationary sources of noise near the proposed O&M building would be related to the heating, ventilation, and air conditioning units (HVAC), if necessary for the O&M building and the selected battery storage technology. The 500 kV substation would also include switching and transformer equipment with cooling fans and pumps. Typical cooling systems for battery storage, if necessary, could generate 81 dBA at a distance of 10 feet, which would not be discernable in the background conditions at any locations over 2,000 feet from the BESS equipment.

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. It 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 standards set forth in the Noise Element of the General Plan for stationary sources of noise are less stringent than these in the Noise Ordinance. All equipment within the proposed 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. No occupied properties or residences would be located within 2,000 feet of the proposed O&M building, BESS facilities, or 500 kV substation and gen-tie line. At the locations of the nearest occupied residences in Desert Center, the solar array and inverter-transformer stations would be the nearest stationary sources of noise within the overall site. The separation of the inverter-transformer stations and the boundaries of the nearest occupied properties would depend on the final site designs. Preliminary site designs indicate that each inverter-transformer pad would be approximately 450 feet away from any property boundary; for any residences within 1,000 feet of the final inverter-transformer station locations, the noise from this equipment could exceed the noise standard of 45 dBA at night for any occupied "rural community." Mitigation Measure N-4 (Noise Performance Standard) is recommended to ensure that project compliance with the Noise Ordinance for the residential receiving land uses nearest to the final inverter-transformer station locations. The impact of operation noise relative to applicable community noise standards would be less than significant with mitigation.

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

***DURING CONSTRUCTION, LESS THAN SIGNIFICANT.*** During construction, the impact or vibratory pile drivers used for installing steel piles would have the greatest radius of potential groundborne vibration impacts. When necessary to install piles near the proposed project site boundaries, use of hydraulic hammers for pile installation could result in vibration that is perceptible and potentially annoying, for occupants of structures within 100 feet of the source. The typical groundborne vibration from an impact pile driver could exceed 0.6 inches per second PPV near the source, but at 100 feet this level would attenuate to less than 0.1 in/sec, which is below the 0.20 in/sec level that indicates an adverse human reaction (Riverside County, 2015). Other construction activities would create lower levels of vibration and would not have the potential to create annoyance at 100 feet or more from the equipment in use.

No occupied residential structures would be nearer than 500 feet of the proposed project facilities, and accordingly, no residences would experience annoying levels of construction vibration. Other routine construction would also be sufficiently far from the nearest residences to avoid causing a vibration annoyance. Project-related vibrations would not cause adverse physical effects to structures because no structures susceptible to damage are known to be nearby. When vibration levels are 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 during the limited duration of construction near residences), and therefore, would not be excessive, resulting in a less than significant impact.

***DURING OPERATION, LESS THAN SIGNIFICANT.*** Operation of the solar facility would not involve any sources capable of generating perceptible levels of vibration in the surrounding area. There would be no permanent source or potential to change vibration levels, except during unscheduled maintenance or repair activities, which would be similar to construction activities. This impact would be less than significant.

***Impact N-3. For projects located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

***LESS THAN SIGNIFICANT.*** There are two private airstrips near the proposed project. The Desert Center Airport is a private airstrip approximately one mile from the proposed project site boundaries, and the Eagle Mountain Airstrip is about 8 miles northwest of the site. Both airstrips have very low use levels.

Because the proposed project does not include noise-sensitive uses, no airport/land use noise compatibility criteria would apply. All features of the proposed project would be outside the airfield properties and would not expose any residential land uses to noise from aircraft. Because the proposed project would not expose people to noise from an airport or airstrip, this impact would be less than significant.

## 3.12.6 Cumulative Impacts

The geographic scope for cumulative analysis of noise and vibration is generally localized. Noise sources attributable to cumulative projects may cause adverse effects within approximately 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. Similarly, vibration sources that typically occur with construction activity or vehicle traffic have a region of influence that is limited to approximately 200 feet.

The geographic scope for cumulative noise and vibration effects includes the West-wide Section 368 Energy Corridors and the Desert Renewable Energy Conservation Plan. Existing, past, and present projects and the probable future projects are listed in Table

3.1-1, Past and Present Projects or Programs in the Project Area and Table 3.1-2, Probable Future Projects in the Project Area.

Cumulative projects within the geographic scope for analysis of noise and vibration include:

- Red Bluff Substation
- Devers–Palo Verde No. 1 Transmission Line
- Devers–Colorado River Transmission Line
- Palen Solar Project
- Athos Renewable Energy Project
- Easley Solar & Green Hydrogen Project
- Victory Pass Solar Project
- Arica Solar Project

The cumulative projects that occur in the geographic scope for noise and vibration include potential developments allowed under planning documents and solar energy projects that are similar in nature to the proposed project. The planning efforts would not themselves create actions that increase noise or vibration levels. The noise and vibration effects of the equipment used for construction of solar energy facilities that are cumulative projects would depend on the site-specific needs and schedules and may or may not overlap spatially and temporally with those of the proposed Projects.

The proposed project could be within 0.5 miles of the Athos, Victory Pass, and Arica Solar Projects and have the potential to cause overlapping construction noise impacts with construction. 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 occur over an approximately 15- to 20-month period, and after that time, few notable permanent sources of noise would occur with the proposed project or the probable future projects.

All cumulative project operations would generate noise from employee vehicles accessing the site, power inverters, and other power system infrastructure. These sources may cause localized cumulative effects where multiple projects or shared transportation routes occur adjacent to a sensitive receptor. Because operation-phase activities related to the cumulative projects involve small workforces and minimal travel demands the cumulative impact of traffic noise would be limited to the construction haul routes where few sensitive receptors would experience simultaneous cumulative effects.

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 to 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, including 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. This would ensure that cumulative noise impacts during construction are less than cumulatively significant.

The only sources of noise associated with solar facility operations that could combine with the cumulative projects to result in a potential cumulative impact near sensitive receptors would be employee vehicles accessing the site. Given the limited number of employees during operations of the proposed project and the nearby cumulative projects, the cumulative operational noise impact would not be cumulatively significant.

Cumulative effects due to groundborne vibration would occur only if there were sources of the vibration within 200 feet of the boundaries of the proposed project site and cumulative project sites. No existing residences occur near enough to the proposed project site boundaries or the cumulative projects sites to experience cumulative vibration effects. The areas of potential overlap of cumulative project construction-related vibration would not be likely to create a cumulative vibration impact at any residences in the area of the proposed project, and no cumulative effects would be likely from groundborne vibration.

## 3.12.7 Mitigation Measures

**MM N-1** **Construction Restrictions.** Heavy equipment operation and noisy construction work relating to any project features within 0.25 miles of a sensitive receptor shall be restricted to the times delineated below, unless a special permit has been issued by the County of Riverside:

- June through September: 6:00 a.m. to 6:00 p.m.
- October through May: 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 Applicant shall notify all residents within 500 feet of the project site boundaries and BLM trails or roads used for site access, by mail or by other effective means, of the commencement of project construction. At the same time, the Applicant 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 Applicant 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 Applicant shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The Applicant or authorized agent shall:

1. Use a Noise Complaint Resolution Form, or other documentation procedure acceptable to the BLM and RWQCB (or its designated representative) to record and report the Applicant's response to resolving each noise complaint;
2. Attempt to contact the person(s) making the noise complaint within 24 hours;
3. Conduct an investigation to determine the source of noise in the complaint;
4. If the noise is project-related, take all feasible measures to reduce the source of the noise; and
5. Submit a report to the BLM and RWQCB (or its designated representative) 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.

**MM N-4** **Noise Performance Standard.** The project design and implementation shall include appropriate placement of inverter-transformer stations within the site boundaries to ensure that the operation of these sources will not cause the noise levels due to plant operation alone to exceed 45 dBA

Lmax at any receiving land use that includes an inhabited dwelling (Section 4 of County Ordinance No. 847).

No new pure-tone components shall be caused by the power inverters or transformers associated with the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

The project design in site plans shall avoid placing stationary sources of noise within 1,000 feet of an inhabited dwelling. If the final design of the project includes any noise-generating air conditioner, inverter, transformer, substation or switchyard component within 1,000 feet of an inhabited dwelling, then the following adaptive management measures shall be required:

1. When the project first achieves a sustained output of 85 percent or greater of rated capacity, the Applicant shall conduct a 25-hour community noise survey by monitoring levels at locations of any affected inhabited dwelling, or at a closer location in consultation with the County. The measurement of power plant noise for the purposes of demonstrating compliance with this mitigation measure may alternatively be made at a location, in consultation with the County, closer to the plant (e.g., 100 feet from power inverters or transformers) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected dwelling.
2. If the results from the noise survey indicate that the power plant noise at the affected receptor site exceeds the above value during the above time period, noise control features, such as enclosures or barriers, shall be implemented to reduce noise to a level of compliance with this limit, or the sources of noise shall be relocated to achieve the standard.

# 3.13 Paleontological Resources

This section describes the existing local geology and paleontological resources and the regulatory framework for paleontological resources. The project area relevant to the analysis of paleontological resources is the physical footprint of project construction, operation and maintenance, and decommissioning activities. The information in this section is based on the Paleontological Resource Assessment for the Oberon Solar Project, Riverside County, California, prepared by PaleoWest (2020) (Paleontological Report).

No specific concerns were raised during scoping related to Paleontological Resources.

## 3.13.1 Environmental Setting

### 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 BLM follows the Potential Fossil Yield Classification (PFYC) system that 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 paleontologic resources. Class 2 geologic units have the following characteristics: paleontologic resources not present or very rare verified by field surveys; units that are generally younger than 10,000 years before present (bp); recent aeolian deposits; 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 contains paleontological resources are found.

**Class 3 – Moderate.** 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 because the existence of significant paleontological resources is known to be low. Common invertebrate or plant fossils may be found in the area, and opportunities may exist for casual collecting. Paleontological mitigation strategies will be based on the nature of the proposed activity.

**Class 4 – High**. Geologic units that are known to contain a high occurrence of paleontological resources. Units assigned to Class 4 typically have the following characteristics: significant paleontological resources may vary in occurrence and predictability, surface disturbing activities may adversely affect paleontological resources; units may contain rare or uncommon fossils, including nonvertebrate or unusual plant fossils, and illegal collecting activities may impact some areas. Management concerns for paleontological resources in Class 4 are moderate to high, depending on the proposed project mitigation strategies will depend on the nature of the proposed activity, but field assessment by a qualified paleontologist is normally needed to assess local conditions. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment is

normally required, and on-site monitoring or spot-checking may be necessary during land disturbing activities. In some cases, avoidance of known paleontological resources may be necessary.

**Class 5 – Very High**. Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources. Units assigned to Class 5 have some or all the following characteristics: significant paleontological resources have been documented and occur consistently, the paleontological resources are highly susceptible to adverse impacts from surface disturbing activities, and the unit is frequently the focus of illegal collecting activities. Management concerns for paleontological resources in Class 5 areas are high to very high and a field survey by a qualified paleontologist is almost always needed. Paleontological mitigation may be necessary before or during surface disturbing activities. Pre-work surveys are usually needed, and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.

**Class U – Unknown Potential.** Geologic units that cannot receive an informed PFYC assignment. Class U 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. Units may also be classified as Class U if they exhibit the any of the following characteristics: the geological units are represented on a map 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 with a unit, reports of paleontological resources are anecdotal or have not been verified, the area or geologic unit is poorly or under-studied, or 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. An assignment of “Unknown” may indicate the unit or area is poorly studied, and field surveys are needed to verify the presence or absence of paleontological resources. The geological unit should be formally assigned to a Class after adequate survey and research is performed to make an informed determination.

**Society of Vertebrate Paleontology Criteria.** The project is located entirely on BLM-administered land and would use the PYFC system; however, the Society of Vertebrate Paleontology (SVP) has 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).

## 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, 2020).

PaleoWest (2020) conducted searches of pertinent local and regional museum repositories for paleontological localities at the Natural History Museum of Los Angeles County (NHMLAC), the San Bernardino County Museum (SBCM), the San Diego Natural History Museum (SDNHM), and the Western Science Center (WSC). Published geologic and paleontological literature of the project area was also reviewed.

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 mapping by Jennings indicates that the project area is underlain by four geologic units: Quaternary alluvium (Qal), Pleistocene nonmarine conglomerate (Qc), Pleistocene Ocotillo Conglomerate (Qco), and Mesozoic granitic rocks (gr) (Jennings, 1967; PaleoWest, 2020), shown in Figure 3-13.1. The Quaternary alluvium (Qal) unit is mapped as underlying most of the site. Numerous consultants' reports from the area have identified Pleistocene vertebrate fossils from lithologies of the valley bottom from non-alluvial fan facies of the Quaternary alluvium. The conglomerate units (Qc and Qco) are mapped across portions of the east and southeast parts of the project site and, due to their coarse grain size and nature of deposition, are not expected to produce any fossil resources (PaleoWest, 2020). The granitic rock exposures in the project area occur as small, isolated outcrops and as a larger faulted pluton south of I-10 and the southern project boundary (Jennings, 1967); however, it may be shallowly located beneath the surficial Quaternary deposits.

A search of the peer-reviewed paleontology literature of the Chuckwalla Valley identified no records. Similarly, a query of both the FaunMap and MioMap curated at the University of California Museum of Paleontology identified no Neogene or Quaternary fossil localities in all of Chuckwalla Valley (PaleoWest, 2020).

The NHMLAC does not have any recorded vertebrate localities within the project boundaries; however, two localities from Quaternary alluvium were identified closer to the axis of Chuckwalla Valley. One of these localities produced fossil specimens of pocket mouse (*Perognathus* sp.). Several localities within Quaternary Pinto Formation were also identified north-northwest of the project area that contain specimens of desert tortoise (*Gopherus* sp.), horse (*Equus* sp.), and camel (*Camelops* sp. and *Tanupolama stevensi*). The Pinto Formation is not mapped at the surface within or near the project boundaries but may be present at depth (PaleoWest, 2020).

The WSC record review identified records of over 50 fossil localities in the project vicinity, including one vertebrate fossil locality within the project boundaries. These localities, documented during the development of the Desert Sunlight Solar Project, were from within similar lithology as the geologic deposits underlying the Oberon Project. The fossil locality within the project boundary yielded a single artiodactyl ilium fragment that was collected from the surface during paleontological field investigations. The Quaternary alluvial localities have produced catfish (Ictaluridae), amphibians, reptiles, grebe (*Aechmophorus* sp.), kangaroo mouse (*Dipodomys* s-p.), jackrabbit (*Lepus californicus*), mule deer (*Odocoileus hemionus*), camels, sabre-tooth cat (*Smilodon* sp.), and other unidentified mammal bones (PaleoWest, 2020). PaleoWest indicates that the single artiodactyl ilium fragment found within the project boundary should be reevaluated to confirm it is a fossil rather than a modern specimen (PaleoWest, 2020).

The SDMNH records identify no localities within or in the vicinity of the project boundaries; however, they did note the prolific nature of the Quaternary alluvium in the area in terms of vertebrate fossil occurrences. The SBCM records also did not have any fossil localities in or around the project boundaries (PaleoWest, 2020).

### Field Survey

A pedestrian survey was conducted of the project area between September 16 and October 16, 2020 by PaleoWest. The purpose of the field survey was to visually inspect for exposed fossils in areas of proposed disturbance and to evaluate geologic exposures for their potential to contain preserved fossil material in the subsurface.

Based on the field survey, the project area is underlain by alluvial fan debris flows and sheetwash deposits from the Chuckwalla Mountains to the south. The field reconnaissance revealed that the conglomerate units mapped by Jennings within the project boundary (Qc and Qco) are far more extensive than originally mapped and actually occupy much of the southern part of the project area. These units are composed of poorly sorted sand to boulder sized clasts of quartzite, gneiss, schist, diorite, amphibolite, and felsic intrusive rocks. The unit mapped in the project area as Ocotillo Conglomerate (Qco) by Jennings was revealed to be composed of active alluvial fan facies that are dissected by modern ephemeral washes and should more likely be mapped as Quaternary alluvial fan. The western end of the site is underlain by alluvial deposits (Qal) consisting of debris flow and sheetwash materials deposited on alluvial fans. The alluvial deposits identified on site consist of finer grained sediment, with occasional cobble sized clasts. The PaleoWest field staff determined that the surficial geology of the project area is dominated by active modern, and Holocene age sedimentary surfaces.

No fossils were encountered during the course of the multi-week paleontological field survey. Although the Quaternary alluvium unit (Qal) mapped in the area has been highly fossiliferous in other nearby projects within Chuckwalla Valley, these localities have a pattern of being more central to the valley axis. This project is closer to the Chuckwalla Mountain front so is situated upon different facies than the more valley

bottom located projects. The Oberon Project sits on sloping alluvial fan deposits in a sediment gravity flow environment that is less conductive to the preservation of biotic remains than valley bottom fluvio-lacustrine facies. Quaternary alluvial fan facies are inherently low for potential fossil yield due to the nature of their formative sediment gravity flows. Abundant human debris intermixed with the surficial sediment also is indicative that the surficial geology is much too young to contain fossils. Although no fossils were found or are likely on the surface, that does not discount that fossil-bearing strata may be encountered at depth.

### Paleontological Sensitivity

PFYC rankings were recommended for the geologic units within the project area based on the literature and records review and field survey results. Quaternary alluvium (Qal) of Jennings (1967) has produced over 50 fossil localities around the project boundaries; however, no fossils were found on the surface of the project area, despite the number of fossil localities in surrounding projects and the potential for fossil bearing facies at depth. Due to the absence of fossils noted during the field surveys and the low preservation potential of the alluvial fan surfaces, the likelihood of surficial fossils is low, and any non-ground disturbing activities have little risk of encountering fossil resources. However, ground disturbance in Quaternary alluvium increases the likelihood of encountering different, potentially more fossiliferous units below the surface, therefore Quaternary alluvium in the project boundaries is recommended to be a PFYC of Class 3 (moderate) sensitivity for vertebrate fossil resources. The Pleistocene nonmarine conglomerates (Qc and Qco) of Jennings (1967) within the project boundaries have not produced any fossil resources, nor are they expected to. As such, these stratigraphic units are considered PFYC Class 2 (low). Mesozoic granitic rocks (gr) of Jennings (1967) are recommended a PFYC Class of 1 (very low), if encountered.

## 3.13.2 Regulatory Framework

### Federal Law, 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.

### State Law, Regulations, and Policies

The are no state laws, regulations, or policies relevant to paleontological resources for the project site, which is on federal land.

### Local Law, Regulations, and Policies

The are no local laws, regulations, or policies relevant to paleontological resources for the project site, which is on federal land.

## 3.13.3 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 NHMLAC, the SBCM, the San Diego Natural History Museum SDNHM, and the 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 Report (PaleoWest, 2020). The identified areas with moderate and unknown potential for paleontological resources are evaluated for the amount and type of disturbance and activities that would result in impacts to paleontological resources; no areas of high or very high potential for paleontological resources were identified within the project site.

## 3.13.4 CEQA Significance Criteria

The criterion used to determine the significance of potential paleontological resources impacts is based on Appendix G of the CEQA Guidelines. The project would result in a significant impact under CEQA related to paleontological resources if it:

- Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (see Impact PR-1)

## 3.13.5 Proposed Project Impact Analysis

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

***LESS THAN SIGNIFICANT WITH MITIGATION.*** 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 disturbance activities that would damage or destroy resources. Indirect impacts include the 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).

The paleontological assessment conducted for the project by PaleoWest (2020) classifies the Quaternary alluvial sediments as having a Moderate Class 3 PFYC classification because, although the surficial geology of the project may have a low potential for fossil preservation, fossiliferous older Quaternary units may be encountered at depth. Therefore, significant paleontological resources could be encountered during ground disturbance associated with the Oberon Project construction. Approximately 2,401 acres of Quaternary alluvial sediments with a Moderate PFYC 3 classification are located underlying the Project development areas; however, mass grading would not be conducted in these areas, with most of the solar area only mowed and grubbed. Ground disturbance associated with grading, excavation, and trenching for exclusion/passage fence, invertors, transformers, internal and external access roads, substation, BESS,

O&M facilities, and the gen-tie line could result in direct impacts to subsurface paleontologically sensitive geologic rock units which could adversely impact (damage or destroy) significant paleontological resources. The probability of encountering paleontological resources on the ground surface is considered low, but the probability increases substantially as depth increases. Impacts could be significant. The potential impacts to paleontological resources would be similar for either gen-tie line option and for either substation location option. Known sensitivity of some of the formations and 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 less than significant.

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, the low sensitivity of the surficial deposits, 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.

## 3.13.6 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 3 (moderate) 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 Impacts.** As discussed above, there is a potential for paleontological resources on the project site to be impacted during ground disturbing activities associated with the proposed project (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 Oberon Project, as well as the other solar development projects 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 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 Oberon Project's incremental contribution to cumulative impacts for paleontological resources would not be cumulatively considerable.

## 3.13.7 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 BLM-approved paleontologist (Project Paleontologist) to prepare and implement a project-specific PRMP to be approved by the 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 BLM paleontology program policy and standards, is as follows:

- 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 moderate (PFYC 3) sensitivity (or higher is identified) 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 moderate (PFYC 3) (or higher) sensitivity.
- The PRMP shall define monitoring procedures and methodology and shall specify that sediments of 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 BLM for review and approval 60 days prior to start of project construction. The PRMP must be approved by the 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 potentially underlain by Pleistocene aged Quaternary alluvial deposits (areas identified as PFYC 3 [moderate] sensitivity). 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) should 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 would 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 BLM approved repository (identified on the permit and in the PRMP) and receipt(s) of collections submitted to the 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. In addition, all appropriate fossil location information shall be submitted to the BLM.

# 3.14 Population and Housing

This section evaluates the impacts on population and housing resulting from implementation of the project. The analysis 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 from the project.

There were no comments received during the scoping period related to Population and Housing.

## 3.14.1 Environmental Setting

### Population

The project area is in Riverside County, the fourth most populous county in California (CA DOF, 2020). The site is near Desert Center, in the eastern part of the county. Table 3.14-1 provides a summary of the existing population, housing, and employment conditions for Desert Center and Riverside, San Bernardino County, and Imperial Counties. These three counties are from where the construction workforce would largely be recruited.

**Table 3.14-1. Year 2018[1] and 2020 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[2] | Unemployment Rate |
| Desert Center | 264 | 239 | 60.3% | 58 | 0% |
| Riverside County | 2,442,304 | 856,124 | 12.8% | 969,900 | 10.5% |
| San Bernardino County | 2,180,537 | 726,680 | 11.1% | 853,800 | 10.3% |
| Imperial County | 188,777 | 58,311 | 13.2% | 54,300 | 16.5% |

1 - The most recent available housing unit and employment data for Desert Center is from 2018.
2 - Accounts for population greater than 16 years of age and in Labor Force.
Source: CA DOF, 2020a; CA EDD, 2020a; CA EDD, 2020b; CA EDD, 2020c; U.S. Census Bureau 2018a, 2018b, and 2018c

Population estimates and projections and average annual growth rates for Riverside, San Bernardino, and Imperial County are summarized in Table 3.14-2. There were no data available for Desert Center regarding population projections, so it is not included in Table 3.14-2. Population estimates from 2020 through 2050 are listed with an average annual growth number and rate for the communities within the study area. (The assumed project service life is 30 years) The population growth in the three counties is expected to increase slowly during the next three decades, with Riverside County projected to have a slightly higher annual growth rate than both San Bernardino and Imperial County.

**Table 3.14-2. Population Estimates, Projections, and Average Annual Growth Rates**

| | Riverside County | San Bernardino County | Imperial County |
|---|---|---|---|
| Population, 2020 | 2,468,145 | 2,217,398 | 191,649 |
| Projected Population, 2025 | 2,597,656 | 2,310,552 | 199,680 |
| Average Annual Growth Rate, 2020-2025 | 1.05% | 0.84% | 0.84% |
| Projected Population, 2030 | 2,723,485 | 2,395,632 | 207,201 |
| Average Annual Growth Rate, 2025-2030 | 0.97% | 0.74% | 0.75% |
| Projected Population, 2035 | 2,837,362 | 2,469,881 | 213,295 |
| Average Annual Growth Rate, 2030-2035 | 0.84% | 0.62% | 0.59% |
| Projected Population, 2040 | 2,933,733 | 2,529,068 | 218,517 |
| Average Annual Growth Rate, 2035-2040 | 0.68% | 0.48% | 0.49% |
| Projected Population, 2045 | 3,009,816 | 2,574,712 | 223,118 |
| Average Annual Growth Rate, 2040-2045 | 0.52% | 0.36% | 0.42% |
| Projected Population, 2050 | 3,070,691 | 2,611,732 | 227,306 |
| Average Annual Growth Rate, 2045-2050 | 0.40% | 0.29% | 0.38% |

Source: CA DOF, 2020b.

### Housing

The current occupied and vacant housing estimates are presented in Table 3.14-1 for Desert Center, Riverside, San Bernardino, and Imperial Counties. The vacancy rate of Desert Center is high, with about 60 percent of the total housing units vacant. Riverside, San Bernardino, and Imperial Counties have vacancy rates of approximately 13 percent, 11 percent, and 13 percent of the total housing units vacant, respectively.

## 3.14.2 Regulatory Framework

There are no federal, state, or local regulations, plans or standards for population and housing that apply to the proposed project.

## 3.14.3 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, see section 15064(e) of the CEQA Guidelines. 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 project would induce population growth, the availability of the local workforce and population in the region were analyzed. It was assumed that most construction workers would be from within Riverside County, San Bernardino, and Imperial Counties. It is anticipated that most of the projected construction workforce not living within one to two hours' driving distance of the project would likely seek temporary housing (such as seasonal, recreational, or occasional use housing; long-term visitor areas; and hotel and motels) during the week and return to their homes over the weekend.

## 3.14.4 CEQA Significance Criteria

The significance criteria listed below are from the Environmental Checklist Form in Appendix G of the CEQA Guidelines. Under CEQA, the project and its alternatives would have significant impacts on population and housing if they would:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) (see Impact PH-1).
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (see Impact PH-2).

## 3.14.5 Proposed Project Impact Analysis

***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)?***

***LESS THAN SIGNIFICANT.*** Construction of the project would occur over approximately 15 to 20 months. The construction workforce would consist of an average of about 320 employees with a maximum of approximately 530 employees during peak construction times. The typical construction work schedule is expected to be from 7:00 a.m. to 7:00 p.m., Monday through Friday, but early morning, evening, night, and weekend work may be needed during certain construction phases. The construction workforce would likely be recruited from Riverside, San Bernardino, and Imperial Counties. Riverside County has the largest concentration of construction workers close to the project's area.

Desert Center's unemployment rate is not available, but in 2020, the unemployment rate averaged 10.5 percent in Riverside County, 10.3 percent in San Bernardino County, and 17 percent in Imperial County. Based on the most recent unemployment rates and population size, it is anticipated that the majority of the construction, operation, and maintenance workforce would come from the existing labor pool in these three counties.

As indicated in Table 3.14-1 (Year 2018 and 2020 Existing Conditions – Population, Housing, and Employment: Desert Center, Riverside County, and San Bernardino County) vacancy rates in the study area are high, ranging from about 11 percent to 60 percent. The Desert Center area has approximately 239 vacant units; Riverside County

has approximately 856,124 vacant units; San Bernardino County has approximately 726,000 vacant units, and Imperial County has approximately 58,311 vacant units. There are sufficient vacant housing units within the region to support the number of construction workers that may elect to use temporary housing during the week. It is not anticipated that workers would migrate to Riverside, San Bernardino, or Imperial Counties from other locations. Therefore, the project's workforce would not be considered a substantial sudden growth and pose a burden on surrounding communities. The project would not cause a shortage in available housing for existing residents in these counties. It would not trigger the need for new housing and would not induce a substantial permanent growth in the regional population levels.

During project operation, up to ten workers would be part of the regular O&M workforce that would perform daily visual inspections and minor repairs. Like the construction workers, these permanent operational workers would likely reside within commuting distance. The small number of operational staff would not substantially increase the population in Riverside, San Bernardino, and Imperial Counties. The project would require either 10 permanent staff members, or 2 permanent staff with 8 project operators who are located off site and would be on-call. These workers would also likely be from the local communities in the three counties. Overall, the O&M staff is not anticipated to increase the local population, and vacancy rates within the study area offer abundant available housing to employees who may relocate into the area.

Decommissioning of the project would require dismantling of the wire, steel, and solar modules for recycling or disposal. A detailed Decommissioning and Reclamation Plan would be developed for the project to comply with public health and safety and environmental standards and would likely outline the number of workers required for decommissioning activities. It is anticipated that decommissioning activities would require similar equipment and workforce as construction.

Overall, the project's impact on population growth in the local area and demand for additional housing from construction, operation, and decommissioning would be less than significant.

### *Impact PH-2. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

***NO IMPACT.*** The project's solar facility would be constructed on undeveloped BLM-administered land within the Riverside East SEZ of BLM's Western Solar Plan, and a DFA under the DRECP. These two plans encourage and incentivize the development of renewable solar energy facilities within these areas, and as such, the project would be consistent with the intended uses of this area. There are no existing residences or buildings in the project site. Construction and operation of the solar facility would occur within the project's boundaries and would not result in the displacement of any existing housing or people. No replacement housing would be required as a result of construction and operation of the solar facility. As such, no impact would occur.

## 3.14.6 Cumulative Impacts

The geographic scope of the cumulative impacts analysis includes populated areas within a two-hour worker commute distance of the project area at Desert Center. This area extends west to Riverside in Riverside County and into San Bernardino County. El Centro in Imperial County is approximately a two-hour commute as well. Blythe is less than an hour east of the project. Parts of Arizona are within 2 hours of the site, but the workforce in this area is relatively small and is not considered as part of cumulative impacts This geographic scope would include all projects listed in Tables 3.1-1 and 3.1-2.

Short-term cumulative impacts to population and housing would occur during both construction and decommissioning, when construction schedules of multiple projects may overlap and create a demand for workers that may not be met by the local labor force, thereby inducing in-migration of non-local labor and their households. Because the operational workforce is small, no operational cumulative population and housing impacts would occur even when multiple projects overlap.

Construction of the Oberon Renewable Energy Project could overlap with construction of the reasonably foreseeable future projects listed in Table 3.1-2. It is unlikely that all the foreseeable future projects' construction would occur simultaneously because they are in different phases of planning, approval, and construction. Under the conservative assumption (i.e., worst-case scenario) that peak construction periods overlap for all reasonably foreseeable projects, there would be an increased demand for temporary housing in the cumulative area. As discussed under Section 3.14.5 (Impact PH-1), the vacancy rates for housing units are moderately high (ranging from 11 percent to 60 percent) in the surrounding communities, and there are 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 regarding housing are projected to be less than cumulatively significant.

## 3.14.7 Mitigation Measures

All impacts would be less than significant, and no mitigation is required.

# 3.15 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 proposed project's potential impacts on public services and utilities.

There were no comments submitted during the Scoping Period related to Public Services and Utilities.

## 3.15.1 Environmental Setting

### Fire Protection

Riverside County Fire Department (RCFD), 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, 2020a). The closest Riverside County Fire Department/CAL FIRE station to the project location in the Desert Center area is Station 49 – Lake Tamarisk Station, located at 43880 Tamarisk Drive, Desert Center, approximately 0.1 miles north of the proposed project (Riverside County Fire Department, 2020b). The BLM Fire and Aviation program also provides fire management, suppression, prevention, preparedness, and protection services (BLM, 2020a). Its field offices, such as the BLM Palm Springs–South Coast Field Office, provide on-the-ground fire management and aviation activities. BLM also manages fire restrictions or temporary public land closures to reduce the risk of wildfires from human-related activities, such as campfires, off-road driving, equipment uses, and recreational target shooting (BLM, 2020b).

### Police Protection

The Riverside County Sheriff Department's Colorado River Station provides service to the unincorporated area from Hayfield 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 (Riverside County Sheriff-Coroner, 2020). The Sheriff's Colorado River Station is located at 260 North Spring Street, Blythe, CA (Riverside County Sheriff-Coroner, 2020), approximately 42 miles east of the proposed project.

The California Highway Patrol (CHP) is the primary law enforcement agency for State highways and roads. The CHP division covering highways in 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, U.S. Route 95, and State Routes, as well as 500 miles of unincorporated Riverside County roadways (CHP, 2020).

Under the FLPMA, the Secretary of the Interior is authorized to set up a law enforcement body to enforce federal laws and regulations with respect to public lands and resources. The BLM has a law enforcement program that protects public land from illegal activities such as unauthorized use of OHV and vandalism of archaeological resources. BLM Rangers from the BLM Law Enforcement and Security Region 1 are responsible for enforcing federal laws on BLM land in California.

### Emergency Medical Services

The Palo Verde Hospital, located at 250 North First Street, Blythe, CA, is the closest hospital to the proposed project. It provides intensive care and radiology services as well as surgery. The hospital has 51 patient beds, consisting of four intensive care beds, six prenatal beds, and 41 medical-surgical beds (Palo Verde Hospital, 2020). It is approximately 39 miles east of the proposed project.

Desert Regional Medical Center, located about 66 miles to the west of Desert Center at 1150 North Indian Canyon Drive in Palm Springs, CA, is the second closest hospital to the 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, 2020).

### Parks

There are no recreation facilities, developments, or specific recreational attractions on the project's site. However, the surrounding area offers multiple outdoor recreational opportunities, including off-highway vehicle use, camping, rock hounding, and hiking. The proposed project is east and south of Joshua Tree National Park and is near other recreational areas, such as the Chuckwalla Special Recreation Management Area and Corn Springs Campground, Palen-McCoy Wilderness Area, and the Chuckwalla Mountains Wilderness Area. No local parks or Riverside County regional parks are in the vicinity of the project area near Desert Center (RivCo RPOSD, 2020).

See Section 3.16, Recreation, for more information about recreation resources near the project area.

### Schools

The Desert Center Unified School District serves the Desert Center area. The nearest school to the proposed project is Eagle Mountain School, which serves kindergarten through eighth grade students (CDE, 2020) and is located approximately 9 miles northwest of the proposed project.

### Libraries

The Riverside County Library System serves all Riverside County. The closest library branch to the project area is the Lake Tamarisk Branch located at 43880 Tamarisk Drive, Desert Center, CA (Riverside County Library System, 2020), about 0.1 miles north of the proposed project.

### Solid Waste Services

Table 3.15-1 lists the capacities of the active landfills near the Desert Center area. The closest landfill to the proposed project is the Desert Center Landfill, located approximately 2.8 miles northwest.

**Table 3.15-1. Landfill Capacities**

| Landfill Name | Total Capacity (cu.yd.) | Remaining Capacity (cu.yd.) | Remaining Capacity (percent) | Maximum Throughput (tons/day) | Distance to Project |
|---|---|---|---|---|---|
| Blythe Sanitary Landfill (cease operation estimated 2047) | 6,229,670 | 3,834,470 | 61.55 | 400 | 39.4 miles east |
| Desert Center Sanitary Landfill (cease operation estimated 2107) | 409,112 | 127,414 | 31.14 | 60 | 2.8 miles northwest |

Sources: CalRecycle, 2020a, 2020b.

### Utilities

Water in the Desert Center area is primarily provided from well water or Riverside County Service Area (CSA) 51, which is one of the County's 60 CSAs that provides utility and public services to unincorporated areas. CSA 51's administrative office is located at 26251 Parkview Drive, Desert Center. CSA 51 provides water to approximately 350 people from two wells (SWRCB, 2016). Wastewater is generally disposed of in septic tanks and is not transported 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, 2021).

## 3.15.2 Regulatory Framework

### Federal Law, Regulations, and Policies

There are no federal regulations, plans, and standards for public services and utilities that apply to the proposed project.

### State Law, Regulations, and Policies

**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 Department of Toxic Substances Control (DTSC).** DTSC is a department of the California Environmental Protection Agency 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 Resource Conservation and Recovery Act 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. DTSC recently finalized revisions to its hazardous waste regulations (revisions in Cal. Code Regs. tit. 22, div. 4.5, sections and articles in chapters 10, 11, and 23) that allows photovoltaic (PV) solar panels to be managed as "universal waste" 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.

**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 CalRecycle. Compost facilities are regulated under California Code of Regulations, title 14, division 7, chapter 3.1, sections 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 Green Building Standards Code (Section 5.408).** In 2007, the California Building Standards Commission developed the California Green Building Standards Code (CALGreen) to meet the goals of Assembly Bill 32, which established a comprehensive program of cost-effective reductions of greenhouse gases to 1990 levels by

2020. Section 5.408, Construction Waste Reduction, Disposal and Recycling, outlines protocols and standards and describes the intent, compliance methods, and enforcement methods for each code requirement to minimize waste and encourage recycling (CBSC, 2019).

**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.

**22 California Code of Regulations (CCR) Division 4.5:** Title 22 of the CCR discusses an array of requirements with respect to the disposal and recycling of hazardous and universal wastes. Specific standards and requirements are included for the identification, collection, transport, disposal, and recycling of hazardous wastes. Additional standards are included for the collection, transport, disposal, and recycling of universal wastes (as identified in 22 CCR § 66273.9). Requirements include recycling, recovery, returning spent items to the manufacturer, or disposal at an appropriately permitted facility. 22 CCR Division 4.5 also provides restrictions and standards relevant to waste destination facilities and provides authorization requirements for various waste handlers. Title 22 includes California's Universal Waste Rule, as well as other additional waste handling and disposal requirements.

### Local Law, Regulations, and Policies

**Countywide Integrated Waste Management Plan.** Riverside County's CIWMP demonstrates the County's compliance with the California Integrated Waste Management Act's solid waste planning requirements. The Summary Plan element of the CIWMP presents goals and policies and measures divert 50 percent of solid waste from landfills and is updated annually. The Countywide siting element is required to demonstrate that at least 15 years of disposal capacity is available to serve all jurisdictions within Riverside County. If the County's annual report to CalRecycle shows there is less than 15 years of remaining disposal capacity, the County must identify new or expanded solid waste disposal and transformation facilities necessary to provide the required permitted disposal capacity (14 CCR § 18755).

**Riverside County Board of Supervisors Resolution 91-474.** Resolution 91-474 establishes standards governing the use of portable toilets and applies requirements for disposal of associated liquid wastes. The Resolution provides specifications regarding the number of portable toilets required at a given site and the duration of use of such facilities on site. At minimum, weekly maintenance of portable toilets is required.

**Riverside County Board of Supervisors Resolution 91-474:** Resolution 91-474 establishes standards governing the use of portable toilets and applies requirements for disposal of associated liquid wastes. The Resolution provides specifications regarding the number of portable toilets required at a given site and the duration of use of such facilities on site. At minimum, weekly maintenance of portable toilets is required.

**Riverside County Fire Department (RCFD) Technical Policy (TP) 15-002:** The RCFD TP 15-002, titled Solar Energy Generating System (SEGS) Fire Apparatus Access Roads, is a standard that was 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. 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.

## 3.15.3 Methodology for Analysis

This section considers the potential impact to and disruption of public services and utilities in the Desert Center area during construction and operation of the proposed project. Some public services and utilities may experience impacts. Because of the potential need to disrupt services for periods of time during construction, some of the impacts may be moderate. However, the proposed project would provide a beneficial effect on the overall utility system by generating a total of up to 500 MW of renewable electricity after completion of construction.

## 3.15.4 CEQA Significance Criteria

The significance criteria listed below are from the Environmental Checklist in Appendix G of the CEQA Guidelines. Under CEQA, the proposed project would have significant impacts on public services and utilities 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):
    - 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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects (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);
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste (see Impact PSU-5).

The following CEQA significance criterion from Appendix G was not included in the analysis:

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The proposed project would not be connected to a public sewer system so it would not create waste that would be treated in an existing wastewater treatment plant. During construction, portable restroom facilities would be provided and serviced by licensed providers. During operations, a septic system and leach field would be located adjacent to the O&M building to serve the proposed project's sanitary and wastewater treatment needs.

## 3.15.5 Proposed Project Impact Analysis

***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:***

***LESS THAN SIGNIFICANT WITH MITIGATION.*** Project construction is anticipated to occur over approximately 15 to 20 months and require an average construction-related on-site workforce of approximately 320 individuals, with the peak workforce reaching approximately 530 individuals. Workers from the overall construction workforce would be associated with the gen-tie line construction as well. Construction workers and O&M staff is anticipated to be sourced from surrounding communities in Riverside County and San Bernardino County. Furthermore, the O&M workforce would include up to 10 permanent staff members. O&M staff members requiring housing would be negligible number of individuals compared to the overall regional workforce. As such, construction and operation of the proposed project would not induce substantial permanent growth to the regional population levels.

Decommissioning is anticipated to require a workforce similar to that required for construction. The workforce would be drawn from communities within Riverside County and San Bernardino County and would not induce substantial permanent growth to the regional population level.

- ***Fire protection?***

The proposed project is not located within a designated area of very high or high fire hazard, according to the CAL FIRE Fire Hazard Severity Zones Map (CAL FIRE, 2020). In addition, no residential structures exist within the project site nor would they be constructed as part of the proposed project.

During construction, there is a potential for 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 above existing levels during construction. However, given the small population of Desert Center and the proposed project's proximity to the local fire station (Station 49 – Lake Tamarisk Station is located approximately 0.1 miles away), the proposed project would not substantially increase demand for fire protection services. The proposed project would not directly or indirectly cause a substantial population growth to generate a need for new or expanded fire protection facilities, as the vast majority of workers is expected to already reside in surrounding communities. Impacts would be less than significant, and no mitigation would be required.

Although the risk of wildfire at the project site is low, fire prevention and safety measures would still be implemented. Coordination with the BLM and Riverside County Fire is ongoing and would define measures to further reduce the risk of fire. Furthermore, as described in Section 2.2.2.13 (Fire Safety), the proposed project would have a Fire Management and Prevention Plan to include measures to protect human life, prevent injury, preserve property, and minimize downtime due to fire or explosion. The Fire Management and Prevention Plan would be enhanced by Mitigation Measure FIRE-1, Fire Safety Plan (see Section 3.18.7 for full text), which identifies specific elements that need to be included in the Fire Management and Prevention Plan. The Fire Plans would identify potential hazards and accident scenarios that have the potential to occur at the facility during construction. The Project Fire 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. Up to 530 workers at the peak, with an average of 320 daily workers, would be present on the site during the estimated 15 to 20-month construction period. It is anticipated that the construction workforce would 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 site, would increase. After construction, up to 10 permanent staff could be on site at any one time for ongoing facility maintenance and minor repairs as needed. 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. The proposed project would be required to coordinate directly with RCFD regarding fire access and secondary access as required by the RCFD's TP 15-002. Overall, the proposed project's impacts to 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 with mitigation.

- ***Police protection?***

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 construction is not anticipated to permanently increase the local population, no new or expanded law enforcement facilities or increased staff levels within the proposed project's regional or local study area would be required. In addition, during construction, temporary fencing would surround the proposed project area to provide security to 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 worker 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 construction

period. The additional volume of traffic associated with construction workers commuting to the project site 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, construction is not expected to adversely affect the CHP's ability to patrol the highways. Once operational, the proposed project would be secured by up to 6-foot-tall chain-link perimeter fencing topped with 1 foot of three-strand barbed wire. Off-site security personnel could be dispatched during nighttime hours or could be on site, depending on security risks and operating needs. Exterior lighting, controlled access gates, motion detectors, infrared security cameras, and/or other similar technology would be installed to allow for remote monitoring of the site 24 hours a day, seven days a week. These measures would deter unlawful activities and minimize the potential need for the police assistance.

Overall, construction and operation of the proposed project 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 3.14, 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. During operations, up to 10 permanent staff could be on site at any one time for ongoing facility maintenance and repairs. These 10 operation personnel would likely come from the local labor force and would not contribute to a significant population increase. The proposed project would not displace populations or existing housing and would not necessitate construction of replacement housing elsewhere. Therefore, the temporary addition of construction workers and permanent addition of operation personnel to the local 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 near the proposed project. The required construction workforce for the project would be hired primarily 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 regional or local study area. The in-migration and presence of construction workers in the area would be temporary and occur during the construction phase. It is anticipated that some of the workforce would temporarily seek housing near the proposed project and would commute home on weekends, and as such, is unlikely to use the recreation facilities to

an extent that would require the provision of new or expanded park facilities. Although some workers may use recreational areas during 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 3.16, Recreation.

- ***Other public facilities?***

**Health Services.** The RCFD would provide first responder emergency medical care to the project site. The nearby RCFD fire station is 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.

Although a high number of construction workers would be on site, local emergency medical facilities are expected to adequately handle any worksite accidents requiring medical 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. If the coronavirus SARS-CoV-2 (COVID 19) epidemic is ongoing during the construction of the proposed project the construction employees would follow strict protocols to reduce the potential for an outbreak. As of 2021, several solar construction projects (Desert Harvest, Palen, and Athos) in the Desert Center area are under construction during the COVID-19 pandemic and have been able to minimize the risk of transmission. If the COVID-19 pandemic is still ongoing at the time of project implementation, protocols would be established and incorporated into the construction planning to reduce outbreaks and any associated increase in local area medical facilities use. 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 construction of the proposed project would temporarily increase the number of people in the Desert Center area, it would not permanently 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.

### *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?*

***LESS THAN SIGNIFICANT.*** The proposed project would not require or result in the relocation or construction of new water, wastewater treatment, or natural gas facilities during

construction, operation, maintenance, and decommissioning because they would not be connected to a public sewer system and would not use natural gas.

The proposed project would construct a new electric solar power facility that includes a SCADA system and telecommunications connections. The SCADA system would require installation of buried fiber optic or other cables underground. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers. As such, the proposed project would not require any substantial construction efforts regarding telecommunications facilities and structures. No relocations of existing telecommunication structures would occur.

Construction of the proposed project would require limited ground-disturbing activities due to the relatively flat and nearly level ground surface present at the project site. Grading may be required for installation of several solar and storage facility locations that require specific ground treatments. Since most of the site has nearly level topography, no mass grading would be required; however, the ground surface of the substation, O&M facility, and roads would be graded and may be require compaction, mowing, or grubbing. Cut and fill would be approximately balanced such that import and export of excavation material are expected to be minimal. Any topographically irregular areas that are required for construction access would be leveled or smoothed as needed but are expected to be minimal. The overall topography and areas with important hydrologic functions would remain unchanged. The proposed project would avoid the largest areas of desert dry wash woodland within the site to protect desert tortoise habitat (see Figure 2-6, Proposed Fencing Plan). Grading could alter naturally occurring drainage patterns and result in soil erosion, sedimentation, long-term siltation, and increased stormwater runoff. Vegetation removal for road clearance and construction areas decrease the ability of the soil to absorb water, which also increases stormwater runoff from such disturbed areas.

Most of the original grades and natural drainage features at the project site would be maintained, and minimal storm drainage control features would be required. Storm drainage components would be constructed around the BESS facility to capture and direct stormwater flows away from the facility. As part of the proposed project, a SWPPP 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 operational life of the solar and storage facility. In addition, the SWPPP would include BMPs, which would include stormwater runoff quality control measures, concrete waste management, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed. The SWPPP and associated BMPs are not considered to be a mitigation measure for PSU-2, and instead, are implemented as part of the proposed project activities in compliance with State and federal regulations. The SWPPP and BMPs would ensure

that the proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be 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?*

***LESS THAN SIGNIFICANT.*** During construction of the solar facility and gen-tie line, it is anticipated that a total of up to 700 acre-feet of water would be used over the construction period for dust suppression, soil compaction, sanitation, and other purposes.

The proposed project would use an estimated 40 acre-feet of water annually during its 35- to 50-year service life. O&M water would be required for panel washing and maintenance and for substation restroom facilities. No wastewater would be generated during panel washing, as the water 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 for other environmental issue areas.

Water required for O&M activities such as panel washing and office use would be obtained from either an on-site or off-site groundwater well. The estimated volumes of water use would be nominal in comparison to the estimated groundwater basin surplus (See Section 3.10, *Hydrology and Water Quality)* especially after construction. Given the minimal amount of water used during operations, there would be sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry, or multiple dry year scenarios. For a detailed discussion of cumulative impacts to groundwater resources in the Chuckwalla Valley, see Section 3.10, *Hydrology and Water Quality.* Impacts would be 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?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** The proposed project would generate solid waste during construction, operation, maintenance, and decommissioning. Riverside County must comply with the California Green Building Standards Code, also known as CALGreen, which includes mandatory recycling. Code Section 5.408 requires that 65 percent of the nonhazardous waste be recycled or salvaged for reuse. Code 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 (CBSC, 2019).

The project site consists of relatively flat topography. Cut and fill associated with construction-related grading activities is anticipated to be limited, as cut and fill would be completed only within specific areas to produce a consistent grade in the solar facility area. As such, import of soils and export of soils to a landfill is expected be minimal. 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 in accordance with recycling standards and regulations at the time at completion of construction. It is anticipated that at least 20 percent of construction waste would be recyclable, and 65 percent of those materials would be recycled. Wooden construction waste (such as wood from wood pallets) would be sold, 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 the municipal 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.

Non-hazardous waste generated during operation of the proposed project 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. As noted, solar panels are managed as “universal waste” and would need to be disposed of under the appropriate California standards applicable at the time.

During decommissioning at the end of the project’s useful life, the infrastructure would be disassembled according to a BLM-approved Closure and Decommissioning Plan. As noted in Chapter 2 (Description of the Proposed Project) upon decommissioning, a majority of project components would be suitable for recycling or reuse, and project decommissioning would be designed to optimize salvage to the maximum extent possible in compliance with local, State, and federal laws and regulations at the time of decommissioning.

The closest landfill to the proposed project is the Desert Center Sanitary Landfill (located approximately 2.8 miles northwest), with a remaining capacity of approximately 127,414 cubic yards. It is estimated to operate until year 2107. The other nearest landfill is Blythe Sanitary Landfill (located approximately 39.4 miles east) which has over 3.8 million cubic yards remaining (see Table 3.15-1). The proposed project would comply with applicable federal, state, and local regulations related to solid waste, and sufficient capacity is anticipated at the nearest waste disposal sites. Overall, impacts related to solid waste would be less than significant.

### *Impact PSU-5. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

***LESS THAN SIGNIFICANT.*** As described in Impact PSU-4, construction and operation of the project would comply with and attain the goals outlined in CALGreen Building Standards Code Section 5.408. Compliance with the requirements and standards of CALGreen

would further the State's goals to minimize waste, increase recycling efforts, and reduce greenhouse gases. Waste reduction and recycling efforts would minimize the proposed project's impacts to the landfills in the area. Additionally, waste reduction actions would help meet the goals of the California Integrated Waste Management Act of 1989 and comply with regulations outlined in Title 27 of the California Code of Regulations.

During operation of the proposed project, the relatively small number of permanent workers (up to 10 permanent staff) would generate minimal amounts of solid waste (most likely in the form of paper, aluminum, food, and plastic) such that the waste would be adequately handled by existing waste management services and facilities. Disposal of wastes associated with construction and operation of the proposed project would be performed in accordance with local, State, and federal regulations, and excess materials and waste would be recycled or reused to the maximum extent practicable. As such, the project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and no adverse impacts are anticipated. Impacts would be less than significant.

## 3.15.6 Cumulative Impacts

The geographic scope of the cumulative impacts analysis includes the service areas of each of the public services and utilities 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 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. The proposed project could contribute to a significant cumulative impact to public services but not utilities because the proposed project and all cumulative projects would be required to comply with the same state and local requirements for waste diversion, recycling, and landfill capacity in Riverside County. As such, the total volume of waste disposed at the Blythe and Desert Center Sanitary Landfills under the cumulative scenario is not expected to exceed the permitted capacity or result in a cumulatively significant impact.

Cumulative operational impacts to utilities would not be cumulatively considerable. The proposed project would utilize an on-site or off-site groundwater well and would not generate wastewater. There is no potential for the project to contribute to cumulative impacts to water or wastewater systems. The project's incremental solid waste-related impact during construction, operation, and decommissioning, when combined with the contributions of past, other present, and reasonably foreseeable future projects would not be cumulatively significant.

### Fire Protection, Law Enforcement, and Health Services

Construction of 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 transmission projects. The greatest potential for fires and fire hazards would exist at the project site during construction because the peak on-site workforce and variety of equipment could create human presence–related hazards and sparks or other potential fire hazards, respectively. 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 cumulatively significant impact. The implementation of Mitigation Measure FIRE-1 (Project Fire Plan) for the proposed project would reduce its 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 proposed project would therefore be reduced to a level that is less than cumulatively considerable. 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 exceed established service ratios or require new or physically altered facilities.

Cumulative operation and maintenance–related demand for public services including fire, hazardous materials handling, and medical resources and facilities related to the project would be less than the demands during construction and would not be cumulatively significant due to the low number of employees required to support projects in the cumulative scenario. No significant cumulative effect would result from operation of the proposed project.

At the end of the operational period of the proposed project (approximately up to 25 years with the potential for repowering and extension to approximately 50 years), the project's components would be decommissioned and dismantled; the site would be restored to its approximate pre-project conditions, including restoration of soil, revegetation, and mulching according to BLM-approved reclamation measures. 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 increase in demand for fire and police services. Under cumulative conditions, implementation of the proposed project in conjunction with past, existing, and future projects listed in Tables 3.1-1 and 3.1-2 are not anticipated to cause a demand on public services such that the construction of new or physical alteration of existing facilities would be required. The cumulative projects would temporarily increase the population in the region only during the construction and decommissioning phase, would include mitigation measures to reduce the need for public services, and would not require construction of new or physical alteration of existing facilities. Therefore, no significant adverse cumulative impact would result.

### Schools and Libraries

Due to the temporary nature of construction, it is unlikely that any of the cumulative projects would result in a substantial number of workers and their families permanently relocating to the area. The majority of workers is anticipated to come from Riverside County and San Bernardino County. Any potential impact to school 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.

## 3.15.7 Mitigation Measures

**MM FIRE-1 Fire Safety.** *See full text in Section 3.18, Wildfire*

# 3.16 Recreation

This section describes the environmental setting and regulatory framework for recreational resources near the proposed project. The study area 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 base-line conditions and could be affected by activities related to the project.

There were no comments submitted during the Scoping Period that expressed concerns related to recreation. The Joshua Tree National Park expressed concerns about off-highway vehicle use as well as the potential to introduce native species, which is discussed in Section 3.4, Biological Resources.

## 3.16.1 Environmental Setting

The project, including its gen-tie line, would be located on BLM-administered land in eastern Riverside County. The site is surrounded primarily by BLM-administered land, with some scattered rural residences and farms on private lands as well as the adjacent Lake Tamarisk Desert Resort, which provides recreation amenities (Lake Tamarisk Desert Resort, 2021). The project is proposed within a DFA defined in the DRECP LUPA.

The DRECP LUPA covers 10.8 million acres of BLM-administered land in southern California. Of this acreage, 388,000 acres are DFAs, designated as “areas within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas.” (BLM, 2016) The DRECP LUPA took into account recreation values and impacts when making land use designations, including DFAs. Most BLM lands are open to visitors generally (e.g., conservation lands, ACECs, Wildlife Allocations, undesignated lands, designated trails).

Public lands are open to dispersed camping, as long as it does not conflict with other authorized uses or in areas posted as closed to camping, or in some way adversely affects wildlife species or natural resources. In addition to the open lands, the approved LUPA specifically allocated approximately 2,691,000 acres as SRMA and 903,000 acres as Extensive Recreation Management Areas (ERMAs).

The impacts of developing and operating the proposed project within the DFA would be no more severe than those described in the DRECP LUPA Final EIS and ROD for renewable energy projects. These impacts were considered during the approval of the DRECP LUPA’s land use allocations.

The project would be located near other existing solar projects as well as solar projects that are under construction or approved; these are described in Section 3.1.2, Cumulative Impact Scenario.

The BLM-administered land in the vicinity of the project has been used for a range of recreational activities such as hiking, horseback riding, rockhounding, noncompetitive vehicle touring, and other events on designated open routes of travel. Additionally, the project is approximately 6 miles from the nearest point of JTNP.

The project's gen-tie line is proposed on BLM-administered public land, and exits the project at its southeastern end, from where it passes south across Interstate 10 within a 175-foot ROW. South of I-10, the gen-tie line would cross into the Chuckwalla SRMA for about 500 feet until it enters SCE's Red Bluff Substation. Project construction and operation traffic access the site from I-10 via Rice Road (SR-177) and BLM trails/open routes near the site.

### Regional Recreation Areas and Opportunities

The project site is located within the Desert Center area in the Chuckwalla Valley of Riverside County. There are no regional or state parks within the Chuckwalla Valley, and there are no community parks in Desert Center.

The Chuckwalla Valley Raceway is located approximately1.5 miles northwest of the project. The raceway is 2.68 miles long with 17 turns for beginners to experienced racers. The site includes amenities such as a paddock for RV dry camping, 40 rental cabins, and an airstrip (Chuckwalla Valley Raceway, 2021).

The BLM administers a range of recreational resources near the project, including wilderness areas, campgrounds, long-term visitor areas, trails, interpretive sites, and an extensive network of extensive backcountry approved travel and OHV routes as shown in Figure 3.16-1. Dispersed recreation opportunities are provided in Areas of Critical Environmental Concern (ACECs), wilderness areas, and SRMAs. In general, summer in the California desert is considered too hot for outdoor recreational pursuits; recreational use of BLM-administered lands is typically concentrated in the cooler months, from September to May.

Except for in designated campgrounds, camping or backpacking in the area is not common. BLM use data for the year of October 2019 to September 2020[1] show that the area of the BLM Palm Springs–South Coast Field Office that includes eastern Riverside County received 318,700 visits for an estimated over 402,000 visitor days (BLM, 2020). Of these visits, the bulk of them (303,588 visits) were for dispersed use. The two special

[1] Portions of the recreational use data for 2019 to 2020 presented here was taken during the COVID-19 pandemic which is not considered a typical year. To have a better understanding of the overall recreational use trends of eastern Riverside County and Corn Springs Campground and Desert Lily Preserve, use data from the previous 5 years was reviewed. While this data varied from year to year, the general visit numbers for eastern Riverside and dispersed recreation were similar for most years except 2015-2016, where substantially more visits were recorded (BLM, 2020). Visits to the Corn Springs Campground and Desert Lily Preserve were similar for all years except 2015-2016 where the Desert Lily Preserve received substantially fewer visits compared with the most recent year (BLM, 2020). Because the overall use trend shown in the previous 5 years did not vary widely, the most recent data was presented in this report.

use areas nearest to the project, Corn Springs Campground and Desert Lily Preserve ACEC, received fewer visits, 3,850 visits and 2,392 visits, respectively (BLM, 2020). Use data for 2019 show that the area managed by the BLM Palm Springs-South Coast Field Office, including the Desert Center area, received 986,671 visitors (BLM, 2019).

Between October 1, 2015, and September 30, 2016, BLM Corn Springs Campground, about 7.5 miles southeast of Desert Center, received 5,546 visits. The Desert Lily Preserve ACEC, approximately 8 miles northeast of Desert Center, received 1,320 visits. The primary recreational users of the Desert Center area are residents from Desert Center and Blythe, or visitors stopping for short periods while traveling I-10 (BLM, 2018).

Recreation areas within 20 miles of the project site are identified in Table 3.16-1 and discussed below.

**Table 3.16-1. Recreation Areas and Special Designations with Recreational Opportunities**

| Recreation Area | Direction from Project Site | Distance from Project Site (approx. miles) | Approximate Size (acres) | Status |
|---|---|---|---|---|
| **BLM Recreation Areas** | | | | |
| Chuckwalla SRMA | South | >1 | 228,480 | Designated in DRECP |
| Palen-Ford Playa Dunes ACEC | West, east, and southeast | | 41,370 | Designated in DRECP |
| Chuckwalla Desert Wildlife Management Area ACEC | South | >1 | 514,400 | Expanded under DRECP |
| Palen Dry Lake ACEC | Southeast | 5 | 3,630 | Designated |
| Chuckwalla Valley Dune Thicket ACEC | Southeast | | 2,270 | Designated |
| Corn Springs ACEC | South | 5 | 2,470 | Designated |
| Alligator Rock ACEC | Southwest | 2 | 7,750 | Designated |
| Desert Lily Preserve ACEC | North | 3 | 2,060 | Designated |
| Little Chuckwalla Mountains Wilderness | South | | 28,030 | Designated |
| Chuckwalla Mountains Wilderness | South | 5 | 99,550 | Designated |
| Palen-McCoy Wilderness | Northeast | 5 | 236,490 | Designated |
| Corn Springs Campground | Southwest | 5 | 9 camping units | Designated |
| Bradshaw Trail Back Country Byway | South | 17 | 65 miles | Designated |
| **NPS Recreation Areas** | | | | |
| Joshua Tree National Park | Northwest | 6 | 1,017,750 | Designated |
| Joshua Tree Wilderness | Northwest | 6 | 549,500 | Designated |

Within the project site, pedestrian surveys were conducted to look for signs of dispersed camping in January 2021 (PaleoWest, LLC, 2021). These surveys found remnants of two modern fire rings, shown in Figure 1. Access to the location of these two fire rings (and assumed dispersed camping locations) was likely from BLM designated route DC 379.

### Joshua Tree National Park

NPS administers JTNP, which covers over 1 million acres. The JTNP is located approximately 4 miles west and 6 miles north of the project site. However, the main entrance is approximately 30 miles distant on the north side of the JTNP. The main activities at JTNP include hiking, mountain biking, and rock climbing, as well as wildflower viewing and bird watching. Camping is available at nine campgrounds. The eastern part of the park is noted for its dark skies and the JTNP has applied to be designated as a "dark sky park" by the International Dark Sky Association. This dark-sky condition attracts stargazers and amateur astronomers. The JTNP is open year-round, with peak visitation in April. Over 2 million people visited the JTNP in 2019 (NPS, 2021).

### Wilderness Areas

The Wilderness Act limits recreation on Wilderness Areas to activities 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 designated 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 within 20 miles of the project. The Chuckwalla Mountains, Palen-McCoy, and Little Chuckwalla Mountains Wilderness areas are managed by the BLM; the Joshua Tree Wilderness is managed by the National Park Service (Wilderness Connect, 2021). These areas have no developed trails, parking/trailheads, or other visitor facilities. They consist of generally steep, rugged mountains, with no permanent natural water sources, thus limiting extensive hiking or backpacking opportunities. BLM has no visitor use data for these areas, but usage in these wilderness areas is very light. There are five nearby mountain peaks within wilderness that 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 but, depending on the elevation and topography, the site may be distantly visible from certain peaks.

Staff and Law Enforcement Rangers estimate about 100 to 200 hikers per year within all the wilderness areas near the project site. Vehicle camping along roads that are adjacent to the wilderness areas is more popular than hiking. BLM states that up to 2,000 visitors per year use the area to RV camp near wilderness areas, with associated hiking, OHV use, photography, sightseeing, and other activities (BLM, 2018).

### Areas of Critical Environmental Concern

There are seven ACECs located near the project (see Table 3.15-1). The individual ACEC Management Plans, and the resources and values for which the ACECs were established, determine the recreation activities allowed in each ACEC. Most allow low-intensity recreation that is compatible with protection of the relevant values for which the ACEC is designated. Chuckwalla Valley Dune Thicket ACEC is closed to OHV use. The Corn Springs, Palen-Ford Playa, and Alligator Rock ACECs overlap with the Chuckwalla SRMA, which allows limited OHV use on designated routes and navigable washes (BLM, 2015).

Of the seven ACECs listed in Table 3.15-1, only Corn Springs and Palen-Ford Playa Dunes have recreation facilities, and they inform visitors of the special values of the areas and associated protection measures.

### Special Recreation Management Areas

A SRMA is a BLM administrated area where existing or proposed recreational opportunities and setting are recognized for their unique value importance, or distinctiveness, especially compared to other areas used for recreation. They are managed to protect and enhance a targeted set of activities, experiences, benefits, and desired recreation.

The Chuckwalla SRMA borders the southside of the I-10. The proposed gen-tie line would enter the Chuckwalla SRMA after crossing over I-10 and then extend to SCE's Red Bluff Substation. This SRMA provides 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 National Back Country Byway in southeastern Riverside County, with a small segment in Imperial County. The trail is located about 17 miles south of the project. The trail extends from about 3 miles east of Rancho Dos Palmos near the Salton Sea State Recreation Area to about 14 miles southwest of the City of Blythe near the Colorado River; it is on mostly public land between the Chuckwalla Mountains and the Chocolate Mountain Aerial Gunnery Range.

This trail was blazed by William Bradshaw in 1862 as an overland stage route beginning in San Bernardino, California and ending at Ehrenberg, Arizona. It was used extensively between 1862 and 1877 to transport miners and passengers. The trail is a dirt road and users are recommended to use four-wheel drive vehicles due to presence of soft sand. Recreational activities include four-wheel driving, wildlife viewing, plant viewing, bird-watching, and scenic drives. All commercial activities require a land use or special recreation permit from the BLM. Camping is limited to 14 days.

## Off-Highway Vehicle Routes

Vehicle access is an important recreation issue in the desert. according to both the CDCA Plan and the NECO Plan Amendment. The recreation program ensures that access routes necessary for recreation enjoyment are provided. In Riverside County, there are no designated open OHV areas[2] on BLM land, so OHV use on BLM land must occur on designated limited routes, as discussed below.

In limited areas, motorized vehicle access is allowed only on certain routes, including roads, ways, trails, and washes. 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 vehicle is allowed, subject to limitations on the number and types of vehicles allowed and restrictions on time or season and speed limits.
- **Closed Route:** Access by motorized vehicles is prohibited except for certain official, emergency, or otherwise authorized vehicles.

If an OHV route or navigable wash provides access to other routes, historical sites, or recreational areas, it is considered to have high significance. These routes and navigable washes may connect to areas that provide backcountry driving, photography, camping, rock hounding, and hiking opportunities.

The Desert Center region has several OHV open routes. The BLM has no means to determine a user count for these routes. According to local Law Enforcement Rangers and BLM staff, use is relatively low on routes and navigable washes in the vicinity of the project, not exceeding 300 visits per year (BLM, 2018). The Oberon Project site includes portions of BLM open routes DC 372, DC 510, DC 425, DC 377, DC 378, and DC 379. BLM open route DC 379, an east-west OHV route through the project site, would remain open, as would BLM open route DC 510 along the northern boundary of the application area. The others may be closed or truncated by fences surrounding various solar field arrays. The existing, under construction, and proposed solar project sites in the area are also crossed by OHV routes that would be or have been closed or rerouted because of solar field development.

## Washes Open Zones

BLM considers washes as “open” unless an area is specifically designated as limited or closed. When used in this context, a “wash” is defined by BLM as having physical features that make passage of motorized vehicles possible, which establishes the navigability, in addition to having running or standing water, or being dry. Use of washes

[2] Open designations are used for intensive OHV use areas where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel (43 CFR 8340.05).

within these “washes open zones” is restricted to areas considered “navigable.” In these open zones, navigable washes are designated “open” as a class, and they are not individually designated unless they are a specific route (BLM Section 3.16, 2018).

The specific washes in the area have not been inventoried or analyzed by BLM to determine their navigability.

## 3.16.2 Regulatory Framework

### Federal Law, Regulations, and Policies

This section describes the regulatory framework for the project. There are no state laws, regulations, or policies applicable to recreation for the project.

### Federal Laws, Regulations, and Policies

**Wilderness Act of 1964**. The Wilderness Act 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, The only way to designate or change the status of wilderness areas is through Congress. Congress has directed four federal land management agencies, to manage wilderness areas to preserve and, if possible, restore their wilderness characteristics. The agencies relevant to the project are the BLM and the NPS.

Permanent roads and commercial enterprises are prohibited by The Wilderness Act, except commercial services that may provide for recreational or other purposes of the Wilderness Act. Wilderness areas generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, permanent structures, or installation (with exceptions in Alaska). Wilderness areas are to be primarily affected by the forces of nature, although The Wilderness Act acknowledges the need to provide for human health and safety, protect private property, control insect infestations, and fight fires within the area.

**Federal Land Policy and Management Act (FLPMA).** FLPMA provides for outdoor recreation for future generations by including the multiple use/sustained yield framework for management. The recreational resources within the California desert are acknowledged in Title VI of FLPMA, which also directs the Department of the Interior to develop a multiple use and sustained yield management plan for the California Desert Conservation area to conserve the desert’s resources, including recreational use.

**California Desert Conservation Area (CDCA) Plan**. The CDCA Plan establishes goals for management of recreation in the California Desert (BLM, 1999). Recreational opportunities in the study area are framed by the CDCA Plan. To provide for the use of public lands and the resources of the CDCA, the goals include recreational uses, in a manner that enhances wherever possible, and does not diminish, the environmental,

cultural, and aesthetic values of the desert (BLM, 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.
- Provide for off-road vehicle recreation use where appropriate in conformance with FLPMA, Section 601, and Executive Orders 11644 and 11989.

Within the CDCA Plan, the motorized vehicle access element includes a system and a set of rules that provide for constrained motor-vehicle access to the CDCA 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, including routes for north-central and southern portions of the CDCA. The conditions of the special status species and other natural and cultural resources are maintained because the BLM manages OHV use. Since the Plan was adopted, the BLM updated its Travel and Transportation Management approach. The most recent Travel and Transportation Handbook, H-8342, was published in 2012 and provides more guidance for preparing, amending, revising, maintaining, implementing, monitoring, and evaluating BLM land use and travel management plans. Under current BLM regulations, opening and closing of a specific route is an implementation decision. BLM Land Use Planning Handbook (H-1601-1), Appendix C, directs that “At the implementation phase of the plan, establish a process to identify specific areas, roads and/or trails that will be available for public use, and specify limitations placed on use.”

The following amendments to the CDCA Plan are incorporated into the Plan through their Records of Decision:

- **Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan.** The NECO Plan provided for management of California Desert recreation in El Centro, Blythe, Needles, and cities in the Coachella Valley (BLM, 2002). According to the NECO plan, all routes outside closed and OHV open areas are designated as open, closed, or limited. Included in the NECO plan is a route

inventory for OHV and designated routes of travel. Approximately 95 percent of existing routes remained available for vehicle access under the plan. Special Recreation Permits (SRPs) are issued as means to control visitor use, protect recreational and natural resources, and provide for the health and safety of visitors, and are authorizations that follow for recreation uses of the public lands and related waters.

- **Desert Renewable Energy Conservation Plan (DRECP).** In September 2016, the Record of Decision was signed for the DRECP LUPA, which included SRMAs and ERMAs within the California Desert (BLM, 2016). The DRECP LUPA included additional conservation management actions for recreation that dictate the types of activities allowed near certain recreational features.

**Off-Road Vehicles (43 CFR S 8340, et seq.)** This regulation establishes criteria for designating public lands as open, limited, or closed to the use of OHVs and for establishing controls governing the use and operation of OHVs in such areas, while protecting resources, promoting safety, and minimizing user conflicts. Recreation use under Title VI "includes the use, where appropriate, of off-road recreational vehicles."

### State Law, Regulations, and Policies

The project would be located entirely on BLM-administered public lands, so state laws, regulations, and policies regarding recreation do not apply.

### Local Law, Regulations, and Policies

Local land use regulation does not apply to BLM-administered public lands, but FLPMA requires the BLM to coordinate with local governments in land use planning in Title 11, Section 202, (b)(9).

**Riverside County Integrated Plan, General Plan, and Desert Center Area Plan (DCAP).** The Riverside County General Plan includes separate Land Use Plans for future development and growth. The Area Plan Volume 2 includes the Desert Center Area Plan, which the project falls within. Local land use regulation does not apply to BLM-administered public lands, but FLPMA requires the BLM to coordinate with local governments in land use planning in Title 11, Section 202(b)(9).

## 3.16.3 Methodology for Analysis

This section analyzes potential effects of the proposed project with regard to recreation and assesses the impacts to known recreational uses. The CDCA Plan, as amended, which includes a detailed inventory and designation of open routes for motorized-vehicle use, was reviewed to determine impacts to open routes.

## 3.16.4 CEQA Significance Criteria

The criteria used to determine the significance of potential land use impacts are based on those in Appendix G of the CEQA Guidelines. The criteria were modified to align with

all potential impacts of the project. For purposes of this analysis, the project would result in a significant impact under CEQA if it would:

- Indirectly or directly disturb recreational users, reduce or block access to recreational areas, or change the character of a recreational area, diminishing its value (see Impact REC-1)

The following CEQA significance criteria were considered but not included in the analysis:

- 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.
- The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

These two criteria were not considered further for the following reasons. The proposed project is not near any neighborhood or regional parks and would not cause an increase in population in the area, therefore there would be no increased use of recreation resources near the project. The project does not include new recreational facilities. The project would not increase population sufficient to require construction or expansion of existing recreational facilities. The temporary presence of workers from the project's construction would not result in the need to construct or expand recreational facilities. Therefore, these criteria were not considered further.

## 3.16.5 Proposed Project Impact Analysis

### *Impact REC-1. Would the project's construction or operation directly or indirectly disturb recreational users, reduce or block access to recreational areas, or change the character of a recreational area, diminishing its value?*

***LESS THAN SIGNIFICANT WITH MITIGATION.***

**Disturbance of Recreational Users.** Recreational users of specially designated lands could be disturbed by noise, traffic, and dust associated with construction vehicles and activities during both initial construction and decommissioning. The project site is immediately adjacent to I-10 and readily accessible via the interchange at Desert Center. Construction effects may be apparent within the BLM Chuckwalla SRMA, wilderness areas, ACECs, and JTNP. However, visitation to these areas in the vicinity of the project is low and they are not close to the project site itself. JTNP, which is 6 miles away, has a much higher overall visitation, but these visits are concentrated in more accessible parts of the park.

Furthermore, temporary construction effects that could impact any recreational users in the nearby surrounding area would be reduced by implementation of MM AQ-1 (Fugitive Dust Control Plan) and MM N-2 (Public Notification Process), as defined in Sections 3.3

(Air Quality) and 3.12 (Noise), respectively. Impacts to recreational users would be less than significant.

**Blocking or Precluding Recreation Activities**. The presence of the fenced solar arrays within the overall project site would prevent OHV use and dispersed camping access along all or parts of the following BLM open routes and within the project area:

- Loss of up to approximately 3,000 acres currently available for dispersed camping. This includes the project area within the fence lines shown in Figure 3.16-1, plus a buffer. The area within the 5,000-acre project application area, but not within the fenced areas, would still largely be available for dispersed camping.
- DC 372, DC 425, DC 377, and DC 378 are within the footprint of the project and would be closed due to solar array fencing; see Figure 3.16-1. These routes do not appear to serve unique recreation areas.
- DC 379 crosses the project east-west, but the project's footprint avoids it, and access would remain. However, there would be loss of dispersed camping access, because fencing would be installed to bar people from entering and/or camping in undeveloped desert dry wash woodland areas along segments of BLM open route DC 379 under the proposed project.

The blocked routes (DC 372, DC 425, DC 377, and DC 378) do not provide unique opportunities in the region, there are many other open routes for use in the area. As well, the routes are within an area defined by the BLM as a DFA under the DRECP LUPA, which anticipates that specific areas would become inaccessible for recreational use once solar projects are developed. Therefore, the impact of closure would be less than significant.

**Changing the Character of Recreation Areas.** The project is proposed entirely on BLM-administered public land that is primarily undeveloped desert with other solar projects in the vicinity as well as a substation and transmission lines. This land is designated as a Development Focus Area and is bordered on the south by I-10, to the north by another solar project under construction, and to the east by a proposed solar project. Additional existing solar projects are found to the north. There are no defined recreation areas within the project's boundaries. As a result, the project would cause no direct loss or change of character of existing designated recreational facilities, nor would its development result in the increased use of other designated recreational facilities.

During operation, the presence of the project would present a visual change that could affect recreationists who are seeking a natural setting, in particular from wilderness areas or JTNP. Since 2010, the Desert Center area has been transformed by large active solar projects (Desert Sunlight, Palen, Desert Harvest) and new and existing transmission infrastructure. As a result, the modification of the region (from undisturbed desert to more developed energy) occurred before the Oberon Project was proposed and views

from nearby sensitive areas, such as wilderness, have already been modified. While the project would add to the existing development in the area, the operational impacts of the project would be less than significant.

As defined in Section 3.2 (Aesthetics), the project would control night lighting, but nighttime lighting could affect the nighttime experience for dispersed recreational users in the surrounding wilderness. Because the impacts associated with nighttime lighting would be limited in nature and reduced with implementation of Mitigation Measure (MM) AES-1 (Night Lighting Management Plan), the night lighting recreational impact on the dark sky and star gazing would be less than significant.

## 3.16.6 Cumulative Impacts

The geographic scope for cumulative recreation impacts is the Desert Center area in the Chuckwalla Valley. 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 multiple large solar projects such as Desert Sunlight, Palen, and Desert Harvest, and additional projects under construction or proposed. While other existing or proposed projects would add to the cumulative impacts, the solar facilities would be the largest contributors.

Each existing or proposed solar project would result in similar impacts to recreation as those described for the project, primarily loss of land that could be potentially used for passive recreation and the potential closure of open BLM routes and navigable washes. However, each project is located either on private land previously used for agriculture and not available to the public for recreation, or on BLM-administered land designated as development focus areas under the DRECP LUPA. While some of the BLM land may no longer be available for recreation, the direct loss of recreational lands would be minimal compared with the land available for recreation (many millions of acres), including the Chuckwalla SRMA south of I-10. The BLM specifically protected recreation south of the I-10 because this area includes the areas of primary recreational interest.

If all the proposed solar projects in the area were developed, some cumulative loss of local Desert Center OHV routes would occur, because both the projects would require route closure. The cumulative loss of OHV routes by the project in conjunction adjacent projects (Athos Renewable Energy Project under construction, Arica and Victory Pass Solar Project proposed, Easley Solar and Green Hydrogen Project proposed) would be less than cumulatively significant because the routes impacted by the project do not lead to any specific recreation area and are minimally used.

If all the proposed solar projects were developed, they would result in approximately 20,000 acres of solar development in the Desert Center area. This amount of development would substantially change the region and the vistas from nearby recreational facilities, such as wilderness areas and the JTNP, that are valued for their solitude and isolation. The projects would also add visible night lighting within the broader Chuckwalla Valley. This may cause a reduction in visitation to nearby recrea-

tional areas due to this change, as visitors looking for isolated recreation opportunities may look elsewhere, causing an increase in visitation to other wilderness areas outside of Desert Center.

Cumulative temporary construction nuisance impacts (e.g., dust, noise) and operational night lighting that could affect the recreational experience would be reduced through compliance with local laws and regulations and implementation of typical mitigation to protect sensitive receptors and dark skies. Likewise, the incremental contribution of the proposed solar facility to the cumulative impact would be reduced by implementing MM AES-1 (Night Lighting Management Plan), MM AQ-1 (Fugitive Dust Control Plan) and MM N-2 (Public Notification Process). Furthermore, since there is a large amount of wilderness and solitary recreational areas in eastern Riverside County, and the California desert generally, it is unlikely that recreationists who choose another wilderness or solitary area outside of Desert Center would increase the use of these areas that would lead to or accelerate substantial physical deterioration of the region. Therefore, there would not be a significant cumulative impact under CEQA.

## 3.16.7 Mitigation Measures

**MM AES-1 Night Lighting Management.** *See full text in Section 3.2, Aesthetics.*

**MM AQ-1 Fugitive Dust Control Plan.** *See full text in Section 3.3, Air Quality.*

**MM N-2 Public Notification Process.** *See full text in Section 3.12, Noise.*

# 3.17 Traffic and Transportation

This section describes the environmental setting and regulatory framework with respect to surface transportation for the proposed project, including applicable plans, policies, and regulations. Because the project is in a remote area, all materials would have to be brought to the site from long distances and/or personnel would have to travel from surrounding communities within Riverside and Imperial Counties. Consequently, nearly all project-related traffic would use Interstate 10 (I-10) and State Route 177 (SR-177) (also known as Rice Road) for regional travel. The "project area" or "study area" for the traffic and transportation analysis would be segments of I-10 and SR-177 providing connectivity to the project area for traffic volumes associated with construction and operation, with private driveways on SR-177 providing direct access to the project site.

A detailed traffic study titled *Transportation Impact Analysis Oberon Renewable Energy Project* was prepared to evaluate the potential traffic impacts of the project (Dave Evans and Associates [2021] in IP Oberon, 2021).

One scoping comment that has been noted by the Southern California Association of Governments regional council's Connect SoCal recommended strategies for lead agencies that would provide guidance for the project relating to transportation.

## 3.17.1 Environmental Setting

The project site is in Riverside County, immediately east/northeast of the community of Desert Center (refer to Figure 2-1, Project Area, in Chapter 2, Project Description). The project site is directly north of I-10 and accessed from SR-177, which has an interchange with I-10. It is anticipated that most construction workers would be drawn from the Blythe/ Palo Verde Valley region and the Desert Center community, with a smaller portion drawn from the Imperial Valley or the greater Riverside County or San Bernardino County region. The western portion of the project site straddles SR-177. Workers and delivery trucks would access the site from SR-177 to both the east and west, as well as along Orion Road to access the northern project area.

### Regional and Local Roadways

Regional roadway facilities in the area and those used to access the project include the following, which are shown on Figure 2-1 (Project Area) in Chapter 2, Project Description:

- **I-10** is a major east-west interstate freeway spanning the United States from Santa Monica, California, to Jacksonville, Florida. It connects Southern California to Phoenix, Arizona and destinations further east. I-10 is a four-lane freeway with an interchange near the project at SR-177. The posted speed limit on I-10 is 70 mph. In the study area, I-10 carries 28,000 average daily trips (ADT) (Caltrans, 2021). Of the total ADT volumes, trucks accounted for 9,715 trips (35 percent) of the total ADT (Caltrans, 2021).

- **SR-177 (Rice Road)** is a north/south highway between Desert Center/I-10 and State Route 62, approximately 25 miles northeast of Desert Center. SR-177 is a two-lane road, and the posted speed limit is 65 mph. It carries approximately 3,250 ADT (Caltrans, 2021). Of the total ADT volume, trucks accounted for 2,600 trips (80 percent) of the total ADT (Caltrans, 2021).
- **Orion Road** is an east/west local county-maintained dirt road that connects SR-177 to various dirt roads which lead into the project site and surrounding area.

### Public Transportation within the Vicinity

#### *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, 2021).

#### *Pedestrian and Bicycle*

Pedestrian facilities include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape amenities. Pedestrian facilities currently do not exist in the proposed project study area. The regional and local roadways do not contain any existing dedicated pedestrian network or bicycle facilities (e.g., bicycle paths, lanes, or routes). However, given the rural nature of Orion Road and other dirt roads traversing the project site, it is possible pedestrian and bicycle use of these rural dirt roads could occur.

## 3.17.2 Regulatory Framework

### Federal Law, 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.

### State Law, 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 Department of Transportation (Caltrans) 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. The analysis provided in Section 3.16.3 is consistent with Caltrans' 2020 TISG.

### Local Law, Regulations, and Policies

~~**Regional Comprehensive Plan and Regional Transportation Plan.** Southern California Association of Governments' (SCAG) Intergovernmental Review section, part of the Environmental Planning Division of Planning and Policy, is responsible for performing consistency review of regionally significant local plans, projects, and programs. Regionally significant projects are required to be consistent with SCAG's adopted regional plans and policies, such as the Regional Comprehensive Plan and the Regional Transportation Plan. The criteria for projects of regional significance are outlined in CEQA Guidelines Sections 15125 and 15206. According to the SCAG Intergovernmental Review Procedures Handbook, "new or expanded electrical generating facilities and transmission lines" qualify as regionally significant projects.~~

**Southern California Association of Governments' (SCAG) 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.[1]

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.

[1] Adopted Final Connect SoCal Plan Performance Measures. https://scag.ca.gov/sites/main/files/file-attachments/fconnectsocal_performance-measures.pdf.

2. Improve mobility, accessibility, reliability, and travel safety for people and goods.

   *Consistency Analysis*: The proposed solar 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 solar 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.

5. Reduce greenhouse gas emissions and improve air quality.

   *Consistency Analysis*: The proposed project is a solar energy project, 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 energy project, 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 solar project would have no effect on regional development patterns of the transportation network. The proposed project is a solar energy project, 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 solar 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 solar project would have no effect on agricultural lands (see Section 3.1.1). The project does affect undeveloped private lands. Potential impacts to habitat are discussed in Section 3.4 (Biological Resources).

**Riverside County General Plan – Circulation Element.** The Riverside County General Plan Circulation Element contains the following policies applicable to the proposed project (Riverside County, 2020):

- **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 C2.2**: 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 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.

**Riverside County Municipal Code Title 10, Chapter 10.08, Sections 10.08.010–10.08.180.** These regulations establish 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.

## 3.17.3 Methodology for Analysis

During the construction phase of the project trips would be generated by construction workers and by trucks delivering materials and supplies. Operation of the project would not generate a substantial or significant number of trips above those already generated by existing land uses in the area, which primarily consist of other solar energy facilities and rural residences. Decommissioning activities are anticipated to be similar to construction, but less intense. This analysis focuses on potential impacts related to the construction, operation/maintenance, and decommissioning of the project on the surrounding transportation systems and roadways.

This assessment of transportation-related impacts is based on evaluations and technical analyses designed to compare the existing conditions (pre-project) to those with the project, as well as potential cumulative impacts. This analysis considers the effects of transportation and traffic of the project in the context of Caltrans 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.

### Trip Generation

Construction trip generation for the proposed project was developed using information provided by the Applicant, shown in Table 3.17-1. These estimates are considered "worst-case" as they assume all workers would arrive and depart during the peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. The construction trip generation numbers provided in Table 3.17-1 are for peak construction, with normal construction periods having fewer daily trips (IP Oberon, 2021). As shown. delivery trucks for the proposed project represent 13 percent of the total trips generated, with most of these trips expected to occur outside of peak travel hours.

**Table 3.17-1. Construction Trip Generation – Worst Case**

| Description | Daily Trips | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total |
| Workers | 1,080 | 530 | 10 | 540 | 10 | 530 | 540 |
| Delivery Trucks | 160 | 3 | 3 | 6 | 3 | 3 | 6 |
| *Total* | *1,240* | *533* | *13* | *546* | *13* | *533* | *546* |

Source: IP Oberon, 2021, Appendix Q.

Once operational, the project would generate 26 daily trips which would be a mixture of maintenance worker commutes and some small truck trips associated with maintenance and solar panel washing activities (IP Oberon, 2021, Appendix Q).

### Vehicle Miles Travelled

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 of time. 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 judgment 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.

Because the proposed project would generate substantial trips only during construction, which is anticipated to take 15-20 months, a qualitative analysis for VMT has been conducted.

## 3.17.4 CEQA Significance Criteria

The criteria used to determine the significance of the project-related transportation impacts are based on the criteria identified in the CEQA Guidelines, Appendix G. Impacts would be considered significant if they would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (*see Impact TRA-1*).
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (*see Impact TRA-2*).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (*see Impact TRA-3*).
- Result in inadequate emergency access (*see Impact TRA-4*).

## 3.17.5 Proposed Project Impact Analysis

***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?***

***LESS THAN SIGNIFICANT – ROADWAY NETWORK.*** Construction of the project would result in workers traveling to/from the site as well as deliveries of equipment and materials, generating vehicle trips to the area during the 15- to 20-month construction period. The estimated maximum addition of 1,240 daily trips (1,080 daily passenger vehicle commute trips and 160 truck delivery trips during construction) would temporarily increase traffic volumes on the I-10 and SR-177. Given the existing daily traffic on I-10 in the project area (28,000 vehicles), an additional 1,240 trips (4.4 percent increase in

daily traffic volumes) would be noticeable but is considered less than significant. Furthermore, a temporary maximum increase of 160 daily truck trips would be a 1.6 percent increase in daily truck volumes on I-10 in the project area, which is considered less than significant.

For SR-177, the increase in daily traffic volumes during construction would be more substantial. Given the existing daily traffic on SR-177 in the project area (3,250 vehicles), an additional 1,240 trips (38 percent increase in daily traffic volumes) would be noticeable. However, a temporary maximum increase of 160 daily truck trips would be only a 6 percent increase in daily truck volumes on SR-177 in the project area, which is considered less than significant.

While the addition of temporary construction worker commute trips on SR-177 would significantly increase the amount of ADT compared to existing conditions (without the project), the project is not found to be inconsistent with applicable SCAG RTP, Caltrans, or Riverside County General Plan Transportation Element plans, ordinances, or policies establishing measures of overall effectiveness for the performance of the circulation system as provided in Section 3.17.2. Therefore, while construction would result in a temporary 385 increase to ADT volume on SR-177, the project is considered to have a less than significant impact to applicable plans and policies. As well, most of the increased traffic volume would occur near the I-10/SR-177 interchange and would not extend a great distance on SR-177.

Operation and maintenance of the project is expected to generate 26 trips per day, which is considered a nominal increase to existing daily traffic volumes. Furthermore, all private access roads would be designed consistent with applicable County and other standards. Therefore, operation would not disrupt any transportation facilities and would result in less than significant impacts to an applicable plan, ordinance, or policy establishing addressing the circulation system.

Traffic impacts during decommissioning are anticipated to be similar to those of the construction phase, as described above. The actual impacts would depend on the proposed decommissioning action and final use of the site. Based on the evaluation of temporary construction impacts of the project, decommissioning impacts are anticipated to be less than significant with respect to compliance with an applicable plan, ordinance, or policy establishing addressing the circulation system.

***LESS THAN SIGNIFICANT – TRANSIT, BICYCLE, AND PEDESTRIAN USE*.** There are no designated pedestrian and bicycle paths, so the analysis is focused on potential impacts to public transit. The only Palo Verde Valley Transit Agency public bus stop in the region is at Desert Center and I-10. Construction of the solar facilities is not expected to directly affect I-10. However, construction of the project gen-tie interconnection with the Red Bluff Substation would cross I-10. This crossing would require obtaining an encroachment permit from Caltrans, which would ensure the safe and continuous movements of vehicles on I-10. Therefore, the gen-tie crossing would have a less than significant

impact to the Verde Valley Transit Agency route that uses I-10. Lastly, while the project would require large vehicle travel on I-10, this segment of freeway contains a large number of large truck movements under existing conditions. The small addition of truck trips on I-10 during construction would not affect the Verde Valley Transit Agency route that uses I-10. Impacts during construction would be less than significant.

The project area is not located near office uses, employment centers, or existing/ planned residential sites. Thus, there are no opportunities for alternative transportation to serve construction workers. While the project would not be transit-friendly, it would not impact an applicable plan, ordinance, or policy establishing measures of effectiveness for public transportation facilities. Furthermore, Mitigation Measure (MM) TRA-1 (Construction Traffic Carpool and Trip Reduction Plan) would encourage carpooling. Once constructed, maintenance activities would occur as needed at the solar facilities but are not expected to restrict transit, pedestrian, or bicycle movements. Impacts would be less than significant as they pertain to an applicable plan, ordinance, or policy related to alternative transportation.

### *Impact TRA-2. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** The proposed project would result in traffic trips during construction. 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 specialized materials trips likely originating from the Ports of Long Beach and Los Angeles. Many workers needed for construction are expected to reside within a 60- to 90-minute drive time of the site or to temporarily relocated in the region. 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 this commute area and seek temporary housing proximate to the work area.

As shown in Table 3.17-1, construction of the project would include a peak of 1,240 daily trips (1,080 daily passenger vehicle commute trips and 160 truck delivery trips during construction). Per CEQA Guidelines Section 15064.3(b.3), a qualitative VMT analysis of construction trips is appropriate. Due to the remote location of the project, some construction truck trips may require high VMT to access the site; for example, it is 190 miles from the Port of Long Beach to Desert Center. 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 worker commute trips related to construction would cease.

At this time, no known applicable VMT thresholds of significance for temporary construction trips that may indicate a significant impact are available. To ensure VMT is reduced to the extent feasible, Mitigation Measure TRA-1 requires the Applicant to

prepare a Construction Traffic Carpool and Trip Reduction Plan for review by affected jurisdictions, with the Plan providing means to encourage or provide ridesharing opportunities for construction workers and to reduce VMT whenever feasible. Therefore, while the proposed project would include temporary construction trips that may include high VMT, the project would seek to reduce VMT and is presumed to cause a less than significant transportation impact.

Once constructed, operation and maintenance of the project would generate 26 daily vehicle trips, with the majority being passenger vehicles from operation and maintenance workers. Per Caltrans guidelines, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant operation VMT impact (Caltrans, 2020).

With respect to a qualitative analysis for compliance with the Regional Comprehensive Plan and the Regional Transportation Plan, it is assumed permanent operational workers would either be located in, or seek permanent residence within, a 30-mile commute. Based on U.S. Census data for the area (Census Tract 469, City of Blythe, Desert Center area), approximately 28 percent of those residing within these areas have a daily work commute ranging between 20 to 40 minutes in duration (U.S. Census Bureau, 2020). Therefore, the estimated commute time and VMT for operational workers is within a reasonable range typical of the remote desert communities nearest the project. Considering the remote location of the site, limited residential and public transit opportunities close to the site, and the low number of operations daily trips (26 daily trips), the project is not considered to result in high VMTs that could adversely affect transit or transportation planning for the area. Therefore, operational-related trips would not affect existing transit uses or corridors and are presumed consistent with regional plans for reducing VMT and less than significant impacts would occur.

Impacts during decommissioning are anticipated to be similar to those of the construction phase as described above. The actual impacts would depend on the proposed decommissioning action and final use of the site. However, any increase in VMT during decommissioning would be temporary. Therefore, impacts are considered less than significant.

### *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)?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** Construction traffic would access the project site from SR-177 at proposed new access points. Due to the flat topography, both SR-177 and these proposed access points would have a relatively straight horizontal alignment with good visibility looking in all directions. All new internal site roads 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, under existing conditions. As the project area does not include any pedestrian or bicycle facilities, hazard impacts from project-related vehicle use of public roadways would be less than significant.

The movement of heavy trucks and equipment at the access points from SR-177 could potentially result in damage to SR-177 road surfaces and shoulders. Additionally, the gen-tie crossing of I-10 would likely require the temporary installation of guard structures during conductor wire stringing to prevent the conductor from falling on the roadway. 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. With the incorporation of this mitigation, hazard impacts from roadway damage demonstrable to the project would be less than significant.

Average daily operational traffic volumes associated with the project would be 26 trips per day, with the majority being passenger vehicles. This amount of operational daily trips would have a negligible effect on public roadway safety and would not damage roadway surfaces. Less than significant roadway hazards would occur from project operation.

Decommissioning impacts are anticipated to be similar to those of the construction as described above. The actual impacts would depend on the proposed decommissioning action and final use of the site.

#### *Impact TRA-4. Would the project result in inadequate emergency access?*

***LESS THAN SIGNIFICANT.*** Construction of the project is not expected to require any temporary roadway closures or other activities that could restrict the movements of emergency vehicles. Therefore, impacts during construction would be less than significant.

The project would have controlled access points for ingress and egress at the site, with all access designed to Riverside County standards that allow for adequate emergency vehicle access and movement. Riverside County Fire Department would review the access and determine its adequacy as part of project approval. Once operational, maintenance activities would not restrict emergency vehicle movements. As the solar facilities would be staffed, entrance into the site through closed gates would be available. Impacts from project operation would be less than significant.

Decommissioning impacts are anticipated to be similar to those of the construction phase. The actual impacts would depend on the proposed decommissioning action and final use of the site.

## 3.17.6 Cumulative Impacts

The geographic scope of the cumulative analysis for the transportation and traffic vehicle trips analysis are the affected segments of I-10 and SR-77 that provide access to the

project and to cumulative projects. This geographic area was selected because cumulative projects would increase impacts only if they used the same roadway segments at the same time as the proposed project. Therefore, the cumulative projects considered within the traffic and transportation geographic extent include the Arica and Victory Pass Projects (see Tables 3.1-1 and 3.1-2). While other cumulative projects may use the same segments of I-10 and SR-177, they are not expected to be constructed at the same time. The majority of the cumulative projects in the Desert Center area are already built (transmission lines, Red Bluff Substation, Desert Sunlight Project, Desert Harvest Project, Palen Project) or are in construction (Athos Project[2]).

As discussed, project operations would result in negligible daily trips on 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 project's direct contribution on the affected circulation system. These impacts conclude that direct impacts would be less than significant, or less than significant with implementation of Mitigation Measure TRA-1 (Construction Traffic Carpool and Trip Reduction Plan). Construction of the Arica and Victory Pass Projects, if it were to occur at the same time as the Oberon Project, would result in an increase in trips and VMT.

Because the proposed project is not found inconsistent with any applicable plans, ordinances, or policies establishing addressing the circulation system, such an impact would not be cumulative as an inconsistency determination is project specific. The proposed project's cumulative contribution to VMT impacts would be reduced to less than cumulatively considerable because Mitigation Measure TRA-1 requires the project to reduce VMT to the extent feasible during construction, which would minimize cumulative VMT impacts of multiple construction projects occurring at the same time. Furthermore, the project's temporary increase VMT is not considered beyond what is typical for large construction projects in the rural desert area. Therefore, the project is considered to have a less than significant cumulative contribution to VMT impacts.

Compliance with required Caltrans encroachment permits and Riverside County design standards would ensure the gen-tie crossing of I-10 and project access points on SR-177 do not result in cumulative impacts toward the safe movement of vehicles, pedestrians, and bicycles. The Arica and Victory Pass Projects and any other cumulative projects would also be required to abide by regulations regarding roadway encroachment and access roads to reduce any potential impacts. Therefore, the proposed project's contribution would not be cumulatively significant.

Cumulatively significant impacts due to increased transportation hazards or damaged roads could occur if simultaneous construction activities resulted in significant volumes

[2] According to Soft Bank Energy (https://www.sbenergy.com/projects), the Athos project is anticipated to start operations between November 2021 and March 2022, before peak construction of the Oberon project, which is expected to start in January 2022.

of heavy truck trips that affected safe use of a roadway or damaged transportation facility surfaces. Because there are few roadways in the Desert Center area, it is likely that cumulative projects would use the same roadway segments as the proposed project. If the project, along with any cumulative projects, were to result in damage and deterioration to the same roadways, this could result in a cumulatively significant impact to the roadways. Mitigation Measure TRA-2 (Repair Roadways and Transportation Facilities Damaged by Construction Activities) is proposed to ensure any damage and deterioration attributed to the proposed project would be repaired. This measure also includes considering if multiple projects are using the transportation features, then the Applicant would pay its fair share of the required repairs. With the incorporation of this measure, the proposed project would have a less than significant contribution to cumulative hazard impacts on transportation facilities.

## 3.17.7 Mitigation Measures

**MM TRA-1** **Construction Traffic Carpool and Trip Reduction Plan.** Prior to the start of construction, the Applicant shall submit a Construction Traffic Carpool and Trip Reduction Plan for review and approval by Caltrans or Riverside County, which shall include, but not be limited to:

- Methods that encourage or provide ridesharing opportunities for construction workers.
- Methods to reduce vehicle miles travelled by both construction employees and construction-related truck trips, such as encouraging hiring of local construction workers or providing temporary on-site housing accommodations for those workers with the longest daily commutes.
- Use of rail transport for specialized equipment that may originate from ports or other long distances to reduce VMT associated with vehicle delivery to the project site.
- Define potential methods to coordinate with adjacent solar project developers where project construction may overlap to potentially provide group ridesharing opportunities for construction workers.
- Means for local hiring practices of operations workers and local procurement of maintenance supplies in efforts to reduce VMT of operations and maintenance trips.

**MM TRA-2** **Repair Roadways and Transportation Facilities Damaged by Construction Activities.** If roadways, 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 a pre-project condition. Prior to construction, the Applicant shall confer with Caltrans or Riverside County regarding the roads within

500 feet in each direction of project access points (where heavy vehicles would leave public roads to reach the project site) and gen-tie crossing of I-10. At least 30 days prior to construction, or as requested by Caltrans or Riverside County, the Applicant shall photograph or video record all affected roadway segments and shall provide Caltrans or Riverside County with a copy of these images, if requested.

At the end of major construction, the Applicant shall coordinate with each affected jurisdiction to confirm what repairs are required, if any. 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 Applicant and the affected jurisdiction. If multiple projects are using the transportation features, the Applicant will pay its fair share of the required repairs, which shall occur when construction of all projects using the feature is completed. The Applicant shall provide Caltrans or Riverside County (as applicable) proof when any necessary repairs have been completed.

# 3.18 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.

The section also considers the scoping comments regarding wildfire such as the recommendation for fire prevention, including BMPs to prevent on-site fires and potential spread of wildfires to adjacent lands.

## 3.18.1 Environmental Setting

The Oberon Renewable Energy Project would be located in Riverside County on land administered by the BLM north of I-10 and approximately 5 miles east of Desert Center, California. A gen-tie line would traverse I-10 from the north to connect to the existing SCE Red Bluff 500/220 kV Substation to the south. The project would be sited on primarily undeveloped land traversed by SR-177 (Rice Road). The project and gen-tie line are within a DFA under the DRECP LUPA, which incentivizes and allows for development of solar energy generation and appurtenant facilities within their boundaries. 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 consists of land at varying elevation, ranging from less than 400 feet above mean sea level (amsl) at Ford Dry Lake (approximately 15 miles southwest of the project) to over 3,000 feet amsl in the mountains that enclose the Chuckwalla Valley. The 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 of the project. The Palen Solar Project is under construction to the east (a portion of the Palen Project is operational). The Athos Solar Project is under construction immediately east and north of the project, and the proposed Arica and Victory Pass Projects, would be located approximately 1,000 feet east of the 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 not located within any FHSZ due to the lack of dense flammable vegetation and steep slopes (CAL FIRE, 2020). According to the Wildfire Susceptibility Map in the Riverside County General Plan Safety Element, very high FHSZs in Local, State, and Federal Responsibility Areas are concentrated in the western portions of Riverside County

(County of Riverside, 2019). The project would be located in Moderate FHSZ in Local and Federal Responsibility Areas. Since the project is not located in a State Responsibility Area, CAL FIRE would not be responsible for fire management or suppression activities in this area. This responsibility falls to 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 and BLM Fire and Aviation 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 (EPA, 2016).

**Riverside County Fire Department**. The Riverside County Fire Department, 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 (County of Riverside, 2020).

**Bureau of Land Management Fire and Aviation Program**. 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, 2020). 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.

## 3.18.2 Regulatory Framework

Federal, state, and local laws, regulations, and policies applicable to the project are described below.

### Federal Law, 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.

### State Law, Regulations, and Policies

**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 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.

### Local Law, Regulations, and Policies

The project would be entirely on land administered by BLM. Local laws, regulations, and policies do not apply to federal lands. The material below is included for information purposes only.

**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 (County of Riverside, 2019).

- **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 Riverside County Fire Department 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 public services and utilities (County of Riverside, 2015).

- **Policy DCAP 10.1**. Protect life and property from wildfire hazards through adherence to the Fire Hazards section of the General Plan Safety Element.

**Riverside County Fire Department (RCFD) Technical Policy TP-15-002**. The RCFD TP 15 002, titled Solar Energy Generating System (SEGS) Fire Apparatus Access Roads, is a standard that was developed to assist with the design of fire apparatus access roads from public roadways to a SEGS (i.e., solar facility). It addresses secondary access road requirements, which shall be determined by the County Fire Marshal given the specific conditions of any given solar project (Riverside County Fire Department, 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.

## 3.18.3 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.

## 3.18.4 CEQA Significance Criteria

The criteria used to determine the significance of the project's wildfire impacts are based on the criteria identified in the CEQA Guidelines, Appendix G. Project-related impacts would be considered significant if the project is located in or near State Responsibility Areas or lands classified as very high fire hazards severity zones and:

- Substantially impair an adopted emergency response plan or emergency evacuation plan.
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- Require the installation or maintenance of associated infrastructure (Such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- Expose people or structures to significant risks, including downslope or downstream

## 3.18.5 Proposed Project Impact Analysis

***If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones:***

The project is located adjacent to a State Responsibility Area, and not in a very high fire hazard severity zone.

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

***LESS THAN SIGNIFICANT.*** The project would be in a remote area with existing, approved, and proposed solar projects in the vicinity. Access to the project is anticipated to be via Rice Road (SR-177) as well as along Orion Road to access the northern project area. Construction of the project would not require the construction of new access roads and is not anticipated to require any temporary lane closures or obstructions that could restrict the movement of emergency vehicles. See Section 3.17 Traffic and Transportation for an analysis of traffic related impacts during project construction. Operation and maintenance access would be via Rice Road and Orion Road. No permanent or temporary road closures that could restrict emergency vehicle movement are anticipated during operation of the project. The solar facility would be staffed with up to 10 permanent staff, or alternatively 2 permanent staff, and 8 off-site, on-call employees. The project would be secured by up-to-6-foot-high chain-link perimeter fences topped by three strands of barbed wire, and a locked gate at the ingress/egress. As such, access on public roads and to the project site would be unobstructed, and construction and operation of the solar facilities would not impair any emergency access routes. The project would result in less-than significant impacts related to impairment of an adopted emergency response plan or emergency evacuation plan.

Construction of the gen-tie line structures would cause a temporary disturbance within the construction corridor estimated to be up to 175 feet wide, but this disturbance would not obstruct any public rights-of-way. Spur roads would be required, but no new access or improvement road construction is expected. The I 10 would require temporary lane closures during stringing of the wire across the highway to connect the gen-tie line to the SCE Red Bluff 500/200 kV Substation. Once operational, the gen-tie line would not cause any future lane closures that would impair movement on the public roadways. Therefore, installation and operation of the gen-tie line would not restrict the movement of emergency vehicles and would not impair any adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

### *Impact FIRE-2. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

***LESS THAN SIGNIFICANT WITH MITIGATION.*** According to the CAL FIRE FHSZ Viewer map 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 located in a remote, largely undeveloped area approximately 40 miles from the nearest major development. The surrounding area includes active and fallow agricultural fields, the community of Lake Tamarisk, scattered residences, electrical transmission lines, and solar development. Due to the presence of sparce vegetation, 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.

Vegetation on the project site is sparce; therefore, complete vegetation clearance would not be required. Prior to construction, vegetation would be disced under, mulched or composted, and retained on site within the solar fields, roadways, and areas around the operations and maintenance (O&M) building. Vegetation would be cleared for construction of the drainage controls, including berms if needed. Reduction of vegetation would further reduce the availability of flammable fuels around the project site. 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. They would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages and accidental fires.

Furthermore, as described in Section 2.2.2.13 (Fire Safety), fire safety measures would be implemented as part of the project. The Project Description (Section 2.2.2.13) notes that a Fire Management and Prevention Plan would be created for the project and would include standards for construction and operation. The plan would comply with applicable BLM and Riverside County regulations and would be developed in coordination with the BLM and the Riverside County Fire Department. The Project Description does not specify the how the Fire Management and Prevention Plan would safeguard human life, prevent personnel injury, preserve property, and minimize downtime due to fire or explosion. Of concern are fire-safe construction, reduction of ignition sources, control of fuel sources, availability of water, and proper maintenance of firefighting systems. Because of this, Mitigation Measure FIRE-1 (Fire Safety) is included to specify what elements would need to be included in the Fire Management and Prevention Plan. See Section 3.18.7 Mitigation Measures. Implementation of MM FIRE-1 would ensure the impact is less than significant.

The following steps 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, so there is minimal 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. Once operational, up to ten workers are anticipated to perform daily visual inspections and minor repairs to ensure all components of the project are in proper condition. Other O&M activities would include panel washing, which would require on-site water use. Any fire hazards during construction and operation of the solar facilities would be minimal and further reduced with the Project Fire Plan. Operation of the solar facility 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 on-site O&M personnel and/or remotely. Security at the solar facility would be provided by a 6-foot-tall wire fence with one-foot barbed wire to prevent vandalism, damage, or theft of project com-ponents. An emergency lock box would be installed at the project site to allow emergency personnel to access the site in the event of an emergency. As such, the solar facility would not exacerbate wildfire risks or expose workers and residents to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Construction and operation of the project's solar facility would result in less-than-significant impacts.

The project includes operation of an up to 500 MW energy storage system. This may be a battery-based system, or a flywheel or other technology. The energy storage system would be installed following all applicable design, safety, and fires standards 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), which includes criteria for fire prevention and suppression associated with ESS installations, and Section 1206 of the California Fire Code. Implementation and compliance with these design and safety regulations and MM FIRE-1 would reduce the impact from exposure of people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire to less than significant.

The gen-tie transmission structures would be composed of lattice steel structures, steel H-frames, and monopole steel structures, and would not exacerbate fire risks due to the nonflammable nature of their foundations. Construction of the gen-tie transmission line and structures would use existing access roads where feasible. Spur roads would be required, but no new access or improvement road construction is expected. The lack of substantial vegetation within the gen-tie corridor would pose a minimal wildfire risk during construction and operation of the gen-tie line. As described previously, fire safety measures would be implemented to ensure that construction and 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, construction and operation of the project's gen-tie line would result in less-than-significant impacts.

***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 or that may result in temporary or ongoing impacts to the environment?***

***LESS THAN SIGNIFICANT.*** 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 disced, mulched or composted, and retained on site. The reduced amount of already-sparse vegetation would minimize the potential ignition of vegetation.

Construction activities would involve the use of heavy construction equipment and vehicles to install the solar facility's components over the course of approximately 15 to 20 months. Although the solar facility is located 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 voltage transformers, batteries, substations, 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 substantially 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 are assembled properly. The project substation would be secured with a barbed wire chain-link fence to comply with electrical codes and would include communication systems to comply with Federal Energy Regulatory Commission and California Independent System Operator/Utility monitoring and control requirements to ensure safe operation. If used, batteries would be housed in enclosed storage containers constructed on level cement or concrete foundations. The enclosures would contain any accidental fires and prevent them from spreading and causing further damage. 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 and the fire risk in PV systems is very low (TUV Rheinland Energie und Umwelt GmbH, 2015). The solar PV panels would not ignite a potential wildfire or exacerbate the spread of wildfires.

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 fire-fighting equipment available on site, as well as additional water for use at the O&M facility, sprinkler systems, a fire suppression system, and having portable carbon dioxide fire extinguishers mounted at the power conversion

system units. These safety measures, along with the Project Fire Safety Plan, would provide safe operating conditions and fire response protocols to minimize the risk of wildfire. As such, construction and 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.

Construction of the gen-tie line and structures would occur within a corridor approximately 175 feet wide. 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 lattice steel structures, steel H-frames, and monopole steel structures, and would not exacerbate fire risks due to the nonflammable nature of their foundations and constituent parts. Construction of the gen-tie transmission line and structures would use existing access roads where feasible. Spur roads would be required, but no new access or improved road construction is expected. The lack of substantial vegetation within the gen-tie corridor would create a minimal wildfire risk during construction and operation of the gen-tie line. As described previously, fire safety measures would be implemented to ensure that construction and 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, construction and operation of the project's gen-tie line would result in less-than-significant impacts.

### *Impact FIRE-4. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes*

***LESS THAN SIGNIFICANT.*** The project would be in a moderate FHSZ in a remote desert setting. There are no major densely populated cities or communities in the vicinity of the project. The solar facility would be constructed and operated on nearly level ground and would require minimal grading prior to installation of the solar PV panels. Grading would be design to avoid or minimize changes to existing stream channel configurations. Grading would be required for the inverter pads, substation, driveways, and other improvements. Solar panels would not be installed in existing drainage ways and washes. Because the ground surface at the project site is level, and nonflammable solar PV panels would be installed, the project would not pose a significant risk of landslides, post-fire slope instability, or drainage changes. In the event of a wildfire, the project would also not expose a substantial population of people to risks associated with post-fire slope instability because the project is located in a remote area. As such, impacts regarding downslope or downstream flooding or landslides as a result of post-fire slope instability would be less than significant.

## 3.18.6 Cumulative Impacts

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 Farm, SCE Red Bluff Substation, Palen Solar Project, Desert Southwest Transmission Line, Desert Harvest Solar Project, Athos Solar Project, and the Arica and Victory Pass Solar Projects. The available CAL FIRE Incident Data (2013-2020) was reviewed for the Desert Center region and no incidents are noted. This supports the conclusion that the risk of wildfire in the region is low.

Projects in the cumulative scenario would be required to comply with fire hazard policies and include their own fire management plan. Therefore, the project, in combination with the nearby solar projects, would not result in a cumulatively significant impact with regard to fire. In addition, the proposed project would result in cumulatively insignificant impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan because no aspect of the project would interfere with emergency response (e.g., construction is not expected to require any temporary lane closures that could restrict the movements of emergency vehicles).

## 3.18.7 Mitigation Measures

**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 initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.

- 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 the 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 fire-fighting equipment, and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by the BLM and RCFD. Fire prevention procedures shall be included in the project's WEAP.
- 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.
- The 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 would 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 the 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 the 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 the BLM for review and approval and to the RCFD for review and comment before construction.

# CHAPTER 4: Alternatives

## 4.1 CEQA Requirements for Alternatives

Section 15126.6(a) of CEQA Guidelines states that an EIR "shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives that are infeasible. The CEQA Guidelines state that factors that may be considered when determining the feasibility of alternatives are "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context) and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent)" [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 4.3, Comparison of Alternatives). If the environmentally superior alternative is the No Project Alternative, the EIR must identify an additional "environmentally superior" choice among the other alternatives.

Several options were considered to determine potential alternatives which might produce fewer significant impacts, or reduce the severity of those significant impacts, compared to 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 in detail include the No Project Alternative, the Land Use Plan Compliant Alternative,[1] and the Resource Avoidance Alternative with Prehistoric

[1] The DRECP LUPA contains Conservation and Management Actions (CMAs) that are intended to minimize or mitigate impacts from the development and use of the public lands. Each of these CMAs are land use plan decisions and must be applied to decisions and authorizations in order to be in conformance with BLM's land use plan that manages the project site. The Oberon Project is located within BLM's California Desert Conservation Area (CDCA) Planning Area.

Resources/TCR Option.[2] These are summarized in Section 4.2.1 and described in greater detail in Sections 4.2.2 through 4.2.4. An alternatives comparison is provided in Section 4.3, including identification of the Environmentally Superior Alternative. Alternatives considered but not analyzed further in the EIR are presented in Section 4.4.

# 4.2 Alternatives Analyzed in Detail

## 4.2.1 Summary of Alternatives

Table 4-1 provides an overview of the proposed project and the three alternatives analyzed in this EIR. The Oberon Project application area covers approximately 5,000 acres of BLM-administered land, not all of which would be occupied by project facilities. The Land Use Plan Compliant Alternative and Resource Avoidance Alternative with Prehistoric Resources/TCR Option would reduce (or eliminate) the footprint of the proposed disturbance area~~, and in doing so would eliminate the need for~~ and would not require a LUPA. However, the alternatives would have a reduced renewable generation output compared to the proposed project analyzed in Chapter 3.

## 4.2.2 No Project Alternative

Under the No Project Alternative, the construction of the Oberon Renewable Energy Project and associated infrastructure would not occur. Because no project would be constructed none of the construction, operation, and decommissioning impacts associated with the project would occur to any of the resources identified and discussed in Chapter 3. Project-related off-site mitigation, upgrades to Red Bluff Substation, 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).

[2] The Resource Avoidance Alternative was developed due to scoping comments submitted by a group of nonprofit organizations that operate independently of any government with the purpose to address environmental issues. They are also referred to as environmental non-government organizations (NGOs). Concerns raised during the AB 52 process are addressed with the addition of the Prehistoric Resources/TCR Option and mitigation measures.

**Table 4-1. Summary of Alternatives Evaluated**

| Alternative | Description | Footprint (acres) | Capacity (MW) | Portion of Application Area Not Developed | Desert Tortoise Critical Habitat within Development Footprint (acres) | Desert Pavement within Development Footprint (acres) | Compensatory Mitigation Acquired (acres) |
|---|---|---|---|---|---|---|---|
| **No Project Alternative** | • No construction of solar facility, BESS, gen-tie line, and associated components | 0 | 0 | 100% | 0 | 0 | 0 |
| **Proposed Project** | • Avoids most DDWW with minimum 50-foot buffer (LUPA may be required[3]).<br>• Impacts from solar panels to ~60 acres of DDWW.<br>• Setback from designated utility corridor north of I-10.<br>• Wildlife friendly fencing.<br>• Cattle fencing installed across undeveloped DDWW corridors along BLM Open Route DC379. | ~2,700 | 500 | 46% | ~~>700~~590 | ~~~70~~55 | ~~~6,800~~6,200 |

[3] BLM will determine through the NEPA process whether the Applicant has met certain criteria for conformance with the DRECP CMAs, and whether a LUPA to the CDCA, as amended, would be required for the proposed project.

**Table 4-1. Summary of Alternatives Evaluated**

| Alternative | Description | Footprint (acres) | Capacity (MW) | Portion of Application Area Not Developed | Desert Tortoise Critical Habitat within Development Footprint (acres) | Desert Pavement within Development Footprint (acres) | Compensatory Mitigation Acquired (acres) |
|---|---|---|---|---|---|---|---|
| **Land Use Plan Compliant Alternative** | • Avoids DDWW with 200-foot buffer, except minor incursion (no LUPA required).<br>• No setback by I-10 in designated utility corridor and designated critical habitat for desert tortoise.<br>• No wildlife-friendly fencing (desert tortoise exclusion fencing during O&M).<br>• No cattle fencing along segments of BLM Open Route DC379 | 2,100 | 375 | 58% | ~~630~~543 | ~30 | ~5,400 |
| **Resource Avoidance Alternative with Prehistoric Resources/ TCR Option** | • Avoids DDWW with a 200-foot buffer, except minor incursion (no LUPA required).<br>• Entirely avoids the multi-species linkage corridor. | 1,600 | 300 | 68% | 0 | ~10 | ~1,800 |

**Table 4-1. Summary of Alternatives Evaluated**

| Alternative | Description | Footprint (acres) | Capacity (MW) | Portion of Application Area Not Developed | Desert Tortoise Critical Habitat within Development Footprint (acres) | Desert Pavement within Development Footprint (acres) | Compensatory Mitigation Acquired (acres) |
|---|---|---|---|---|---|---|---|
| | • Avoids all designated critical habitat for desert tortoise.<br>• Setback from designated utility corridor (due to overlap with desert tortoise critical habitat).<br>• No wildlife-friendly fencing (desert tortoise exclusion fencing during O&M).<br>• No cattle fencing along segments of BLM Open Route DC379<br>• Avoids prehistoric archaeological resources within development footprint. | | | | | | |

If energy that would have been produced by the proposed project is not replaced with 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 within 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 ~~would~~ may be similar to those identified for the proposed project, as presented in Chapter 3 of this EIR.

### 4.2.3 Land Use Plan Compliant Alternative

Under the Land Use Plan Compliant Alternative, the Applicant would comply with all CMAs specified in the DRECP LUPA and no LUPA to the CDCA would be required by BLM. Most aspects the Land Use Plan Compliant Alternative would be similar to the proposed project; however, in order to comply with all DRECP CMAs, this alternative would result in less land being available for power generation, thereby reducing the project's capacity to 75 percent of the electricity (375 MW) that would be produced under the proposed project. Specifically, this alternative would establish a 200-foot setback from desert dry wash (microphyll) woodland, as required by DRECP CMA LUPA-BIO-RIPWET-1 and LUPA-BIO-3. A 200-foot setback would remove approximately 600 acres from the development footprint (see Figure 4-1, Land Use Plan Compliant Alternative). Under the proposed project, solar panels would be set back 50 feet from desert dry wash woodland~~, which would require a LUPA to the CDCA~~.

Also, under the proposed project, solar panels would be set back 300 feet from the I-10 freeway to help preserve BLM's Section 368 utility corridor. However, under the Land Use Plan Compliant Alternative, to offset some of the reduction in land available as a result of a 200-foot desert dry wash setback, solar panels would be installed within the utility corridor area north of and adjacent to I-10.

During construction and operations, desert tortoise exclusion fencing would be installed around the project development footprint, including all solar panel, substation, and BESS development areas. This fencing would remain through construction and O&M. Exclusion fencing would maximize desert tortoise safety during O&M activities but would bar desert tortoise and other wildlife, such as desert kit fox, movement through the project footprint connecting desert dry wash woodland corridors. No cattle wire fencing would be installed along segments of east-west BLM open route DC 379 at desert dry wash woodland crossings (i.e., non-development areas within the project area) to allow continued public and recreational access. This fencing plan differs from the proposed project (see Figure 2-6 in EIR Appendix B). The proposed project would

install desert tortoise exclusion fencing around the areas undergoing development, but during O&M, after construction is complete and the land begins to revegetate, exclusion fencing in portions of the project area would be modified or reconfigured to facilitate desert tortoise movement through areas of high-quality habitat to their preferred desert dry wash woodland habitat corridors.

In order to meet the energy needs of the proposed project, an additional energy project may be developed on another site and could have environmental impacts equal to or greater than the proposed site, which is surrounded by proposed and approved solar generation projects and located on BLM-administered land that is within the DRECP DFA, and thus, targeted for renewable energy development.

### Impact Analysis

The Land Use Plan Compliant Alternative would:

- Comply with all current CMAs, reducing the footprint of the proposed project by establishing a 200-foot setback from desert dry wash woodland.
- Maintain exclusion fencing around all developed portions of the project to maximize desert tortoise safety during O&M activities.
- Exclude other wildlife such as desert kit fox from entering the solar facility.
- Not install cattle wire fencing along segments of BLM open route DC 379 at desert dry wash woodland crossings.
- Install solar panels in the utility corridor closer to the north side of I-10.
- Slightly reduce the amount of off-site wildlife compensation lands.

Under the Land Use Plan Compliant Alternative, the proposed development footprint (primarily solar arrays) would be reduced by approximately 600 acres, which would result in slightly reduced visual impact. However, because the majority of views of the project would be at grade and edge-on, the reduction in developed acreage would have little effect on the overall level of visual change caused by the project and impacts would remain significant and unavoidable.

Likewise, this alternative is expected to require a similar amount of construction and operation workforce, equipment, and fencing material as the proposed project. Construction and operation intensity would be virtually the same, except there would be no mobilization of a workforce or equipment to create wildlife-friendly fencing during operations as would occur under the proposed project. No cattle wire fencing would be installed along segments of BLM Open Route DC379, which would allow for continued public and recreational access to desert dry wash woodland crossings.

Given the overall similarities between the Land Use Plan Compliant Alternative and the proposed project except for the reduced amount of developed land, the types and level of impacts for the following resources would be essentially the same, and the same mitigation would be required:

- Aesthetics
- Air Quality
- Energy
- Geology, Soils, and Mineral Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Paleontological Resources
- Population and Housing
- Public Services and Utilities
- Recreation
- Traffic and Transportation
- Wildfire

### *Biological Resources*

Under the Land Use Plan Compliant Alternative, a 200-foot setback from desert dry wash woodland would be implemented to comply with DRECP CMA LUPA-BIO-RIPWET-1. The substation, BESS, and gen-tie line options in the Land Use Plan Compliant Alternative would be the same as for the proposed project.

Since the alternative would occupy generally the same area and would use the same construction techniques as the proposed project, such as vegetation removal and grading resulting in increased dust noise, and activity, direct, indirect, and cumulative impacts to biological resources would be qualitatively similar. However, by complying with the 200-foot setback, 600 acres of vegetation and habitat within the proposed development footprint, including ~~and~~ desert dry wash woodland habitat and buffer, ~~area~~ would no longer be impacted. ~~Therefore, b~~By increasing the buffer distance, this alternative would avoid development near desert dry wash woodland, and would ~~thus,~~ allow for increased wildlife movement in the desert dry wash woodland corridors across the project site. A breakdown of the habitat impact acreages by alternative is included in Table 3.4-1 (Impacts to Sensitive Habitats within the Project Fenceline by Alternative) in EIR Section 3.4.5.

~~On the other hand~~To balance the loss of acres available for construction of solar facilities, under the Land Use Compliant Alternative the development footprint would expand towards the utility corridor north of and adjacent to I-10. This would ~~restrict~~ reduce the width of the east-west wildlife movement corridor between freeway underpass culverts along the north side of I-10, which~~that~~ connect to the desert dry wash woodland corridors within the multi-species linkage.

Under the proposed project, approximately 920 acres of the solar facilities would be surrounded with wildlife friendly fencing, which would support movement for some small wildlife through the revegetated project site during O&M. Potential impacts to wildlife are described in Section 3.4.5. In the Land Use Plan Compliant Alternative, ~~use of~~ exclusion fencing is proposed to surround all solar facilities, which would protect desert tortoise, desert kit fox, and other wildlife from O&M activities (e.g., potential collisions from O&M vehicles, disturbance from solar panel maintenance, etc.); however, their movement patterns would be restricted through the revegetated site and any vegetation within the fenceline would not be available for shelter or foraging.

Due to a relatively smaller ~~amount~~ acreage of habitat impacted under this alternative, ~~less than~~approximately 5,400 acres of habitat would be permanently protected under a conservation easement (in compliance with DRECP CMA LUPA-BIO-COMP-1) compared to ~~over~~ approximately 6,2~~8~~00 acres with the proposed project.

~~With mitigation, the impacts to biological resources would be reduced to less than significant under both the proposed project and the Land Use Plan Compliant Alternative.~~ Overall, the impacts to biological resources from the Land Use Plan Compliant Alternative would be ~~somewhat less than~~reduced from the proposed project, because the development footprint would be ~~reduced~~ setback~~and~~ farther from desert dry wash woodland habitat, in compliance with CMAs. ~~-~~With mitigation, the impacts to biological resources would be reduced to less than significant under both the proposed project and the Land Use Plan Compliant Alternative.~~yet the overall habitat compensation package would not be substantially reduced.~~

### *Cultural Resources/Tribal Cultural Resources*

The direct effects of this alternative would be similar to those described for the proposed project. However, the 2,100 acres within the fenceline is approximately 600 acres smaller than the 2,700 acres of the proposed project.

Fourteen CRHR-eligible resources, and therefore considered historical resources under CEQA, are potentially subject to direct effects from the Land Use Plan Compliant Alternative solar facility.

Of those CRHR-eligible resources, 21 prehistoric artifact scatters would be destroyed by the construction of the Land Use Plan Compliant Alternative solar facility (see Appendix C for full list). These resources are eligible in the own right and are contributors to the PTNCL. Mitigation for the direct impacts to these resources would be the same as the proposed project.

Only small portions of WWII-related historic archaeological site AE-3752-200H extends into the Land Use Plan Compliant Alternative solar development area. The destruction of a small portion of the site would not cause a substantial adverse change in the significance of this historical resource. Therefore, the Land Use Plan Compliant Alternative would not cause direct effects to AE-3752-200H, and no mitigation is necessary.

In addition to the CRHR-eligible resources, 12 WW-II era resources would be destroyed by the construction of the Land Use Plan Compliant Alternative solar development footprint. However, while these resources are contributors to the DTCCL, these resources are not eligible for the CRHR in their own right, so are not subject to direct impacts.

Under this alternative, no changes to the gen-tie are proposed, therefore direct impacts associated with Land Use Plan Compliant Alternative gen-tie would be the same as the Proposed Project and would be addressed by the same mitigation.

Overall, indirect effects of Land Use Plan Compliant Alternative would be similar to the Proposed Project and would be addressed by the same mitigation.

Therefore, the direct impacts of this alternative would be less than but similar to the Proposed Project while the indirect impacts would be the same as the Proposed Project. Like the Proposed Project impacts to historic-era CRHR-eligible resources associated with the Land Use Plan Compliant Alternative would be less than significant with implementation of mitigation. While implementation of MM CUL-10, CUL-11 and CUL-12 would reduce the impact of the Land Use Plan Compliant Alternative, like the proposed project, the direct, indirect and cumulative impacts to prehistoric-era CRHR-eligible resources would remain significant.

#### *Greenhouse Gas Emissions*

The overall air quality and GHG emissions generated through construction activities would not exceed any annual emissions thresholds. For the Land Use Plan Compliant Alternative, the associated direct, indirect, and cumulative effects to GHG would be like that of the proposed project. However, because the Land Use Plan Compliant Alternative would produce only 375 MW of renewable energy generation, the net decrease in GHG emissions would be substantially less than the decrease in GHG emissions from the 500 MW proposed project over the 30- to 50-year life of the project.

### 4.2.4 Resource Avoidance Alternative with Prehistoric Resources/TCR Option

During scoping, the Center for Biological Diversity, Sierra Club, California Native Plant Society, and National Audubon Society suggested that an alternative be included that avoids desert tortoise critical habitat, the sand transport corridor, and the wildlife connectivity corridors linkage area.

As described in the Biological Resources Technical Report (IP Oberon, 2021, Appendix F), no aeolian sand deposits are mapped on the project site so no avoidance of this resource is needed. The Resource Avoidance Alternative with Prehistoric Resources/ TCR Option would be similar to the Land Use Plan Compliant Alternative in requiring a 200-foot setback from desert dry wash woodland, but would further reduce the development footprint by also excluding development in desert tortoise critical habitat and the multi-species linkage corridor (see Figure 4-2, Resource Avoidance Alternative with Prehistoric Resources/TCR Option).

In addition, based on tribal concerns raised under Assembly Bill (AB 52) tribal consultation process, this alternative would also include an option to avoid all identified TCR within the development footprint. Specifically, prehistoric archaeological resources within the fenced development areas would be fenced and avoided under this alternative. To avoid these prehistoric resources, a total of approximately 5 acres (18 artifact scatters) across the alternative site would be removed from development. Therefore, this

alternative would eliminate the project's significant and unmitigable direct impacts to TCR resources.

Removing desert tortoise critical habitat and the multi-species linkage corridor (which overlaps the desert tortoise critical habitat at the eastern end of the project area) from development and avoiding identified prehistoric archaeological resources that are also Tribal Cultural Resources would eliminate approximately 1,100 acres from the project.

This would result in the project being able to generate only 300 MW of solar power, only 60 percent of its objective of 500 MW under the proposed project. In order to meet the energy needs of the proposed project, an additional energy project may be developed on another site and could have environmental impacts equal to or greater than the proposed site, which is surrounded by proposed and approved solar generation projects and located on BLM-administered land that is within the DRECP DFA, and thus, targeted for renewable energy development.

The central substation, BESS, and gen-tie line under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would be the same as for the proposed project and the Land Use Plan Compliant Alternative, but the southeastern substation and BESS secondary option with a shorter gen-tie line would not be available as it would be located in desert tortoise critical habitat and the wildlife linkage corridor area.

As with the Land Use Plan Compliant Alterative, the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would fully comply with the DRECP CMAs by eliminating impacts to the desert dry wash woodland buffer areas. However, avoidance of desert tortoise critical habitat and the multi-species corridor is not required by the DRECP CMAs. Off-site compensation lands can mitigate for these impacts. Under the proposed project, in compliance with DRECP CMA LUPA-BIO-COMP-1, off-site compensation lands in the Wildlands mitigation package to offset project impacts to sensitive habitats include desert tortoise critical habitat at a 5:1 ratio. The amount of compensation land needed would be substantially reduced under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option at less than 1,800 acres compared with ~~over 6,800~~approximately 6,200 acres under the proposed project.

This alternative would avoid direct impacts to Tribal Cultural Resources. Otherwise, this alternative would be similar to the Land Use Plan Compliant Alternative, but would result in an even smaller project footprint and, with an operational output of 300 MW, an even further reduced ability to contribute to meeting renewable energy targets. The amount of off-site protected lands required for compensation would be reduced.

### Impact Analysis

The Resource Avoidance Alternative with the Prehistoric Resources/TCR Option would:

- Remove desert tortoise designated critical habitat and the multi-species linkage corridor from development.

- Maintain desert tortoise exclusion fencing during operations to maximize tortoise safety during O&M activities.
- Exclude other wildlife such as desert kit fox from entering the solar facility.
- Not install cattle wire fencing along segments of BLM Open Route DC379 at desert dry wash woodland crossings.
- Maintain a setback from I-10 within the designated utility corridor (due to overlap with desert tortoise critical habitat).
- Reduce the amount of off-site wildlife compensation lands.
- Avoid prehistoric archaeological resources that are also Tribal Cultural Resources within the development footprint.

Under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option, the proposed development footprint (primarily solar arrays) would be reduced by approximately 1,100 acres, including all of the acreage south of the common east-west gen-tie corridor and BLM Open Route DC379 (due to overlap with desert tortoise critical habitat).

By eliminating all of the solar arrays between I-10 and the east-west gen-tie corridor, project visibility and visual change would be substantially reduced when viewed from locations along I-10 that would be in close proximity to the project boundary. However, since the proposed gen-tie line would follow the same route as the proposed project, the level of visual change would remain high (though reduced somewhat), because the gen-tie line is the primary structural component contributing to the visual contrast and visual change. From an elevated vantage point on Alligator Rock, there would be more perceptible gaps in the array fields and the areal extent of the fields would appear reduced, but given the scale of area still to be developed, the overall level of visual change would remain significant and unavoidable.

The alternative would use a somewhat reduced amount of fencing for the project, and exclusion fencing would be used during O&M instead of wildlife passage fencing, which would minimally change the workforce, equipment, and fencing material during construction. Because the exclusion fencing would remain in place for the life of the project, there would be no mobilization of a workforce or equipment to create wildlife-friendly fencing during operations as would occur under the proposed project.

No cattle wire fencing would be installed along BLM Open Route DC379 and the area south of the open road would not be developed with solar panels, allowing continued public and recreational access to desert dry wash woodland.

This alternative is expected to use the same type yet somewhat reduced amount of construction and operation workforce, equipment, and fencing material as the proposed project. Given the overall similarities between the Resource Avoidance Alternative with Prehistoric Resources/TCR Option and the proposed project except for the differences

noted above, the impacts for the following resources would be essentially the same, and the same mitigation would be required:

- Aesthetics
- Air Quality
- Energy
- Geology, Soils, and Mineral Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Paleontological Resources
- Population and Housing
- Public Services and Utilities
- Recreation
- Traffic and Transportation
- Wildfire

***Biological Resources***

Under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option, in addition to the 200-foot setback from desert dry wash woodland (as in the Land Use Plan Compliant Alternative), the development footprint would avoid desert tortoise critical habitat and the DRECP multi-species linkage corridor. A breakdown of the habitat impact acreages by alternative is included in Table 3.4-1 (Impacts to Sensitive Habitats within the Project Fenceline by Alternative) in EIR Section 3.4.5.

Since the alternative would occupy generally the same geographic area and would use the same construction techniques as the proposed project, such as vegetation removal and grading resulting in increased dust noise, and activity, direct, indirect, and cumulative impacts would be qualitatively similar. However, by complying with the DRECP 200-foot setback and avoiding critical habitat and the multi-species linkage, approximately 1,100 acres of vegetation and habitat within the proposed development footprint would no longer be impacted. ~~, including t~~The utility corridor north of I-10 would be avoided with avoidance of critical habitat, and the~~.~~ ~~Therefore, a larger~~ area adjacent to the underpass culverts would be available ~~adjacent to the I-10 underpass culverts~~ for wildlife movement. Wildlife movement corridors would be expanded from the proposed project in desert dry wash woodland habitats ~~as well as within the desert dry wash corridors~~ across the project site.

~~Long-term desert tortoise exclusion fencing of the entire site would reduce risk to desert tortoise during O&M, but would restrict wildlife including special-status species from using and moving through the site, and any vegetation within the fenceline would not be available for shelter or foraging.~~ Under the proposed project, approximately 920 acres of the solar facilities would be surrounded with wildlife friendly fencing, which would support movement for some small wildlife through the revegetated project site during O&M. Potential impacts to wildlife are described in Section 3.4.5, Biological Resources. Under the Resource Avoidance Alternative, exclusion fencing is proposed to surround all solar facilities, which would protect desert tortoise, desert kit fox, and other wildlife from O&M activities (e.g., potential collisions from O&M vehicles, disturbance from solar panel maintenance, etc.); however, their movement patterns would be restricted through

the revegetated site and any vegetation within the fenceline would not be available for shelter or foraging.

Due to a relatively smaller ~~amount~~ acreage of habitat (namely desert tortoise critical habitat) impacted under this alternative, ~~over 5,000 fewer~~ approximately 1,800 acres of habitat would be permanently protected under a conservation easement ~~under this alternative~~ compared to approximately 6,200 acres with the proposed project.

The designated critical habitat portion of the project that would remain undeveloped under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option is adjacent to I-10 and contains existing energy transmission lines. Much of the area surrounding the project site, including portions of the designated critical habitat, is degraded and contains anthropogenic features and land uses, such as agriculture, residential, renewable energy, transmission lines, historic military operations, recreational development/limited dispersed camping, BLM designated OHV open routes, and the I-10 freeway.

~~On the other hand~~In comparison, the designated critical habitat portion proposed for acquisition and protection in ~~of~~ the Applicant's proposed compensation package is partially located within the Chemehuevi ACEC, Mojave Trails National Monument, and Piute Mountains Wilderness Area, and partially located within the Chuckwalla ACEC on the Chuckwalla Bench and Smoke Tree Valley (IP Oberon, 2021, Appendix AA). Much of the area surrounding the proposed mitigation sites is BLM-administered lands that have enhanced protections via ACEC and Wilderness Area designations. Additionally, there are many privately owned conservation lands adjacent and proximal to the mitigation sites that have similar habitat management goals. The remote nature of the mitigation sites has revealed very low anthropogenic impacts such as trash, OHV use, evidence of dispersed camping, or invasive species.

Overall, the direct impacts on the project site to biological resources from the Resource Avoidance Alternative would be reduced from the proposed project and the Land Use Compliant Alternative, because the development footprint would have a 200-foot setback from desert dry wash woodland habitat, the alternative would fully comply with DRECP CMAs, and the critical habitat and multi-species linkage on the project site would be avoided. With mitigation, the impacts to biological resources would be reduced to less than significant under both the proposed project and the Resource Avoidance Alternative with Prehistoric Resources/TCR Option.

~~Therefore,~~ However, as described above, the proposed project would ~~be required~~ mitigate approximately ~~700~~ 590 acres of compromised desert tortoise critical habitat on the Oberon site at a 5:1 compensation ratio (in compliance with DRECP CMA LUPA-BIO-COMP-1) with much better value critical habitat. A major reduction in the acreage of the compensation land package under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would result in greater overall impacts to biological resources. With mitigation, the impacts to biological resources would be reduced to less

than significant under both the proposed project and the Resource Avoidance Alternative with Prehistoric Resources/TCR Option.

### *Cultural Resources/Tribal Cultural Resources*

No prehistoric artifact scatters would be destroyed by the construction of the Resource Avoidance Alternative with implementation of the with Prehistoric Resources/TCR Option (see Appendix C for full list of resources avoided), which, if feasible, would eliminate significant and unmitigable cultural and TCR impacts to prehistoric archaeological resources by the proposed project and Land Use Plan Compliant Alternative. If a~~A~~ll direct impacts to these resources would be avoided, ~~and~~ no mitigation would be required. Even with implementation of mitigation, indirect impacts to TCR and cultural resources would remain significant and unavoidable.

Therefore, only 1 CRHR-eligible resource, which is therefore considered a historical resource under CEQA, would be subject to direct effects from the Resource Avoidance Alternative with Prehistoric Resources/TCR Option. Only small portions of WWII-related historic archaeological site AE-3752-200H extends into the Resource Avoidance Alternative development footprint. The destruction of a small portion of the site would not cause a substantial adverse change in the significance of this historical resource. Therefore, the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would not cause direct effects to AE-3752-200H, and no additional mitigation is necessary.

In addition, 9 WW-II era resources would be destroyed by the construction of the Resource Avoidance Alternative. While these resources are contributors to the DTCCL, they are not eligible for the CRHR in their own right, so would not be subject to direct impacts.

Potential impacts unknown cultural resources would be similar to the proposed project, but somewhat reduced due to the smaller development footprint and associated mitigation would be the same.

Therefore, the direct impacts of this alternative to known historical resources and Tribal Cultural Resources would be much reduced and significant direct impacts would be avoided compared to the proposed project and Land Use Plan Compliant Alternative; indirect impacts and associated mitigation would be the same. That is, while implementation of mitigation would reduce the contribution of the Resource Avoidance Alternative with Prehistoric Resources/TCR Option, the indirect and associated cumulative impacts to prehistoric-era CRHR-eligible resources that are also Tribal Cultural Resources would remain significant.

### *Greenhouse Gas Emissions*

The overall air quality and GHG emissions generated through construction activities would not exceed any annual emissions thresholds. For the Resource Avoidance Alternative with Prehistoric Resources/TCR Option, the associated direct, indirect, and

cumulative effects to GHG would be like that of the proposed project. However, because the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would produce only 300 MW of renewable energy generation, the net decrease in GHG emissions would be substantially less than the decrease in GHG emissions from the proposed project over the life of the project.

## 4.3 Comparison of Alternatives

This comparison is based on the assessment of environmental impacts of the proposed project and each alternative, as identified in Chapter 3 (Environmental Analysis) and in Section 4.2.

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. 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 [CEQA Guidelines Section 15126.6(e)(2)].

Highlighting 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.

The environmental impacts of the proposed project were compared to those of each alternative to determine the environmentally superior alternative.

### 4.3.1 Comparison Methodology

The following methodology was used to compare alternatives in this EIR:

- **Step 1: Identification of Alternatives.** A screening process (described in Section 4.1, CEQA Requirements for Alternatives) 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 decisionmaking 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 Chapter 3 and Section 4.2, including the potential impacts of solar facility and gen-tie transmission line construction and operation and decommissioning. A summary of the significant impacts that cannot be mitigated are described in Section 4.3.3. 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 4-2. Although this EIR identifies an environmentally superior alternative, it is possible that the decisionmakers 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.

### 4.3.2 Ability to Meet Project Objectives

As noted in Section 1.3 (Project Objectives), the Applicant's objectives for the project are to:

1. Deliver 500 MW of affordable wholesale renewable energy to California ratepayers under long-term contracts with electricity service providers;
2. 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 GHG emissions reduction goals of the California Global Warming Solutions Act of 2006 (AB 32), as amended by Senate Bill 32 in 2016;
3. Bring living-wage renewable energy construction jobs to eastern Riverside County including Native American construction and monitoring jobs;
4. Minimize environmental impacts and land disturbance associated with solar development by siting the facility on relatively flat, contiguous lands receiving high

solar insolation, that are in close proximity to established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access;

5. Further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
6. 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;
7. Enhance California's fossil-free resource adequacy capabilities and help to solve California's "duck curve" power production problem by installing up to 500 MW of 2-hour and/or 4-hour battery energy storage capacity;
8. Conform with the Desert Renewable Energy Conservation Plan's Conservation and Management Actions to the maximum extent practicable, while also optimizing the balance between renewable energy generation and protection and conservation of sensitive habitat; and
9. Support BACI scientific research at the project site to further the public's understanding of the interactions between wildlife and solar energy facilities.

### No Project Alternative

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 State's energy generation goals or GHG reduction goals under Senate Bill 350, Senate Bill 100, and AB 32.

### Land Use Plan Compliant Alternative

The Land Use Plan Compliant Alternative would meet the project's objectives; however, it would achieve these objectives, which include the provision of environmental benefits, to a lesser extent compared with the proposed project.

Although the Land Use Plan Compliant Alternative would assist Californians in meeting their renewable energy generation goals under Objective #1 and would further the purpose of Secretarial Order 3285A1 regarding responsible renewable energy under Objective #5 and the United States' commitments under Article 4 of the Paris Climate Agreement (Objective #6), the Land Use Plan Compliant Alternative would generate and store a smaller amount of renewable energy compared with the proposed project. Therefore, it would assist Californians to a lesser degree in meeting their renewable energy generation goals (Objective #2) and BLM with meeting its renewable energy objectives of the DRECP LUPA (Objective #8).

The Land Use Plan Compliant Alternative would fully comply with the DRECP CMAs by maintaining the desert dry wash woodland buffer areas, so no LUPA to the CDCA would be required ~~as is necessary for construction of the proposed project~~. The BLM DRECP

LUPA designated 6.5 million acres of land for conservation and identified 388,000 acres as DFA suitable for renewable energy development. One DRECP objective is to promote renewable energy and transmission development, consistent with federal renewable energy and transmission goals and policies, and in consideration of State renewable energy targets. With a smaller project, Oberon's contribution towards meeting these goals and the necessary speed of the United States achieving these goals would be reduced.

Although the Land Use Plan Compliant Alternative would bring living-wage jobs to eastern Riverside County under Objective #3, it may create fewer jobs compared with the proposed project. It would meet Objective #4 to minimize environmental impacts and land disturbance, because the alternative would also be on flat contiguous land in close proximity to established utility corridors, existing transmission lines with available capacity, and road access.

Finally, although the Land Use Plan Compliant Alternative would make the highest and best use of land under Objective #4, it would not capture the same economies of scale as the proposed project nor help as much to solve California's "duck curve" power production problem (Objective #7), and the alternative would therefore generate, store, and transmit less wholesale solar electricity, and the electricity would be less affordable. Finally, because the Land Use Plan Compliant Alternative would not use wildlife friendly fencing during operations, it would not support this aspect of the BACI study and contribute to the understanding of interactions between wildlife and solar energy facilities under Objective #9 to same extent as the proposed project.

#### Resource Avoidance Alternative with Prehistoric Resources/TCR Option

The Resource Avoidance Alternative with Prehistoric Resources/TCR Option would achieve the Applicant's project objectives as discussed for the Land Use Plan Compliant Alternative. However, this alternative would result in an even smaller project footprint than with the Land Use Plan Compliant Alternative, and with an operational output of 300 MW, the Resource Avoidance Alternative with Prehistoric Resources/TCR Option would result in a lesser ability to contribute to meeting renewable energy and emissions targets compared to the proposed project and the Land Use Plan Compliant Alternative.

### 4.3.3 Significant and Unavoidable Impacts

Chapter 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 incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible.

- **Aesthetics**: Although consistent with the BLM's visual classification for the area as Class IV (allowing for a high level of change to the landscape character), the proposed project would degrade the existing visual character or quality of the site and its

surroundings. While mitigation measures are recommended that 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 change would remain significant and unavoidable. This is true for the project itself and for it cumulative effects, when considering other existing and planned projects in the vicinity.

- **Cultural Resources/Tribal Cultural Resources**: The project would directly and indirectly impact Tribal Cultural Resources and prehistoric resources. Even with implementation of mitigation measures, these impacts would remain significant and unavoidable.

The project would result in a cumulatively considerable contribution to a significant cumulative impact under aesthetics and cultural resources.

### 4.3.4 Comparison of Alternatives Summary

Table 4-2 compares the potential impacts of the proposed project to the solar facility alternatives. The selected substation and BESS location option and supporting gen-line would be determined during final engineering based on SCE's interconnection requirements and crossing agreement requirements of other solar project gen-tie lines, so an environmental comparison is not included herein. It should be noted that the southeastern substation and BESS location is within desert tortoise critical habitat and the multi-species linkage corridor, so it would not be an option under the Resource Avoidance Alternative with Prehistoric Resources/TCR Option.

As described above, the Land Use Plan Compliant Alternative would not reduce any of the project's significant and unmitigable impacts to a less-then-significant level or result in a change to overall impact classifications or significance conclusions. The Resource Avoidance Alternative with Prehistoric Resources/TCR Option would eliminate direct impacts to prehistoric archaeological resources, a significant and unavoidable impact of the proposed project and Land Use Compliant Alternative. Table 4-2 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.

**Table 4-2. Summary Comparison of Alternatives to Proposed Project**

| Environmental Resource | No Project Alternative[1] | Land Use Plan Compliant Alternative[1] | Resource Avoidance Alternative with Prehistoric Resources/ TCR Option[1] |
|---|---|---|---|
| Aesthetics[2] | Fewer | Fewer | Fewer |
| Air Quality | Greater | Fewer | Fewer |
| **Biological Resources** | Fewer | Fewer | **Greater** |

**Table 4-2. Summary Comparison of Alternatives to Proposed Project**

| Environmental Resource | No Project Alternative[1] | Land Use Plan Compliant Alternative[1] | Resource Avoidance Alternative with Prehistoric Resources/ TCR Option[1] |
|---|---|---|---|
| **Cultural Resources/Tribal Cultural Resources[2]** | Fewer | Fewer | **Fewer** |
| Energy | Greater | Fewer | Fewer |
| Geology, Soils, and Mineral Resources | Fewer | Fewer | Fewer |
| **Greenhouse Gas Emissions** | Greater | **Greater** | **Greater** |
| Hazards and Hazardous Materials | Fewer | Fewer | Fewer |
| Hydrology and Water Quality | Fewer | Fewer | Fewer |
| Land Use and Planning | Fewer | Similar | Similar |
| Noise | Fewer | Fewer | Fewer |
| Paleontological Resources | Fewer | Fewer | Fewer |
| Population and Housing | Fewer | Fewer | Fewer |
| Public Services | Fewer | Fewer | Fewer |
| Recreation | Fewer | Fewer | Fewer |
| Traffic and Transportation | Fewer | Fewer | Fewer |
| Wildfire | Fewer | Fewer | Fewer |
| Potential to Meet Most Project Objectives?[3] | *NO* | *YES* | *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. Bolded text indicates issue areas where the difference in impacts between the proposed project and an alternative is more substantial, even if the overall significance determinations are similar.

2 - Aesthetic operational impacts and Cultural Resources/Tribal Cultural Resources indirect and cumulative impacts would be significant and unavoidable for all alternatives except the No Project Alternative. Direct impacts to prehistoric resources would be avoided with implementation of the Prehistoric Resources/TCR Option.

3 - Section 4.3.2 discusses to what extent the alternatives meet the project objectives.

### 4.3.5 Comparison of the Proposed Project and No Project Alternative

The No Project Alternative would result in no impacts because construction, operation, maintenance, and decommissioning would not occur. This alternative would result in no impacts to aesthetics, agriculture, biological resources (e.g., impacts to desert dry wash woodland, multi-species linkage corridor, desert tortoise critical habitat), cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, and transportation, tribal cultural resources, utilities and service systems, and wildfire.

It would not result in beneficial impacts of the proposed project relating to long-term air quality, energy production, and greenhouse gas emissions associated with renewable energy generation.

The land would remain undeveloped, and the site would remain an allocated DFA. The BLM would continue to manage the land under its current plan as a DFA. Therefore, if

the No Project Alternative were selected, another solar project could be proposed in the same location and result in similar impacts. The No Project Alternative would fail to meet the Applicant's objectives for the project and would not contribute to achieving any of the state or federal energy generation goals or GHG reduction goals.

### 4.3.6 Environmentally Superior Alternative

Section 15126.6 of the 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 4-2 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 Chapter 3. However, as described above, the No Project Alternative would fail to meet the Applicant's objectives for the project and would not contribute to achieving any of the state or federal energy generation goals or GHG reduction goals, and thus, is not a feasible alternative to the project. It is also possible that if the proposed project were not approved, another solar project would be constructed, which ~~would~~ may have impacts similar to the project.

In accordance with section 15126.6 of the CEQA Guidelines, the **Land Use Plan Compliant Alternative including implementation of the Prehistoric Resources/ TCR option would be the Environmentally Superior Alternative** since it would result in fewer impacts to biological resources than the proposed project, would eliminate significant direct impacts to cultural resources that are also Tribal Cultural Resources, and would have a reduced level of ground disturbance. This alternative would have greater setbacks from desert dry wash woodland than the proposed project and at the same time would have a comprehensive mitigation package of nearly 5,400 acres of high value habitat conserved. It would exclude desert tortoise and other wildlife from accessing the secured solar panel development areas, thereby protecting them during O&M from potential harm or disturbance within these areas. In contrast to the proposed project, this alternative would use desert tortoise exclusion fencing instead of passage fencing around all solar panel development areas during both construction and operation. All other project components and construction methods and resulting impacts would remain similar to those of the proposed project.

In accordance with Section 15126.6 of the CEQA Guidelines, Land Use Plan Compliant Alternative with the Prehistoric Resources/TCR Option would be the Environmentally Superior Alternative since it would result in fewer impacts than the proposed project due to the smaller footprint and reduction in direct impacts namely to and cultural resources

that are also Tribal Cultural Resources and biological resources. The Land Use Plan Compliant Alternative with or without the Prehistoric Resources/TCR Option would meet most of the project objectives and would be feasible, but it would generate 375 MW of renewable energy (compared to 500 MW under the proposed project).

In order to meet the energy needs of the proposed project, an additional energy project may be developed on another site and could have environmental impacts equal to or greater than the proposed site, which is surrounded by proposed and approved solar generation projects and located on BLM-administered land that is within the DRECP DFA, and thus, targeted for renewable energy development.

Because the Land Use Plan Compliant Alternative with the Prehistoric Resources/TCR Option would achieve the project objectives, which include the provision of environmental benefits, to a lesser extent compared with the proposed project (see Section 4.3.2), the proposed project is considered preferred.

## 4.4 Alternatives Considered and Eliminated from Further Analysis

Several alternatives were considered but eliminated from further analysis. The following provides the description of each alternative and rationale for elimination.

### 4.4.1 Private Land Alternative

An alternative that would develop the solar facility on private lands was not considered further, because it is considered speculative and infeasible based on the number of landowners whose agreement would be required to establish a reasonably consolidated amount of acreage and the fact that the Applicant does not have any site control.

In addition, another site may have environmental impacts equal to or greater than the proposed site, which is surrounded by proposed and approved solar generation projects and located on BLM-administered land that is within the DRECP DFA, and thus, targeted for renewable energy development. Due to the discontinuous nature of the parcels additional gen-tie line interconnections would be required. Using nearby private lands would not reduce the effects of the project, because such lands are farther from Red Bluff Substation so would require a longer gen-tie line. Multiple longer gen-tie lines would increase impacts associated with their construction and introduce more widespread visual impacts.

Finally, the BLM lacks jurisdiction to authorize a solar project on private lands. This alternative was not considered further.

### 4.4.2 Federal Land Alternative

Similar to the project, an alternative site elsewhere on BLM-managed lands would involve the construction, operation, maintenance, and decommissioning of an up to 500 MW solar facility and 500 kV gen-tie line. This alternative would be located within the

East Riverside DFA less than 15 miles from the Red Bluff Substation, because IP Oberon, LLC, has interconnection requirements at the Red Bluff Substation, where it holds queue position and additional capacity remains. It is also assumed that this alternative would require a BLM ROW Grant to allow for the construction and operation of solar facilities within BLM-managed lands.

The Federal Land Alternative on BLM-managed lands would not likely reduce any potentially significant impacts from the proposed project, as the project site has undergone extensive refinements to avoid sensitive resources and is located on BLM-administered land surrounded by proposed and approved solar generation facilities as well as I-10 and is in close proximity to the Red Bluff Substation, resulting in a short 0.5-mile gen-tie line. 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 and visual resource impacts, as it would likely have a longer gen-tie line, could be within the sand transport corridor, and/or could be located closer to Joshua Tree National Park. Also, it may not be feasible to find an alternative site on BLM-managed lands, because most of the land within the DFA is already in use, proposed for other solar energy projects, or within mountainous areas. Lands outside the DFA have already been preliminarily screened and determined to be more likely to have greater environmental impacts. Site control is also an issue, given that the Western Solar Plan, DRECP and BLM Rents and Bonds Policy require a competitive auction to secure land within SEZs/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 potential feasibility issues associated with site control; therefore, it has thus been eliminated from consideration.

### 4.4.3 Full Build Alternative

Most often, when an agency is considering a utility solar project, the agency reviews the location proposed for the project, identifies the most substantial impacts, and develops a reduced footprint alternative to avoid these locations. To meet the requirements of the CDCA Plan, as amended by the DRECP, this process was completed prior to defining the project and resulted in the removal of approximately 3,800 acres from the original 6,500-acre ROW application. The larger sized project would have allowed for additional flexibility when siting the 500 MW project within the project site or could have accommodated more MW. While the amount of MW proposed for construction at the project site has not changed with the smaller footprint, the MW hours are fewer than originally proposed. This is because the proximity of the solar panels under the smaller footprint increases shading and other technical constraints compared with a more widespread layout.

The full build alternative would have greatly increased impacts to desert dry wash woodland, desert tortoise habitat, and wildlife connectivity habitat. Additionally, solar panels would be developed adjacent to I-10 further restricting the utility corridor in desert tortoise critical habitat, and a greater number of prehistoric cultural resources would be directly affected. Given that this alternative would have much greater environ-

mental impacts and would comply with the BLM's DRECP CMAs to a less extent than the project, this alternative was eliminated from consideration.

### 4.4.4 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.

- **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 impact may 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.

- **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.

- **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 500 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 development in desert habitat.

  Although there is potential to achieve up to 500 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 can 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.

### 4.4.5 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 and would not be technically or economically feasible for the Applicant to implement.

### 4.4.6 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.

# CHAPTER 5: Other CEQA Considerations

Chapter 5 includes discussions of various topics required by CEQA. These topics include Section 5.1, significant and unavoidable impacts, which summarizes the conclusions presented in Chapter 3; Section 5.2, significant irreversible and irretrievable changes, including energy use; and Section 5.3, growth-inducing effects.

## 5.1 Significant and Unavoidable Environmental Impacts

### 5.1.1 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 described in Chapter 2, the CMA-Compliant Alternative and the NGO-Requested Alternative described in Chapter 4, 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 in the immediate vicinity of Oberon Renewable Energy Project along SR-177 and adjacent to I-10 except for the Lake Tamarisk Desert Resort.
- **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.***
    - ***Impact TCR-1. The project would cause adverse change in the significance of a Tribal Cultural Resource determined by the Lead Agency.***

- ***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).***

Although the proposed project and alternatives would both create significant visual impacts from the solar facility and gen-tie line to travelers along SR-177 and I-10, the proposed project would primarily be located on BLM-administered lands designated as a "Development Focus Area" to allow for development of solar energy generation and appurtenant facilities on public lands in this specific area. 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, President Biden's January 27, 2021, Executive Order on Tackling the Climate Crisis at Home and Abroad more specifically directed 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).

Siting the facility on land designated for renewable energy, on relatively flat, contiguous lands with high solar insolation, and near established utility corridors, existing transmission lines with available capacity to facilitate interconnection, and road access would minimize environmental impacts and land disturbance associated with the development. Furthermore, construction and operation of the project would bring jobs to eastern Riverside County and would assist California with achieving its renewable energy generation goals. Given the location of the proposed project on land designated for solar generation development and operation, the project's renewable energy and economic benefits would outweigh its unavoidable adverse environmental impacts to visual resources.

## 5.1.2 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 areas:

- **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 cumulative projects would result in significant cumulative visual impacts when viewed by sensitive viewing populations along SR-177 and I-10, from nearby residences, from portions of Joshua Tree National Park, and in the surrounding mountains and wilderness. Effective implementation of Mitigation Measures AES-1 (Night Lighting Management Plan), MM AES-2 (Surface Treatment of Project Structures and Buildings), and MM AES-3 (Project Design) would reduce the severity of the cumulative visual effects, although not to levels that would be less than significant.
- **Cultural Resources:** Past, present, and reasonably foreseeable future actions have already altered or destroyed and are projected to alter or destroy several thousand acres of cultural resources that are estimated to have originally existed in the cumulative analysis study area. Four sensitive prehistoric archaeological resources are present in the indirect effects study area and are contributors to the Prehistoric Trails Network Cultural Landscape/Historic District. In addition, there are 13 rock rings/cleared circles and 10 artifact scatters located in the direct effects Study Area that would avoid direct effects but would be subject to indirect effects. The addition of more industrial components to the Chuckwalla Valley contributes in a small but meaningful way to a visual intrusion upon the setting of the District, which compromises the integrity of the resource. Implementation of mitigation would reduce the contribution of the project, but the cumulative impact would remain significant.

## 5.2 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. The Applicant anticipates that at least 65 percent of construction waste would be recyclable. 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 the use earthen minerals. During operation, oil, gas, and other nonrenewable resources would be consumed for maintenance purposes, although on a limited basis. See Section 3.6 (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. 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).

## 5.3 Growth Inducing Impacts

CEQA Guidelines Section 15126.2(d) requires analysis of the growth-inducing impact of the project. The discussion should identify the ways in which a project could foster

economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This includes projects that remove obstacles to population growth, such as by extending public services into areas not previously served. Growth inducement can also result from actions that encourage development or encroachment into surrounding areas or encourage adjacent development. According to State CEQA Guidelines Section 15126.2(d), growth should not be assumed to be beneficial, detrimental, or of little significance to the environment.

This growth inducing impact analysis considers the following four criteria, and whether the project would result in:

- Removal of an obstacle to growth, e.g., establishment of an essential public service or the provisions of new access to an area;
- Economic expansion or growth, e.g., changes in revenue base or employment expansion, that would require construction of new facilities that could cause significant environmental effects;
- Establishment of a precedent-setting action, e.g., a change in zoning, or general plan amendment approval; or
- Encouraging development or encroachment into an isolated area or open space.

Should a project meet any one of the criteria listed above, it can be considered growth-inducing.

**Removal of an obstacle to growth.** The proposed project would result in the conversion of substantial open space to a developed land use. The project would be located entirely on 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 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 entirely on 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 and is not surrounded by residential development. Therefore, the proposed project is not considered to have the potential to encourage or push residential development into other open space areas. The project site is remote and existing/planned land use patterns do not indicate that residential development was planned in the area.

In addition to residential development, installation of a solar facility and associated gen-tie line for one project is usually unlikely to trigger additional development of other energy generation projects, because the gen-tie line is normally sized to the capacity of the electric generator facility that it serves and it occupies an interconnection position at the regional substation (i.e., Red Bluff Substation). Any additional electric generator facilities would likely require their own gen-tie line and would need space to interconnect into the substation, separate from the project-specific gen-tie line.

The Oberon Project is connecting into the Red Bluff Substation at 500 kV, because there are no more interconnection positions available at the 230 kV level. IP Oberon, LLC, plans to collocate the Oberon gen-tie line with the proposed Easley Solar and Green Hydrogen Project gen-tie line and would utilize either the existing gen-tie structures or remaining capacity on the line. While the Applicant currently plans to collocate the lines, the Easley Project has a 2025-2026 commercial operation date, is a completely separate project from the Oberon Project, and could move forward with or without construction of the Oberon gen-tie line. Therefore, the Oberon gen-tie line is not considered growth inducing.

Furthermore, both the Oberon and Easley project sites are located within a DRECP DFA targeted for renewable energy development, and the DRECP LUPA assumed full development within DFAs. Therefore, future renewable energy projects are likely to be developed within the Desert Center area whether or not the Oberon Project is built. If the Oberon Project is not built, another solar project could be constructed on the site. The Oberon Project would not affect the development of these future solar projects.

Therefore, the proposed project would not result in growth inducement through development or encroachment into an isolated area or open space.

# CHAPTER 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 Colorado River Basin RWQCB was the CEQA Lead Agency. Aspen Environmental Group provided technical assistance in the preparation of this document RWQCB. 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 |
|---|---|---|
| **Colorado River Basin RWQCB – CEQA Lead Agency** | | |
| Paula Rasmussen | Executive Officer, Colorado River Basin RWQCB | |
| Cassandra Owens | Assistant Executive Officer, Colorado River Basin RWQCB | |
| Logan Raub | Environmental Scientist, Colorado River Basin RWQCB | |
| **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, Noise |
| Fritts Golden | Senior Associate | Land Use and Planning; Recreation |
| Scott Debauche | Environmental Planner | Traffic and Transportation |
| Aurie Patterson, P.G. | Associate | Geology and Soils; Paleontology; Hydrology |
| Erin Jones | Biologist | Biological Resources |
| Bridgit Harvey | Biologist | Biological Resources |
| Theresa Sims | Biologist | Biological Resources |
| Stephanie Tang | Associate | Energy; Public Services; Utilities and Service Systems |
| Grace Weeks | Associate | Population and Housing; Wildfire; Hazards and Hazardous Materials |
| Christopher Notto | GIS Specialist | Graphics |
| Kati Simpson | Senior Graphic Designer | Graphics |
| Mark Tangard | Associate | Document Production |
| **Michael Clayton & Associates** | | |
| Michael Clayton | Visual Resources Specialist | Aesthetics |

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: Brandon Anderson and Dan Ryan
- U.S. Fish and Wildlife Service: Felicia Sirchia
- California Department of Fish and Wildlife: Dr. Shankar Sharma and Magdalena Rodriguez

# CHAPTER 7: References

## 7.1 References – Introduction

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## 7.2 References – Description of the Proposed Project

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